



JV Educational: The Journal of Educational Research and Interdisciplinary Studies

Volume 1, Issue 2

Spring/Summer 2016





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JV Journal of Educational Research & Interdisciplinary Studies (ISSN 2379-1470) is published four times throughout the year by
JV Educational Consultants, LLC., 6689 Orchard Lake Road, Suite 154, West Bloomfield, Michigan 48322.



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Achievement Gap: A Look Back and a Way Forward

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Abstract

The achievement gap has been a pervasive issue in the U.S. education system. According to the National Assessment of Educational Progress (NAEP, 2014), “achievement gaps occur when one group of students outperforms another group and the difference in average scores for the two groups is statistically significant (that is, larger than the margin of error)” (para 1). Achievement gaps can be seen in success indicators such as high school completion, standardized test scores, dropout rates, and proportion of students of color enrolled in college preparatory courses (Education Week, 2011).

Introduction

The achievement gap was first highlighted in the Coleman report, better known as the report on Equality of Educational Opportunity (Coleman et al. 1966). The goal of the report was to understand if schools of lesser quality attended by African Americans contributed to the achievement gap. This research study commissioned by the U.S. Department of Education and published in 1966 highlighted that differences in family background had a substantial association with achievement, as did the backgrounds of other students in the school; the latter was reason to advocate for desegregation in schools. Ladson-Billings (2006) also summarized literature that offered several explanations for the achievement gap. These explanations ranged from sociocultural factors such as school environment, family background, and teacher communication skills as noted in the Coleman Report; stereotype threat; cultural mismatch in education; curriculum and the school; and educator practices (Ladson-Billings, 2006).

The achievement gap is usually discussed in reference to the performance of African American and Latino students lagging behind their White peers in academic success (Education Week, 2011). Currently, achievement gaps continue to exist particularly in the subjects of math and reading (NAEP, 2014). In 2013, Black students in eighth grade scored 30 points lower than their White peers in Mathematics (NAEP, n.d.a). Moreover, in the same grade and subject, White students scored higher than their Latino peers (NAEP, n.d.a). Additionally, reading scores for Black and Latino students lagged behind their White peers by 25 and 20 points respectively (NAEP, n.d.b).

It is evident that the achievement gap not only affects test scores, but can lead to disadvantages in college and career readiness and preparation. The National Center for Education Statistics (2013) found

that 87% of White high school students graduated as compared to 75% of Latino students and only 71% of Black students. The authors contend that the achievement gap has been maintained through legal precedence, policy, and educator practices, and that a paradigm shift in these regards is needed to promote meaningful change.

Critical Race Theory

Critical Race Theory (CRT) is the lens through which we view and discuss the achievement gap. CRT posits that race is a powerful construct of human social life. As such, CRT scholars view racism as a normal and natural part of American society; however, they resolve themselves to unmasking all forms of racism and oppression (Delgado, 1995; Ladson-Billings, 1998). This theoretical lens challenges the notion of whiteness as normal and calls for counter-narratives of the experiences of racial oppression of people of color (Crenshaw, Gotanda, Peller, & Thomas, 1995; Delgado, 1995; Ladson-Billings & Tate, 1995). These narratives with the CRT lens illustrate the limits of the current litigation and policies in fueling social change. In recognition of these limits, CRT scholars call for and are engaged in the active struggle towards social changes to address the racial realities of people of color.

CRT made its way into the field of education in 1994 as a means to analyze and critique educational research and practice (Ladson-Billings, 2005). The use of CRT in the field of education has helped scholars and practitioners understand how race and racism manifest in PK-12 schools at the micro and macro levels (Ledesma & Calderon, 2015). At the micro level, for example, researchers have highlighted the individual experiences of racism and oppression that students of color face while navigating PK-12 schools (Ledesma & Calderon, 2015). At the macro level, CRT scholars analyze the effects of larger policies and practices on students of color, which include school curriculum and instruction, assessment, school funding, and legislation (e.g. NCLB, IDEA, etc.; Ladson-Billings, 1998; Ledesma & Calderon, 2015). At each of these levels, scholars integrate the major tenets of CRT by focusing on the experiential knowledge of racism and challenge the dominant legal claims of neutrality, objectivity, colorblindness, and meritocracy. CRT offers a lens to engage these issues and join in the active struggle against the persistence of racism in education. A necessary part of this conversation is the consideration of the legal and historical context within which the achievement gap exists.

Legal History and Trends

Charles Hamilton Houston and Thurgood Marshall, two Black men who were lawyers and leaders of the National Association for the Advancement of Colored People (NAACP) Legal Defense and Education Fund, spearheaded the challenge against racial segregation in U.S. public schools throughout the 1930s and 1940s. By 1950, most U.S. school systems were segregated either on *de jure* (i.e., legally) or *de facto* (i.e., custom) terms. To this end, the educational experiences of Black children were inferior to that of Whites, in part due to the scarcity of resources in Black schools that *were* provided in White school systems. The NAACP had prior experience challenging racial discrimination in the realm of education particularly at the graduate and professional ranks of institutions of higher education. This was seen specifically through four legal cases, which set the foundation for challenging the precedence set with the “separate but equal” ruling in *Plessy v. Ferguson* (1896): 1) *Murray v. Maryland*; 2) *Missouri ex rel Gaines v. Canada*; 3) *Sweat v. Painter*; and 4) *McLaurin v. Oklahoma*. It was ruled in the *Plessy v. Ferguson* (1896) case that racial segregation was constitutional in as long as there were equal public facilities across the country

In the *Murray v. Maryland* (1936) case, Donald Murray claimed he was denied admission from the University of Maryland School of Law because of his race. Arguments were put forth that Historically

Black Colleges and Universities (HBCUs) in the area were not on par with the College Park school. The city court ultimately ruled in favor of Murray. After an appeal at the state level, the Maryland Court of Appeals also ruled on behalf of the plaintiff Murray who was later admitted and graduated from the university in 1938.

That same year, another case led by the NAACP was brought forth, *Missouri ex rel Gaines v. Canada* (1938), where the state of Missouri optioned to build an all-Black law school for Lloyd Gaines, a Black male graduate of Lincoln University (Mo.), who was denied entry to the University of Missouri Law School because of his race (Stout, 2009). During this time, the Chicago native completed a master's degree in economics from the University of Michigan while the trial was completed. Through various appeals, the NAACP led his case before the Supreme Court who ruled in favor of Gaines on the grounds of the 14th Amendment and the clause for equal protection (Stout, 2009). Interestingly, in 1939 Gaines never entered the University of Missouri Law School, mysteriously disappearing with his family unaware of his whereabouts (Stout, 2009).

The third case, *Sweat v. Painter* (1950) involved Heman Sweat's attempt to be admitted to the University of Texas' law school for Whites, as the school established one for Blacks to prevent any racial amalgamation. The Supreme Court ruled the schools for Blacks, while separate from the White law school, was not equal. Thus, Sweat was to be admitted to the White law school (Carter, 2005).

The fourth case, *McLaurin v. Oklahoma* (1950), involved George McLaurin, a Black male, who was initially denied entry to a doctoral program at the University of Oklahoma. He sued the school for not complying with state law that stated that Blacks could be admitted, but needed to be provided with separate facilities. He was later admitted, and though he was in the same classroom as his White counterparts, had the same professors, and same textbooks, he was given an assigned seat in classes, a designated table in the library, and special seating in the school's cafeteria. McLaurin petitioned at the U.S. District Court level to remove the experience of separate facilities so that he could interact more fully with other students. The NAACP argued the conditions in which McLaurin learned prevented him from obtaining an equal education (Carter, 2005). McLaurin's petition, though, was denied.

While challenging law and graduate schools for racial discrimination, the NAACP turned its attention to racial segregation at the primary and secondary school levels. In 1952, they led five cases from different jurisdictions across the U.S. contesting the "separate but equal" ruling from *Plessy v. Ferguson*, *Brown v. Board of Education of Topeka*, *Gebhart v. Ethel*, *Davis v. Board of Education of Prince Edward County*, *Boiling v. Sharpe*, and *Briggs v. Elliot*. While filed separately, the highest court in the U.S. merged the cases under *Brown v. Board of Education*. For more than fifty years, public schools across the U.S. had been racially segregated and provided with unequal resources and facilities. For example, White schools often had better facilities and infrastructure, while outdated textbooks were commonplace in Black schools. The NAACP argued in *Brown* that the current racial segregation in U.S. schools violated the equal protection clause of the 14th Amendment of the Constitution.

At the level of the U.S. District Court, the three judges who heard the *Brown v. Board of Education* cases ruled in favor of the respective school boards, leading Marshall, the chief counsel, to appeal the decision to the U.S. Supreme Court. After two years, a final ruling was given on May 17, 1954. The Court ruled unanimously that state-sponsored segregation in the realm of public education was unconstitutional stating "separate educational facilities are inherently unequal." Regardless of facilities and resources, this decision ruled racial segregation violated the 14th amendment and created negative effects for Black children, reversing the *Plessy v. Ferguson* decision. The Supreme Court later ruled in May 1955 the states were to end separate educational institutions (whether de jure or de facto) with "all deliberate speed."

While the ruling was deemed a victory, it took nearly a year before states developed plans to desegregate their schools. This impeded the expected progress the NAACP hoped for conceding the desegregation process (Ogletree, 2004). Whites were hostile to the presence of Blacks in their communities (Ogletree, 2004). Instead of the immediate integration of public primary, secondary, and collegiate schools, across the nation there were numerous school closings, a mass exodus of Whites from the city to the suburbs, and numerous demonstrations where Whites expressed their displeasure with integration (Ogletree, 2004). For example, Governor Orval Faubus of Arkansas used the Arkansas National Guard to prevent the integration of Central High School in Little Rock in 1957. In 1958, lawmakers in Norfolk, Virginia closed schools in an effort to prevent the integration of the city's historically White schools (Bly, 1998). On June 6, 1966, James Meredith, a Black man from Mississippi, was shot during his one-man march against the color barrier at the University of Mississippi.

Thus, the Supreme Court's ruling did not provide immediate protection for equal educational opportunities. Rather, states procrastinated on matters pertaining to desegregation. This was evident in *Milliken v. Bradley* (1974), a case that ensured suburban districts that were predominantly White were not susceptible to forced integration if there was no evidence of prior racial segregation (Chapman, 2014; Reardon, Grewal, Kalogrides, & Greenberg, 2012; Wells, Baldrige, Duran, Grzesikowski, Lofton, Roda, Warner & White, 2009). Such rulings only perpetuated the educational disparities *Brown* sought to alleviate. Despite the many advancements Black people have made since the 1954 ruling, there are still great disparities in American public schools.

Post-Brown Educational Policy and the Achievement Gap

The Coleman report was one of the first to highlight the achievement gap. That report was dispersed nearly 12 years after the *Brown v. Board* decisions and discussed the negligible impact that racial integration, school facilities, and school curriculum including compensatory education had on improving achievement. This particular report challenged the previous actions the Elementary and Secondary Education Act (ESEA). ESEA provided Title I funds to support compensatory programs to equalize educational opportunities for disadvantaged students, though it also helped to negate racial integration through federal funding opportunities which incentivized districts that maintained larger concentrations of poor, Black children.

A Nation at Risk was a report written by the National Commission on Excellence in Education in 1983 to provide both defined and provided solutions facing the American education system. The report called American education mediocre at best, stating that "educational institutions seem to have lost sight of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them" (The National Commission for Excellence in Education, 1983, p. 3). In addition to international competition, the authors argued that individuals who did not possess a certain level of skills or education would be disenfranchised. In the report—the authors also identified specific problems facing schools, which included differing and somewhat minimal high school graduation requirements, significantly less time spent in math and science courses when compared to other industrialized nations, and teacher preparation curriculum focused more on educational methods instead of content (The National Commission for Excellence in Education, 1983).

The Goals 2000: Educate America Act (1994) was a revised version of America 2000, a plan that never received congressional support under former President George Bush, Sr. (Kessinger, 2011). Goals 2000 was an attempt to improve learning and teaching through a national framework for educational reform through "research, consensus building, and systemic changes needed to ensure equitable educational opportunities and high levels of educational achievement for all students" (1994). Eight goals were outlined in the Act, six of which are from the America 2000 plan (Kessinger, 2011). The goals (1994) included:

(1) all children will start school ready to learn; (2) the high school graduation rate will increase to at least 90%; (3) all students will demonstrate competency in specific subjects in grades 4, 8, and 12; (4) the Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century; (5) United States students will be first in the world in mathematics and science achievement; (6) every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship; (7) every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning; and (8) every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children (National Education Goals section, para. 1-8).

Just as Goals 2000 was passed, the ESEA was reauthorized as the Improving America's Schools Act (IASA, 1994). It encouraged comprehensive reform at the state and local levels in order to meet national goals. IASA required states to (a) establish common statewide standards for all students in reading and math in grades 3 and up; (b) implement statewide assessments aligned to the standards in at least 3 grades; and (c) implement a statewide accountability system for evaluating school-level performance. Under the provisions of IASA, states still were granted full autonomy to make instructional, governance, and fiscal policy decisions to support student achievement.

No Child Left Behind Act of 2001 (NCLB) was the subsequent reauthorization of the ESEA, which extended the provisions under IASA. NCLB represented even greater federal power in educational reform by calling for specific educational goals for students as well as what will be done when goals are not achieved (Wong & Sunderman, 2007). NCLB mandated for greater accountability in that statewide accountability systems are based on rigorous state standards in reading and math. Students were to be tested annually in grades 3-8 to ensure that they reached proficiency standards, ultimately leading to all students being on grade level by 2014. To ensure that no group was "left behind," assessment results were required to be disaggregated by subgroups including poverty, race/ethnicity, disability, and limited English proficiency. Schools that failed to make adequately yearly progress (AYP) for three consecutive years were required to provide supplemental programs to students to improve student achievement. If schools failed to meet AYP for four consecutive years, restructuring measures were taken by an outside entity (NCLB, 2001). Moreover, NCLB mandated the hiring of "highly qualified" teachers, granting state and local agencies authority over failing schools. Additionally, teachers were charged to use best practices, meaning teaching strategies that were evidence based and aligned to national and state standards.

Despite extraordinary efforts, educational reform stemming from the national agenda has fallen short. Although *A Nation at Risk* set the scene for greater Federal authority in education reform, all subsequent education legislation has been met with great challenges. While the IASA provided a framework for educational reform and held schools receiving Title I funds to the same high expectations as other schools, states had full autonomy to make decisions on academic and performance standards. Holding schools and districts accountable to high-stakes mandates proved to be difficult (Wong & Sunderman, 2007). Thus, only a handful of states were granted fully approved standards and assessment systems under IASA (Wong & Sunderman, 2007).

As a response to the failure of IASA, NCLB provided stricter requirements for educational goals. However, these stricter mandates actually further marginalized the students that they were intended to serve. In looking at data from the National Assessment for Educational Progress, substantial gaps still exist for the nation's most vulnerable students, students in urban schools. For example, while the gap in 4th grade

reading has narrowed, students who are eligible for free and reduced meals are still lagging behind students who are not eligible for free and reduced meals by 24 points (NAEP, 2012a). This trend is also present when looking at race/ethnicity as Black and Latino children score 25 points lower than White children in reading (NAEP, 2012b).

Many of the same economic and social realities that existed sixty years ago are still present today. The legacy of disenfranchisement has unfortunately been passed down from previous generations for persons of color in the U.S. Research has demonstrated in some instances that economic barriers of a community has a greater association to test scores than does racial segregation as the academic achievement of Black and Latino children continues to be abysmal (Johnson, 2014). Many failing school systems are plagued by poverty, large student to teacher ratios, a lack of resources for their pupils, inexperienced staff (teachers, administrators, and counselors), and high teacher turnover rates. All of these issues coupled with racial segregation in residential communities across the nation present learning environments that prevent quality educational opportunities (Acevedo-Garcia, Rosenfield, McArdle, Osypuk, 2010).

As we look at historical and current trends, it is clear that the achievement gap has been a pervasive problem that has plagued the U.S. educational system. Recent Federal and state attention towards education through failed policy and initiatives begs the question of our commitment to the educational success of *all* children.

Policy Recommendations

States and school districts should examine the allocation of funds to enhance resources at the early childhood and elementary grade levels. The achievement gap begins early and only widens with time; therefore, early intervention may hold promise for eliminating gaps (Darling-Hammond, 2014; Reardon, 2013). All students should have equal access to resources including high-quality and credentialed teachers, engaging instruction and advanced curriculum, and school resources such as books, computers, and libraries (Reardon, 2013). The latest Program for International Student Assessment (PISA) report demonstrated that the U.S. allocates significantly less funding and resources for the most needy students compared to other developed nations (Darling-Hammond, 2014). Without a focus on changing systemic issues such as school funding inequities, poverty, the lack of universal early childhood programs, healthcare, social services, and before and after school care options, the achievement gap will continue to persist (Darling-Hammond, 2014). Reform is necessary outside of the classroom to address the challenging issues many students of color encounter that create obstacles to their academic success (Verstegen, 2015).

Practice Recommendations

It is essential for educators to conduct a needs assessment of their school environment to determine the best approach to bridging the achievement gap. Fisher, Frey, and Lapp (2011) found that attendance and student engagement were significant factors to consider in addressing the achievement gap at a particular school. The researchers found that low-achieving students were frequently absent and disengaged from the school environment. Therefore, a school-wide plan was developed specifically targeting attendance and instructional practices to increase classroom engagement. After three years of implementation, student attendance rates increased from 90.3% to 95.6% and gains in standardized test scores that exceeded state averages were noted.

Common trends in urban schools, where we most often observe an achievement gap, are teachers that lack the training to be effective with the students they serve (Darling-Hammond, 2011). Therefore, increased professional development and consultation opportunities amongst educators could help to support the delivery of culturally competent practices (Brown, Benkovitz, Mutillo, & Urban, 2011). Such practices would ensure that all students have a strong sense of self and are reinforced by the school culture for their

individual identities and lived experiences. This can begin with individual and systemic services that reinforce what Holcomb-McCoy (2007) calls critical consciousness, which consists of group identification (i.e., focusing on the shared experience of a racial group); group consciousness (i.e., talks about power dynamics of different racial groups in society); and self- and collective efficacy (i.e., discusses role of each student in the social process and how they can promote change).

A large part of this endeavor must be advocacy. Educators must be aware of many of the underlying factors that contribute to the achievement gap. In this way, they are positioned to address issues such as stereotype threat as a barrier to academic achievement. Educators can unknowingly perpetuate these stereotypes if they are not made aware of them. Stereotype threat is the internalization of a negative stereotype about one's group and therefore being at a higher risk for confirming it (Steele & Aronson, 1995). Standardized tests can act either as road-blocks or doorways to higher academic achievement. They are often used by schools as a way of measuring intelligence and are then used to place students in more or less rigorous classes in Kindergarten through 12th grade. While stereotype threat can have deleterious effects, Ellis and colleagues (2015) found that African American students with strong racial centrality have higher academic self-efficacy, where racial centrality means cultivating a racial ideology in which identifying as African American is important to one's self-concept. Students with high racial centrality were able to negate the effects of stereotype threat and be academically successful. Educators can work together to create an environment that maximizes the positive effects of critical and group consciousness.

To foster this positive racial identity building in students of color, individual and small group counseling experiences could also be appropriate. Small groups of individuals with shared experiences create interpersonal bonds and support systems for students at school. Using a strengths based model, Tucker and colleagues (2010) found that interpersonal mattering is a good indicator of student success for African Americans specifically. Feeling like they mattered at school not only affected their desire to be academically successful, it also helped mitigate external stressors outside of school.

Recommendations for Research

More research is needed around educator practices that may contribute to the achievement gap. For example, researchers should examine practices around cultural responsiveness in meeting the needs of students, especially those from at-risk populations (i.e., African American, Latina/o, low-income). Qualitative studies with African American, Latino/a, and low-income students to identify best practices of learning and mastery content for college readiness would also be appropriate. Further research should examine how policies and school environment affect students who are scoring lower on state exams and/or not completing high school requirement for college preparation. To this end, more interdisciplinary research is necessary; for example, research integrating CRT scholarship and legal studies would add value to the current knowledge base. This approach adds an eclectic richness to research regarding the achievement gap (Dixon & Rousseau, 2005). Lastly, given that a major tenet of CRT focused on the active struggle toward eliminating racial oppression, more educational research is needed that captures this. For example, action research regarding efforts at the micro (e.g. school level) and macro (e.g. district & state level) should be documented and shared.

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A Cornerstone for Success: Identifying Effective Informal Mentoring Tools and Techniques Within Secretary of The Air Force A6 Policy and Resources Directorate (SAF/A6P)

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Review of Related Literature

The purpose of this action research study was to identify best practices for supporting an informal mentoring program for Air Force employees at the Secretary of the Air Force A6P (SAF/A6P). The review of the literature focused on effective informal and formal mentoring elements within the Department of Defense (DOD) components and discusses published studies and text that have been written in the past years on this particular subject matter. This literature review explored the history, meaning, and types of mentoring. It focused on leadership attributes taught in mentoring programs, with a focus on transformational leadership attributes because it is considered the most important leadership style in the military.

Mentoring has evolved over time and has been defined in different ways depending on whether or not it is formal or informal. Some researchers have provided a detailed understanding and explanation of the roles of mentors and mentees, while others discussed the importance of mentoring relationships to both the individuals involved as well as the organizations. According to Weaver (2009), the importance of mentors includes the cycle of experiential learning, in which, —mentors play key roles at each stage of the cycle and especially offering challenge and support for risk-taking in a safe environment (p. 35). Specific variables that have been found to enable enhanced opportunities and success included mentoring relationships and support networks, in addition to other factors such as recruitment strategies, commitment to diversity, orientation, and professional preparation (Gardner, 2008). A mentor relationship benefits the mentee, the mentor, and the organization. It supports performance, productivity, satisfaction, and commitment.

While there has been verbal support for military mentoring relationships, time and availability can serve as constraints because of the mission and the current goals (Jahnke, 2008). Nevertheless, research on mentorship in the military has demonstrated a prevalence of informal mentorships throughout the years. This informal mentoring supports positive outcomes among the mentees and often leads to the mentee mentoring for others (Baker et al., 2003; Johnson et al., 2001; McGuire, 2007; Steinberg & Foley, 1999). To determine key elements for improving the informal mentoring going on in SAF/A6P, research must look at the value, benefits, and drawbacks of informal versus formal mentor relationships; the importance of aspects of accountability and oversight; and the resultant effects on mentor and mentee outcomes and benefits, in terms of personal and career growth and knowledge transfer.

This chapter was historically organized and guided by the research questions related to Air Force mentoring. Subsequently, the main topics were further divided into subtopics: historical background of mentorship; definitions of mentoring; distinctions between informal and formal mentorships; leadership models; benefits of mentor relationships; mentoring in the military; Air Force mentoring policy; guidance

for formal mentoring programs and research; and the gaps in the literature. The organization of the literature review is illustrated in Table 1.

Table 1

Synopsis of Sources in the Literature Review

Reference Type	Total	Less than 5 Years	Greater than 5 Years	n.d
<i>Peer-based research journal</i>	46	27	19	
<i>Dissertations and research papers</i>	12	11	1	
<i>Books</i>	7	2	5	
<i>Websites</i>	3	3	0	
<i>Total</i>	68	43	25	

Note: Of the sources greater than 5 years, 10 are from the historical background section, offering the historical significance and theoretical framework behind the concepts.

Documentation

The analysis of the literature review required the researcher to obtain information from published articles, books, periodicals, newspapers, magazines, newsletters, and dissertations. These materials were retrieved from ProQuest, EBSCOhost, First Search, Worldcat, Google, GAO website, OPM website, Air University website, Navy website, Army website, and the Air Force Portal. The key words used by the researcher included mentoring, leadership, leadership development, career development, mentors, protégé, mentee, management, DOD, Air Force, Navy, human resources, benefits of mentoring, best practices for mentoring programs, mentor programs, senior leaders, employee mentoring program, Army mentor programs, OPM mentoring programs, federal employee mentoring programs, government mentoring programs, Air Force policy on mentoring, Air Force guidance on mentoring, Air Force instructions for mentoring, Air Force best practices on mentoring, Air Force key elements for effective mentoring, Air Force leaders, Air Force Total Force, Air Force employee development, federal government mentoring programs, managers as mentors, supervisors as mentors, mentoring benefits, peer mentoring, employee development programs, informal mentoring programs, formal mentoring programs, developing leaders, leaders, leadership qualities, leadership attributes, attributes of leaders, common attributes for leaders, different management styles, leadership styles, good leaders, organizational leadership, leaders in

organizations, business leaders, goals of leaders, leadership goals, successful leaders, leading success, transformational leadership, leadership models, models of leadership, models of government leaders, important leadership attributes, military leadership skills, leadership skills, mentor skills, history of mentoring, leadership integrity, integrity of leaders, best rated leadership attributes, top five leadership skills, and mentoring program emphasis.

Review of Literature

The literature review provides a historical background of mentoring; formal and informal mentoring practices; the connection between leadership attributes and mentorship. The theory and research specific to the problem is discussed along with the benefits of mentoring, best practices, and Armed Forces mentoring. Finally gaps in the literature are defined and the chapter concludes with a summary.

Historical Background

The concept of mentoring dates back to ancient Greece, where mentor relationships were used to develop young professionals (Sipe, 2002). The word mentor stems from the Greek word meaning enduring (Dennis, 1993). When the goddess Athena provided advice and counsel to the son of Odysseus to help him find his father, she demonstrated mentorship (Rodenhauser, Rudisill, & Dvorak, 2000). Indeed, many of Athena's traits in this role (i.e., age, wisdom, friendship, nurturing, and guidance) remain elemental to the model of a mentor (Rodenhauser et al., 2000).

A mentor is defined as a person who guides another to avenues of success (Young & Wright, 2001). A mentor should manifest personal traits and abilities in modeling, coaching, guiding, nurturing, and teaching, for the purpose of supporting, advising, and contributing to the positive development of the mentee (Young & Wright, 2001).

Holliday (2001) asserted that mentoring often occurs in exchange of personal information or experiences where the mentee benefits by learning new skills, and gaining different interests or perspectives. Galbraith (2003) agreed that mentoring relationships involve reciprocity between the mentee and mentor to include elements of—dialogue, caring, challenging, authenticity, emotion, passion, growth, development, and identity (p. 9). Zachary (2005) stated that an organization's history, experiences, and training define mentoring for that organization.

According to Johnson and Andersen (2010):

Mentoring is a developmental relationship in which a more experienced person serves as a guide, role model, teacher, and sponsor for a less experienced person—usually in the same organization. A mentor typically becomes invested in the career progression and development of the protégé or mentee and often provides such essential functions as counsel, challenge, and support (p. 113).

The relationship is inherently defined by the roles of the mentor and the mentee, in which the role of a mentor is to help develop a mentee to their fullest potential and the role of a mentee (or protégé) is to learn from the mentor and apply the skills and knowledge that the mentor has shared in order to advance them in their personal or professional lives. Gardner (2008) defined a mentor as someone in a position of power who gives advice to a protégé or highlights the protégé's contributions to upper management. Murray (2006) suggested that age does not define mentoring, but rather that it is the experience and knowledge of one peer over another that is shared between two peers, which defines the relationship.

This notion was supported by Gardner (2008), who added, —more general definitions of mentoring view the process as simply a relationship involving a more experienced professional serving as a supportive and guiding role model for another professional who is less experienced in the field (p. 47). The importance of mentoring was noted on many levels in terms of personal and career development. Roman (2008), citing the importance of mentors to minorities and women when he asserted that having Anglo mentors helped minorities and women attain credibility, confidence, and access in networks made up of predominantly white men.

These findings are significant because they help define mentorship and create a foundation on which to base this research. Mentoring programs should be an avenue for both individuals (mentor and mentee) to grow. Shaw and Linnecar (2007) asserted that learning can be achieved through experiences exchanged between the mentee and mentor via conversations, reflections, explorations, and questioning.

Mentoring is about sharing knowledge with others for the purpose of the growth and prosperity of both the organization and the individual (Bailey, 2003). As such, the mentor is skilled and knowledgeable, and demonstrates commitment to the organization and the improvement of mentee skills through advisement, caring, nurturing, and coaching (Young & Wright, 2001). Mentoring can either be formal or informal and can be used by the organization as a means of assisting in the organizational and personal development of a new recruit in terms of knowledge of values, beliefs, and practices, thus serving to instill the organizational culture in the individual (Navy Medical Service Corps, 1998).

Informal versus Formal Mentoring

Mentoring programs and relationships typically exist in two distinct modes: formal or informal. In the context of a formal mentoring program, the organization supports and oversees the development of the relationship between a senior mentor and a more junior mentee. The relationship is generally structured with clear organizational goals (Halcisak, 2011). In contrast, an informal mentor relationship reflects a relationship that was developed spontaneously and without organizational involvement. It generally has little to no structure, no organizational oversight, and may not have any defined goals established (Halcisak, 2011).

Informal mentoring relationships are considered to happen naturally, developing over time (Egan & Song, 2008; Jahnke, 2008; Johnson & Anderson, 2010). These relationships result from one-on-one, informal interactions, often motivated by the shared interests and needs of the individuals and are often mutually initiated (Allen, Eby, Poteet, & Lentz, 2006; Egan & Song, 2008; Johnson & Anderson, 2010; Siegel, Schultz, & Landy, 2011). Informal mentor relationships have no set timeframe, but rather, last as long as the two participants remain involved. The relationship itself may change over time as the needs of the mentor or mentee change (Siegel et al., 2011). As noted by Ragins and Verbos (2007), these relationships are typically less outwardly noticeable compared to formal mentorships. One of the disadvantages of informal mentoring relationships is that minorities and women typically lack access and opportunity for informal mentoring relationships with —likel individuals due to the limited numbers of minority and female senior ranks retained (Matthews, 2011).

Formal mentoring programs are structured and organizationally sponsored. In a formal program, the mentor and mentee are typically assigned or matched by the employer or organization with the goal of facilitating and supporting professional relationships over a specified timeframe (Siegel et al., 2007; Wanberg, Welsch, & Hezlett, 2003). Research has remained divided on the varying impact of formal versus informal mentoring. Mentoring literature has provided evidence that the psychosocial benefits of mentoring are significant at lower professional levels and related more to formal, rather than informal mentoring models (Chao, Walz, & Garnder, 1992; Allen et al., 2006). Other studies have demonstrated a more

significant influence of informal mentoring on personal development at the more senior levels of management (Siegel et al., 2011). Table 2 provides a comparison between informal and formal mentoring according to the four dimensions described by Chao (2009).

Table 2

Distinguishing Dimensions of Formal and Informal Mentoring

	Intensity	Visibility	Focus	Duration
Formal Mentoring	Less emotionally intense	Known and accepted by the organization	Prescribed by the organization	Operate within clear guidelines for meeting frequency and expectations for termination
Informal Mentoring	More emotionally intense due to a natural and intrinsic	Less visible, often operating without the endorsement or awareness of the	Generally focused on the mentee's career and psychosocial development	Unconstrained, and therefore much longer in duration

Note. Source: Chao (2001).

Research has consistently demonstrated the general superiority of informal mentoring to formal mentoring (Chao, 2009; Ragins & Cotton, 1999; Underhill, 2005). According to Underhill (2005), the greater success of informal mentoring compared to formal mentoring is due to the selection process. Underhill stated, —in informal mentoring, mentors and protégés select each other naturally as part of a mutual attraction and similarity of interests and personality characteristics (p. 303).

Leadership Attributes and the Mentorship Connection

There are several attributes that are consistent with being a good leader in an organization. To start, an organization must develop leaders in order to be successful and grow (Benjamin & O'Reilly, 2011). An effective leader possesses good listening skills, is able to lead by example (Sitkin & Hackman, 2011), and can balance staying within and outside of his or her comfort zone (Cragg & Spurgeon, 2007). Being helpful and committed to the organization are strong leadership traits that help an organization to become more successful (Caldwell, 2011). The ability to empower others is a key element to successfully leading people (Cragg & Spurgeon, 2007). Opinion leaders have a huge effect on the people who follow them (Van Den Brink, Rusinowska, & Steffen 2011), and mentoring staff serve to enhance leader efficacy and performance (Lester, Hannah, Harms, Volglegesang, & Avolio, 2011).

Possessing depth and breadth of knowledge along with the ability to adapt are key elements of a good leader (Hargrove & Sitkin, 2011). True leaders gain buy-in from staff (Hansen, Kraemmmargard, & Mathiassen, 2011) and effectively influence and lead their employees' reactions to organizational change (Oreg & Berson, 2011). Self-awareness, self-management, and learning to be socially aware are key characteristics of an effective and productive leader (Petriglieri, Wood, & Petriglieri, 2011; Schyns, Kiefer, Kerschreiter, & Tymon, 2011). Gaining these skills can be achieved through a mentor relationship. As such,

transformational leaders empower their employees by showing devotion to the organization and by creating a sense of belonging (Hoffman, Bynum, Piccolo, & Sutton, 2011). Such innovative, flexible leaders are crucial in dynamic organizations that are required to do more with fewer resources. Warrick and Mueller (2011) stated that job satisfaction, job performance, employee commitment, and trust are instrumental in organizational development. Leaders must be visionaries who display passion, are inspirational, and communicate this vision in order to influence staff to change and grow, which in turn, will enable the organization to be successful. Mentoring can help organizations prime the next generation of successful transformational leaders through senior level managers providing advice, insight, knowledge and experience to middle and junior level managers.

According to Boddie (2009), leadership is about influencing others into some type of action. Transformational leaders persuade members to strive to achieve group goals through motivating the members to —consider the greater good (Boddie, 2009, p. 12).

Indeed, transformational leadership has been shown to elicit positive changes in organizations, results that are achieved through personal charisma and by engaging and inspiring their followers (Boddie, 2009). To describe the essence of transformational leadership, Boddie offered the Vision, Integrity, Communication, Inspiration, and Empowerment (VICIE) model of transformational leadership. All five VICIE elements are required to make the leader and must be sufficiently present to demonstrate transformational leadership. As such, transformational leadership is demonstrated through (a) vision, in terms of articulating a clear and compelling view of the future; (b) integrity, in knowing and doing the right thing; (c) communication, information and knowledge sharing; (d) inspiration, through inspiring and encouraging others (followers) to challenge the norm and to think outside the box with innovation and creativity, and (e) empowerment, through collaborative sharing information and knowledge, with an emphasis on employee development and rewards (Boddie, 2009).

From this framework, Boddie (2009) asserted that transformational leadership provided significant improvement in long-term organizational performance. However, transformational leadership is based on communication, inspiration, and empowerment. Mentorship dovetails with transformational leadership in that it is a way to enhance communication, knowledge sharing, and inspiration through individual level relationships.

In the military, and more specifically, the Air Force, leadership is recognized as critical to the successful completion of the mission (AFPD, 2008). In 1948, leadership was seen as an intangible skill or quality:

The very fact that leadership is an art should discourage your becoming a mechanical leader. Leadership does not provide formulas, rules, or methods that will fit every situation. Leadership is an intangible quality which cannot be seen, felt, or measured except through its results. Moreover, you cannot predict the results with mathematical accuracy. If you have skill as a leader, however, you can predict results within the limits of your objectives (Air Force Manual, as cited by AFDD 1-1, p. 24).

Current Air Force documentation defines leadership in terms of three core values of integrity, service before others (incorporating concepts of loyalty, selflessness, and sense of responsibility), and excellence in all we do (encompassing commitment, energy, decisiveness, professional ability, emotional stability, and humaneness) (AFDD 1-1).

Theory and Research Specific to the Problem Benefits of Mentoring

A strong mentor program within any organization, formal or informal, benefits both the mentor and the mentee such that the mentee gains valuable training and advice from an organizational leader with more experience, and the mentor gains the fresh insight and new perspective of the more junior mentee (Matthews, 2011). Research in the civilian sector over the past 30 years has demonstrated the positive effects of mentoring, not only on an organizational level in terms of recruitment, retention, diversity, employee satisfaction and morale, and knowledge transfer (Johnson & Ridley 2008), but also on a personal mentee level in terms of career success, promotion, and productivity (Chao, 2009; Eby, Alien, Evan, Ng, & Dubois, 2008; Haggard, Dougherty, Turban, & Wilbanks, 2010; Kammeyer-Mueller & Judge, 2008; Tonidandel, Avery, Phillips, & McKensy (2007). Personal and professional growth at the individual level serves to contribute positively to the organizational success, which is also enhanced by the increased level of commitment on the part of the mentor to not only the mentee, but also to the organization (Jahnke, 2008).

Across a variety of organizations, research has shown that mentored employees demonstrate an increase in promotions, productivity, confidence, and competence along with decreased stress, more positive attitudes, increased levels of job satisfaction, and increased commitment to the organization (Chao, 2009; Colarelli & Bishop, 1990; Eby et al., 2008; Kammeyer-Mueller & Judge, 2008). According to Hollis (2003), mentorship contributes to the creation of strong leaders while also developing loyalty, competency, and a sense of camaraderie among employees. Murrell, Blake-Beard, Porter, and Perkins-Williamson (2008) asserted inter-organizational formal mentoring provides access to mentoring relationships for the diversity of the work force. These mentor relationships, according to Murrell et al. (2011) declared that trust and psychosocial support, access to organizational power, and the ability to participate in the sharing of social capital across organizational boundaries.

The Institute of Management and Administration (IOMA, 2010) reported that 71% of Fortune 500 corporations implement mentoring programs, with 62% of the employees participating in such mentor programs reporting being likely to remain with the current employer. In addition, the American Society for Training and Development (ASTD, as cited by Kaye, 2002) reported an 88% increase in managerial productivity with the addition of mentoring to employee training, compared with a 24% increase in productivity with training alone.

On meta-analysis of the related research, the benefits of mentor relationships were demonstrated to be consistent across disciplines (Byrne, Dik, & Chiaburu, 2008; Kammeyer-Mueller & Judge, 2008). For example, Shannon (2009) examined mentoring in State Vocational Rehabilitation Agencies and found positive relationships between career related functions of mentoring and career motivation and job satisfaction; whereas, the results of a study by Gothard (2009), in which the benefits of mentoring were explored in a college institute, suggested that mentoring was beneficial to the collegiate organization under investigation. Eby et al. (2008) found that among 112 research studies on mentoring, the results indicated statistically significant positive correlations with the variables of performance, retention, and citizenship behavior associated with the organization, positive attitude, personal health, interpersonal relationships, career recognition, and overall competence.

Thus, mentoring provides many organizational benefits. These can include enhanced employee retention, reduced turnover, and rapid induction/orientation of new employees, providing needed guidance to organizational expectations, and enhanced leadership development (Dash, Gupta, Roy, & Muthyala, 2012). As a result, many organizations include formal and informal mentoring programs in their strategic organizational development plans.

Mentoring Best Practices

In order to most effectively gain the benefits from mentor experiences, understanding and implementing mentoring best practices is crucial. Many questions stem from operational aspects of mentoring programs (Dash et al., 2012). Operational aspects of a mentor programming can include identification of individuals who would require or would most benefit from mentoring, the role of managers in mentoring processes, and how to most effectively match up or pair mentors with mentees (Dash et al., 2012).

Perrone (as cited by Dash et al., 2012) presented six steps for achieving a successful formal mentoring program. These steps included (a) defining the context by stating and clarifying the organizational goals for the mentor program and the positioning of the mentor program within the organizational long-term strategy; (b) establishing a mentoring strategy, which serves to develop the guidelines for the mentor program; (c) managing selection by matching/pairing of mentors with mentees; (d) providing mentor/mentee skill training, to provide adequate tools for a successful mentor-mentee relationship; (e) providing mentors and mentees with a guided approach, serving to assist participants with setting goals for the relationship; and (f) following a continuous review process, to ensure quality and improvement, where needed. Dash et al. (2012) asserted that each of these steps provided by Perrone is essential to the success of a mentor program. In addition, Dash et al. suggested that the mentor clearly delineate the scope of the mentor – mentee relationship.

The Office of Personnel Management (OPM, 2008) described and recommended best practices for implementing a mentoring program:

1. **Developing a recruitment and marketing strategy/plan:** This will serve to recruit mentors and mentees to the program, highlighting the value of mentor relationships, particularly to potential mentors.
2. **Matching mentors and mentees:** An effective matching process is key to productive mentor programs. Some web-based mentor tools are able to reduce administrative costs and paperwork involved in matching mentees with mentors through electronically matching participants, tracking their needs, and providing development materials. This process may include matching mentors and mentees with similar interests, same race/ethnicity, or same gender; determination of mentor goals; tracking mentor activities; accessing resources; and even conducting evaluations of the program.
3. **Conducting a program orientation:** The orientation can serve to assist in the matching process as well as getting the relationship started. Orientations can provide workshops on the tools and techniques to initiate and grow the mentor relationship.
4. **Developing an instructional guide:** An instructional guide for mentors and mentees should, according to the OPM (2008), include defining the mentor relationship, roles, and expectations, recommended topics to cover at mentor/mentee meetings, time commitments of mentors/mentees, and critical skills and/or competencies for successful mentor relationships to grow.
5. **Developing instructional guide for supervisors:** The OPM (2008) also recommended the development of a separate instructional guide for supervisors, who can be critical to the success of the program. Such a guide can include suggested time commitments of mentors/mentees, benefits to both the mentor and mentee as well as the supervisor, and the supervisor's role.
6. **Conducting a pilot program:** The OPM (2008) suggested that organizations conduct a pilot program prior to implementation of a full-scale mentor program. It was also recommended that the pilot

include a mechanism for continuous feedback, such as evaluations, surveys, interviews, observations, etc. This input can then be used to form the mentor program.

7. Developing a mentoring agreement: This can be accomplished via a standard mentoring agreement or mentors and mentees can develop their own agreements. It was recommended that such an agreement should define roles, responsibilities, and expectations; an action plan with targeted completion date; meeting times/dates; and confidentiality statements and termination agreements.

8. Developing a mentoring action plan: OPM (2008) noted that agencies with successful mentor programs require the development of an action plan between the mentor and mentee, which serves to outline goals and objectives, and activities to accomplish these goals.

9. Providing a list of topics to discuss: This can be used to assist mentors and mentees in terms of promoting positive and productive discussions, which further assist in the development of the relationship.

10. Providing developmental activities: Such activities, programs, and professional development represent activities that the mentors and mentees can attend together and can be used for further discussion.

11. Conducting an evaluation: It was recommended that evaluations be conducted throughout the process/program. Evaluations can reveal valuable information for the program and possible changes for improvements. OPM (2008) recommended that evaluations should be conducted at least twice, once in the middle of the program and once at the end.

12. Conducting an end of program graduation or recognition ceremony: OPM (2008) recognized that agencies with successful mentoring programs tend to have a program in place for graduation/recognition of participants.

However, given the structure of these best practices, they seem to be limited to a more formal mentor model. The OPM (2008) also acknowledged four types of mentors: career guides, information source, friend, and intellectual guide. The OPM also noted that informal mentoring has minimal, if any, structure and oversight, which seems to contradict these recommendations, suggesting these recommendations are directed at more formal mentor programs.

Similarly, Pease (2009) cited nine elements that make mentor experiences memorable. These included (a) develop of mutual trust, (b) expand and challenge thinking, (c) provide meaningful feedback, (d) offer alternatives, (e) allow reflection, (f) develop action plans, (g) be selfless, (h) learn from each other, and (i) extend the development. These elements are similar to the previously mentioned critical components or best practices offered by the OPM (2008), but seem to be more easily applied to an informal mentor situation.

Freedman (2008) separated mentoring into two categories: career, and psychosocial. Freedman described career mentoring as directed specifically toward support of a mentee's career success. Psychosocial mentoring was defined in relation to personal aspects of a relationship serving to support a mentee's career/professional identity and confidence. Without specifying one type over the other, Freedman noted the importance of feedback and the possible need for various forms of support, which can be garnered through different types of mentor relationships. Freedman stated, —In fostering mentoring relationships, feedback is a powerful vehicle for learning and a critical mechanism. Different kinds of mentoring may be needed for support and giving and receiving feedback at different stages [of a career] (p. 4). However, research supporting best practices for informal mentor relationships seems to remain lacking.

Mentoring in the Armed Forces

The USAF has had formal support for mentoring since 1996 (U.S. Air Force, Air Force Instruction [AFI] 36-3401, 2000), but since 2007, there has been a profound increase in formal mentoring programs across all of the armed forces. This increase stems primarily from the success of civilian corporate based mentor programs in terms of corporate recruitment, employee retention, as well as other personal and organizational level benefits (Johnson & Anderson, 2010). The Army, Navy, Air Force, and Marines all have incorporated mentor programs and guidelines. These programs tend to assign mentors, require detailed interaction for the mentor/mentee relationship and pre-defined goals centered on developing leadership skills (Jahnke, 2008; Wallace, 2007). Wallace (2007) described both the need for and difficulties with successful implementation of mentor programs:

As leaders, we don't always recognize the importance or value of mentoring. We have become consumed with mission accomplishment. We tend to do our supervisory chores by rote. Yet, we are surprised when we recognize that the civilian workforce that will replace us in the future is ill prepared to assume leadership roles (p. 1).

Among the military civilian workforce, although no formal program seems to be in place, the organization places responsibility in the hands of the supervisors to use mentoring relationship building as a means to meet leadership demands of the future (Jahnke, 2008). Prevalence and Outcomes of Mentoring in the Military Limited research was uncovered related specifically to military mentoring practices. Several Navy studies demonstrated the prevalence of mentor relationships within the organization (Baker et al., 2003; Johnson et al., 2001). Both studies had sample sizes over 500 and the results demonstrated that between 40-45% of all naval participants reported having significant mentor relationships while at the Naval Academy. Results also indicated a greater prevalence of being/having been mentored among female midshipmen (63%) compared with male midshipmen (45%). Those who served as mentors tended to be military officers (41%), civilian faculty (30%), and senior midshipmen (28%). Also, the students who reported having been mentored in the Academy also reported a greater level of satisfaction with their educational experience and were more likely to mentor others later (Baker et al., 2003).

The third study, conducted by Johnson et al. (1999), was a retrospective study of the mentor experiences of retired admirals. Of the 691 participants who responded to the survey, 67% described having at least one mentor in their officer career, with many reporting at least three. These mentor relationships were reportedly initiated by the mentors or resultant from mutual interests. Participants who reported having mentors were more satisfied with their Navy experience compared to those who did not have a mentor. The study reported the perception of importance that mentoring has in the Navy.

Two studies focused on mentor relationships in the Army. A larger survey was conducted with Army personnel using a sample of 3,715 respondents (Steinberg & Foley, 1999). The majority of all participants, 84%, reported having a mentor during their career. This finding was consistent across senior officers' status, (commissioned and noncommissioned) gender, and racial demographics. In a study on mentoring in the military using a sample of 305 senior military officers at the National War College,

McGuire (2007) found that 91% of the participants had been mentored during their military career and 87% of the participants had served as a mentor for others. Subjects cited both career and psychosocial benefits received from mentoring relationships.

These studies on mentoring in the military therefore suggest that mentoring increases satisfaction with the military experience (educational or career); promotes continued participation in mentoring as a

mentor later in life; does not demonstrate inherent gender or racial disparities, and tends to be initiated by the senior individual (mentor).

Need for Knowledge Sharing/Transfer

Mentoring benefits both the aging and younger generations because of the information exchange and talent development that is good for future organizational success (Teller, 2011). As more and more senior level personnel leave their positions, due to retirement, non-military opportunities, disablement, and forced reduction (for example, Base Realignment and Closures (BRAC) for military personnel), there is a need to transfer the knowledge, insight, and experience of these professionals to the mid- and junior-level (Halcsisak, 2011). Kaplan (2008) asserted that mentoring provides a—deliberate and structured means to capture and transfer the requisite know-how and know-why that comprises the experiential side of this multidimensional (para. 4). Figure 2 was used by Kaplan to illustrate the real and desired levels of knowledge/experience among senior, middle, and junior managers in the federal acquisition community. This desired shift in the knowledge/experience base can be accomplished, according to Kaplan, through use of mentorship and internship opportunities.

Figure 2. Moving from actual to desired knowledge and experience levels (Kaplan, 2008, para. 4).

Thus, there have been demonstrated successes and benefits, on both the personal and organizational levels, resulting from mentor relationships. Stemming from these successes, there has been a trend among business and other organizations toward implementation of formal mentoring programs (Chao, 2009). According to Jahnke (2008), —with the transformation of the military, a combination of the best civilian and military mentoring concepts—both old and new—should be considered an important part of developing...the strategic leaders for future generations (p. 2). This is true among the armed forces, and more specifically among Air Force personnel, as well (Johnson & Anderson, 2011).

Air Force Mentoring Directives

The Air Force maintains an emphasis on the importance of informal mentor relationships and strives to foster a mentor culture through expected participation from all airmen in some type of mentor/mentee role (AFMAN 36-2643). Indeed, the Air Force has a history of supporting mentor relationships in the development of its force.

According to Dr. Patricia McGill Chief, Senior Leader Development Force Development Integration Division (AF/A1DI):

[The] Air Force has had a long history of mentoring airmen. The mentoring program was first formally recognized with Air Force Policy Directive (AFPD) 36-34, 1 Jul 2000, which provided guidance for its implementation. The program, at that time, was expanded beyond company grade officers to the entire force. (Dr. McGill, personal communication, Sept 17, 2012).

As such, the Air Force expects leaders to support a force development process that includes the use of mentoring. Air Force leaders are developed through education and training along with mentoring provided by experienced leaders; therefore, mentoring is viewed as—a fundamental responsibility of all Air Force leaders (Manly, Evans, & Harrison, 2010, p. 5) and is essential to the progress of both airmen and civilians in the Air Force (AFDD1-1, 2011). Yet, mentoring is not a formalized program in the Air Force. Although expected, mentoring remains strictly volunteer-based. Individual commanders hold the responsibility for the promotion of mentoring in their respective units (AFRC PAM 36-3401, 2000). The

Air Force guidelines for mentoring rely heavily on the role of the leadership in the professional development of the force (AFRC PAM 36-3401, 2000).

Total force development encompasses educational programs; executive education opportunities; graduate and undergraduate degree programs; training programs; experience gained through job assignments; special programs; industry education; fellowships; and mentoring (AFI 36-2640, 2008). Indeed, the Air Force offers a definition of training that is inclusive of mentoring at its core:

A set of events or activities presented in a structured or planned manner through one or more media for the attainment and retention of skills, knowledge and attitudes required to meet job performance requirements. This involves the coaching and mentoring of airmen, resulting in proficiency development. (AFI 36-2640, 2008, p. 18)

According to the most recent draft of the Air Force Mentoring Program (AFMAN 36-2643), —Mentoring is an inherent responsibility of leadership. The direct involvement of military and civilian leaders in the professional development of their people is essential to the mentoring process. The draft specifies direct benefits of mentoring, which included elements related to the preparation of Airmen for the increased responsibilities associated with career progression. These benefits included improved morale, personal career development, and competency mastery, core values translated into actions, enhanced engagement, and retention of airmen.

The draft also detailed specific objectives for the mentoring program in the Air Force: personnel promotion; professional growth; occupational competency, organization familiarization to new airmen, and to serve as a catalyst for knowledge sharing between leaders and subordinates (AFMAN 36-2643). To meet these objectives, guidelines were provided to the mentors and mentees. Mentors are asked to serve as advisors by sharing knowledge and experience; coaches by supporting the development of subordinates; facilitators by supporting problem solving and career progression of subordinates; and advocates by recommending opportunities to mentee (AFMAN 36-2643). Mentees are also offered guidelines to promote active involvement and engagement; work with mentors to create personal development plans, and remain open to feedback offered by mentors.

Thus, although not a formal program, informal mentoring is not only supported, but expected through the existence of a strong mentoring culture within the Air Force. However, this assumption of a strong mentoring culture may be more of a desired, or optimal culture, rather than the current reality.

Gaps Between Desired and Actual Mentor Culture in the Air Force

Research studies on Air Force mentoring programs have demonstrated a focus on career management rather than leadership development (Budd, 2007). Budd asserted that senior leaders in the Air Force viewed the mentor role as more of a—sponsorship of a more junior officer to serve to help that junior officer to get the—right jobs and the—right time, resulting in earlier promotion (Budd, 2007, p. 17). As a result, Budd conducted a research study to explore the possible gap between the desired mentor culture in the USAF versus the actual mentor culture that exists. Dr. Budd gathered data from various focus groups and attendees of briefings that he led (Dr. Budd, personal communication, March 21, 2012).

Budd (2007) interviewed a sample of 10 managers at various levels (workforce personnel categories: enlisted, officer, and civilian government employees) and 80 students. The goal was to discover the participants' thoughts on good mentor characteristics, mentees' needs most, and suggestions for making mentoring a more consistent priority. The results are discussed for each.

1. **What Makes a Good Mentor:** The data from the study suggested that good mentors were seen as individuals who not only make time for the mentee(s), but —seek them out and listen to their concerns (Budd, 2007, p. 17). Participants reported that a good mentor —understands that mentoring can develop a positive impact on people (Budd, 2007, p. 17). Taking the time to seek out mentees, provides the ability to align performance at the individual level with organization goals.

2. **What Mentees Need Most:** The study results given by Budd (2007) indicated that the mentee needs from the mentor included giving guidance, setting the example as role models, listening and providing feedback, providing challenges and support, and equipping the mentee with skills for greater levels of performance. Mentees described wanting to know where they fit into the organization and how they could affect change.

3. **Making Mentoring a Priority:** Budd (2007) described the importance of placing priority on mentoring. The participants noted the belief and perception that mentoring is an—essential responsibility (Budd 2007, p. 20), while also admitting to the challenges in finding or creating the necessary time for the commitment.

The recommendations given by Budd (2007) suggested that senior leadership reflect the value of mentoring consistently and that every such leader should be rated or scored on his or her mentorship role, making them accountable for results. Mentorship was felt to be best as an informal program, which will also maintain the numbers of volunteers to be mentors for others (Budd, 2007). Overall, Budd asserted that mentoring should be highly respected and rewarded cultural component of the organization.

Literature Summary

Although the benefits of both informal and formal mentorships have been demonstrated by the research described in this literature review, it remains unclear as to whether the Air Force should implement and/or support one form of mentorship over the other. Should programs implement a formal, stringent program requiring significant oversight and requirements or would a more hands-off, informal approach to mentorship would be more beneficial? A formal approach provides strong benefits to the mentee in terms of greater positive outcomes resulting from the perceived management support and required high frequency of dyad involvement (Eby, Lockwood, & Butts, 2006). In contrast, when mentors feel a higher degree of accountability, the mentors become less willing to contribute or participate voluntarily (Eby et al., 2006). Indeed, Eby et al. (2006) asserted, —Increasing mentor accountability may backfire on organizations by turning off potentially good mentors to mentoring (p. 286). Implementation of the—right (p. 286). Implementation of the—right program will require a balance in terms of mentor support, oversight, and accountability (Eby et al., 2006). The answer to this question may lie in the perceptions and needs of the potential mentors and mentees themselves.

The review of the literature provided definitions and history with regard to mentoring, informal and formal, and the roles of mentors and mentees. In addition, research revealing the benefits of mentorship was discussed to highlight the opportunities to enhance the needed knowledge sharing and leadership advancement of the next generation of leaders in the Air Force at the Secretary of the Air Force A6P. Research on military mentor programs demonstrates a predominance of beneficial informal mentoring that has been supported, but not necessarily formally promoted by the various military sectors. To assess the needs and best practices for mentor programming within the Air Force at the Secretary of the Air Force A6P, additional research is needed specific to this population and the perceived needs of the potential mentors and mentees involved.

Contribution of the Study

This study will attempt to add to the body of knowledge in literature with regard to informal mentoring and the makings of an effective informal mentorship program within Secretary of the Air ForceA6 Policy and Resources Directorate. It will also attempt to acknowledge various other benefits of mentoring that could positively influence one's career (Shannon, 2009). The study will be significant through the identification of key informal mentoring tools and techniques and how these informal mentoring tools and techniques can be more widely accepted.

Chapter 3 identifies the proposed methodology for the study that was used to accomplish this goal. In addition, the chapter details the sample, data collection, and data analysis to reveal the proposed procedures for answering the research questions of the study. The chapter also provides information on the validity and reliability and the protection of human rights.

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“Do HBCU Professors Over Nurture their African-American Students? A Discussion”

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I have been instructing on the college level full-time since 2000 and instructing since 1996. During my tenure as an instructor at Jackson State University, I have witnessed a change in the students that choose historically Black colleges and universities (HBCUs). I have often heard my colleagues declare. “Students are getting worse and worse.” I am not so sure if it is the students who are getting worse or the systems that are preparing them for their life/university experiences. Although state-funded HBCUs have a good number of students who scored 1500 and above on the SAT and 26 and higher on the ACT, it appears that a larger proportion of the high achievers attend the private HBCUs for the status that is attached to those Howards, Hamptons and Fisks. I believe I can speak for my colleagues when I say that while we are elated to have our careers, it can be draining at times to teach African-American students at HBCUs. As professors, we have to remember that these students may have parents who have no college experience. More importantly, we have to remember that these students may have been passed along by high school teachers because President George W. Bush, in all his infinite wisdom, said that no child should be left behind. So as professors we are somewhat tempted to over nurture our students. For the purpose of this paper, I have defined over nurturing as an abundance of hand holding or coddling students by an authoritative figure to the point where students stop developing mentally. Perhaps this is a harsh definition; however, this is what happens when we over nurture our students. Needless to say, I give credence to the fact that HBCU professors have a tendency to over nurture African-American students.

First of all, we know that as a culture, we still have so many children whose parents have no college experience. So college is a culture shock to these students in particular. Not only is college a culture shock but so is accountability. Many students have not heard the sentence, “Either do this or this will happen.” As professors we may be sympathetic. We have an inclination to blame society for their shortcomings rather than to encourage them to develop their abilities. In turn, it can cause us to lower our standards as to what we expect from our students. For example, in the Spring Semester I teach ENG 105. This class second half of freshman English that all students at Jackson State University must take unless they are English majors or honor students in which case they will take ENG 112 and 112. In ENG 105 students are required to write a documented research paper. Now when I first started teaching this class in Spring 2001, I told my students that their paper had to be at least twelve typed pages including the Works Cited page. Since the time I have taught this class, I have had to shorten the required pages from twelve to nine. Why? Because students cannot find enough research on their topic. They cannot fathom writing anything that mandates thinking. They do not know the difference between primary, secondary and tertiary sources. I figure that if they have less accountability, then they will do better.

Secondly, we know as a culture that most of these students come from lower-income families. According to Mikyong Minsun Kim’s article “Historically Black vs. White Institutions: Academic Development among Black Students”, students at Black institutions tend to be more socio-economically disadvantaged. This may be because students whose families focus on their surviving or those who push

hard-working as most proletariats do over academic development may have a difficult time in the education-driven society. In contrast, those students who have had opportunities because their parents could afford the parochial schools or other private schools will be better prepared for the university experience. I know that in my eighteen years of teaching college English, I have encountered many students that do not have enough funds to purchase the textbook (s) for my class. These students will attempt to share the textbook with their classmates, sometimes with negative results. In situations like these, I have been known to let students borrow my book if it was not the instructor's edition and to make copies from my book if at all possible. I have done this because I know that not everyone's socio-economic status is the same. It just mentioned a textbook, but I have had students who come to class without a pen or paper.

Finally, however, we know that even with these cultural obstacles, these students need to know that scholastic writing dictated that they can express themselves proficiently in all areas of writing. As stated by Paola Uccelli, Christina L. Dobbs, and Jessica Scott in the study "Mastering Academic Language: Organization and Stance in the Persuasive Writing of High School Students"

This view also implies that some speakers/writers might be successful language users in some social contexts (e.g., sharing personal anecdotes with friends yet much less skilled in other contexts (e.g., constructing effective arguments at school)...It is important to attend the new language demands of school learning, especially in light of research documenting the substantial language challenges faced by many adolescent struggling readers and writers.

In other words, students need to know how to be *bilingual*: They need to write or speak to their friends/peers one way, and they need to know how to write or speak formally, minus text language and abbreviations. Students should not write paragraphs like the following:

There are symptoms of over nurturing that might happen in students/teacher interaction as far as course requirements are concerned. I know for a fact that some of my colleagues do not hold their students accountable for reading the syllabus. I, on the other hand, do. I clearly remember the beginning of the Fall 2014 Semester in my ENG 104 class, the first half of the ENG 104/105 requirement. I submitted the syllabus the first day of class and begged the students to carefully read it because it contains pertinent information they need to know to be successful in this class. I gave them two days to read the syllabus. I announced my first homework assignment Needless to say, the students did not read the syllabus. Much to my dismay, half of the class received failing grades because they wrote on the back of the paper, wrote past the right margin or wrote in the last space on the page. All of the above offenses are clearly stated as pet peeves in my syllabus. One of my friends who is an associate professor of history at West Chester University suggested that I give them a second chance to complete the assignment. Some of my colleagues at Jackson State University suggested the same thing. Really? Why should I? Since they did not take me seriously initially, I believe they need to know that every action has an equal and opposite reaction, whether positive or negative. If I would have allowed them another chance to do that assignment, I am basically telling them that it is acceptable to do what they want to do in college because they will have various chances to get it right. In my humble opinion, this is setting them up for failure because in the real world, people will not give them another opportunity to do an assignment or project correctly. Students need to know how the real world operated; however, when we over nurture students, they become mislead and clueless as to what is expected of them the first time.

HBCU professors also over nurture students in other areas as well. We have a tendency to constantly remind students to complete their work in a timely manner and not procrastinate. I have extended deadlines on assignments because I know that the assignments have not been completed. Why, just this semester on March 2, I extended a deadline for an assignment dealing with the research paper that was originally due February 23. We did not have class February 23 because of inclement weather. When I held

class March 2, I asked the students for the assignment. They looked at me as if I were speaking Greek. Then they said that they did not know they had an assignment due. I calmly reminded them that according to their syllabus, their Evaluation of Sources for the research paper was due February 23 and since we did not have class that night, then it was due today. Needless to say, NOT ONE STUDENT in the class had the assignment. Their look of bewilderment started to anger me. Then one student had the gall to ask me to give the class a break. I reminded them that they received a break when we had the inclement weather. Naturally, I felt inclined to give them an extension since no one did the assignment. I told them that the assignment would be due March 16 and the highest grade they could receive is a “B”. They have to submit their sentence outline for the research paper, so now they have two major assignments due when they return from Spring Break.

Although I am not guilty of this, I have had colleagues in the past that have called students when they were absent from class to tell them what they missed in class. This definitely makes the less responsible. It is a form of crippling, a result of over nurturing that can disable, impair or weaken the student. I remember when professors did not give extra credit in institutions of higher learning. Now students will ask for extra credit assignments the first week of class. Why should professors give extra credit work when they cannot do the regular credit work? If we are not careful when we over nurture students, we may end up crippling them. When students are crippled, they become trifling, lackadaisical and/or vapid about their studies. Retaking exams, as far as I am concerned, is a form of crippling also. I never fully understood this concept because it does not help the student. In actuality, it creates a problem in students not studying when they should. If I were a student, why would I study the first time when I know I will have a second chance to take the exam? Speaking of second chances, as far as HBCU English professors are concerned, we allow students far too many rewrites on essays. In my professional opinion, one rewrite is enough, and depending on the assignment, sometimes that is too much. Allowing too many rewrites is a crippling process. After one rewrite, the paper is no longer the student’s but the professor’s. Perhaps the most negative example of crippling students is being too available for them. I have office hours posted next to my door, so students will know when I can see them. This does not work all the time because they come by my office when it is convenient for them, which sometimes means that I might not be in the office. When they complain and say, “Every time I come see you, you are never in your office.” I asked, “Did you come during my office hours?” Stunned silence. I also have my office hours printed in the syllabus, but this does not always work because if the students will not read the syllabus, then they will not know when I am in my office. Students cannot also contact me by e-mail, but I do not respond immediately when they contact me. Being too available created a dependency for students. They need to know that people will not always be available when they want to see them all the time. Learning this in college teaches students that the world does not revolve around them. Being too available to students also cripples the professors because they are too preoccupied with office hours and grading papers to even think about researching, presenting and publishing.

HBCU professors do not publish as much as their counterparts at PWIs (predominately white institutions) because the latter professors do not have to teach as many classes (HBCU professors usually teach four to five classes whereas PWI professors teach three to four) and the latter is more likely to get release time for research, presenting and publishing.

The Military Decision Making Process: Antiquated for the Modern Day Business Operations

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Review of Related Literature

In this chapter, discussions are presented to introduce the decision theory and its rational, beginning with a rational decision made by Christopher Columbus in 1492 (Peterson, 2009). Other aspects on the decision theory and decision behavior are that it assists in providing an understanding on the relationship between normative and descriptive decision theories (Reidel, Nijhoff & Junk, 1989) and on reviewed literature related to the U.S. Army's purpose, steps, execution, and concern with the MDMP. The concentration of this research elaborates on the decision theory focused on the MDMP, which has been called a single, established, and proven analytical process and the U.S. Army's approach to problem solving (Department of the Army, 1997). This traditional decision-making process has been the standard process used by commanders during tactical missions since World War II (U.S. Department of the Army, 2005b). The importance of the MDMP's integral sections will be presented, including (a) problem solving steps, (b) planning, (c) mission analysis process, (d) course of action (COA) estimates from staff and commanders and (e) mission execution. The purpose of the study was to outline the current use and requirements of the MDMP and to propose, improved and a more efficient future use of the MDMP or other decision making process, for staff decision making within the JFHQ-NCR/MDW. This establishes an Army bottom-up decision-making process and by integrating a new standardized automated, shared database, for the continued development of operational processes, orders production, and communication flow. This could enable the J/G3 operations directorate of the JFHQ-NCR/MDW to execute defined mission information sharing process and new standard operating procedure regardless of the type of event, incident, or crisis in a more efficient manner. The overall intent of the research was to continue expanding the knowledge-based and decision-making systems to be used with the MDMP and establish a better "business practice" for the JFHQ-NCR/MDW. Information would be passed along to staff regarding a new standard for making better, faster, intuitive decisions with some changes to the MDMP.

Historical Background

According to Marr (2001), the MDMP was reflective of almost 100 years of institutional learning and experience of the U.S. Army, further adding that the historical versions of army field manuals had established the paramount importance of the MDMP. The seven steps and more than 40 sub-steps of the MDMP (as outlined in FM 5-0) each began with inputs that were built on previous steps; each step, in turn, had outputs that resulted in subsequent steps (U.S. Department of the Army, 2005b). A formal and deliberate MDMP has 128 sub-steps and well over 100 total subsections when followed from beginning to end according to Nawoichyk (2008). Paparone (2001) stated that, according to the Staffs Officer Field Manual, the Department of the Army War Department published the evolution of the MDMP involving the optimum use of staff in 1932. Other versions of the regulation had emphasized a primary focus on the commander with the intent of providing the leader with a systematic and analytical decision making method for the battlefield (Paparone, 2001). Over the years as military battles have become more complex, the implications of decisions and courses of action required involving more staff members in decisions (Paparone, 2001).

According to Marr (2001), during the 13-year period between the 1984 and 1997 versions of *FM 101-5*, this text was re-written ten times, and with each subsequent edition, it further re-defined the MDMP (p. 13). What made the finding significant in the revisions is how *ST 100-9* introduced several new decision-making processes that are no longer referred to in doctrine: (a) Combat Decision-Making (CDMP), (b) Deliberate Decision-Making (DDMP), and (c) Quick Decision-Making (QDMP). Marr emphasizes how each MDMP differentiated by the amount of time available and emphasis on the need for intuitive decisions. Although admittedly not a true doctrinal manual, forces in the field recognized and appreciated the compelling utilitarianism of these different processes, and in the absence of an updated *FM101-5*, *ST 100-9* became an authoritative source (Marr, 2001, p.14).

Van Creveld (1985) related that armies did not have staff until around the middle of the 19th century, when the “traditional coup d’oiel,” gave way to the German-derived estimate of the situation (pp. 33-57). Over the last several centuries a multitude of military instances showed the MDMP did not fare well: (a) Napoleon Bonaparte’s invasion of Russia in 1812, (b) General Santa Ana’s decision at the Alamo, (c) General Custer’s decision not to use Gatling guns in 1876, and (d) Adolph Hitler’s invasion of Russia in 1941. A detrimental war and learning point were illustrations of a lack of planning, preparation, and operational procedures in the orders given to Lieutenant Colonel (LTC) Smith by the division commander, Major General (MG) William F. Dean, which lacking in actionable intelligence and substantive operational planning, led to the conflict known as the Korean War (Marmion, 2010). The outbreak of the Korean War was a classic example of the U.S. Army going into a battle on the reputation of success in World War II and previous battles but undeniably unprepared for the grueling battle with North Korea. “No more task force Smiths” became a common army adage to recall the initial stages of the Korean War and it’s often cited readiness failings (Marmion, 2010). Another to an unfavorable military campaign is cited with the well-known saying of “Remember the Alamo” (Johnstone & Johnstone, 2007, p. 86). Paparone (2001) related information and provided minor details on the timeline of the MDMP and Historical Campaigns of the MDMP development (Table 1) beginning in the 1910 publication, *Regulations for Field Maneuvers* (Headquarters, Department of the Army, 1914).

Campaign	Publication Title	Orders Format	Staff Estimates	Commanders Estimates
World War I (WWI)	Regulation for Field Maneuvers	No	No	No
World War I (WWI)	Field Service Regulation (FSR)	No	No (Mentioned)	Yes
After WWI	Field Service Regulation (FSR)	Yes	No	Yes
After WWI	Staff Officers Field Manual	Yes	Yes	Yes
World War II (Preparation)	Field Manual 101-5 Staff Officers’ Field Manual: The Staff and Combat Orders	Yes	Yes	Yes

WWII (Post)	The U.S. Army Command and General Staff College (CGSC)			
Korean War	FM 101-5, Staff Officers' Field Manual: Staff Organization and Procedures	Yes	Yes	Yes
Korean War (Post)	FM 101-5, Staff Officers' Field Manual: Staff Organization and Procedures	Yes	Yes	Yes
Vietnam War	Standardization Agreement (STANAG) 2118	Yes (Allied)	Yes (Allied)	Yes (Allied)
Vietnam War	FM 101-5 Staff Officers' Field Manual: Staff Organization and Procedures	Yes	Yes	Yes
Vietnam (Post)	FM 101-5, Staff Organization and Operations	Yes	Yes	Yes
Gulf War (Post)	FM 101-5, Staff Organization and Operations	Yes	Yes	Yes
Iraq/Afghanistan Wars	FM 5-0, Army Planning and Orders Production & FM 6-0, Mission Command: Command and Control of Army Forces	Yes	Yes	Yes

Table 1 Historical Campaigns of MDMP Development.

The U.S. Army's MDMP has needed continuous updates to move from the rigidly structured and uncompromising process of the initial doctrines to a more fluid, independent, intuitive, and decentralized methodology. The complexity of wars and their progressive advancement in technological development resulted in the current revision of Army Field Manual 101-5 (U.S. Department of the Army, 1997), with updated and newly added sections in the MDMP blueprint. A newly included segment includes process design (Department of the Army, 2003). Throughout the development of a standard guideline for the MDMP, the field manual used by commanders and staff to make military decisions on the battlefield has been revised considerably. Between 1940 and 1997, the Army Field Manual 101-5 (U.S. Department of

the Army, 1997) had been revised five times and republished once, with current replacement editions in the sixth edition of the publication (U.S. Department of the Army, 2005a, 2005b).

U.S. Army Field Manual 5-0 (U.S. Department of the Army, 2005b) was addressed to planning issues only, but Field Manual 6-0 (U.S. Department of the Army, 2001b) was concentrated on command and control, staff organization and operations, the duties of and relationship between the commander and his staff, information management, rehearsals and liaisons. Although most needed during battles and tactical situations, the MDMP showed a bias in the civilian sector for decision-making strategies. Archer, Brockett, McDermott, Warwick & Christ (2006) delineated that because the transformation in technologies required to support the digital battlefield of the future was not complete, a method could be developed to train soldiers using tomorrow's technology. Archer et al.'s theory required not just that a soldier be familiarized with new pieces of digital equipment, but also with the decision making process itself, which was once intuitive, and might become more analytical as more information is presented (2006). The MDMP as explained in FM 5-0 is primarily taught to officers as most evolve to become commanders (U.S. Department of the Army, 2005b).

Harding (2007) elaborated more on another type of personnel support in decision-making. He conducted a study on the difference between civilians in the federal government who received transformational leadership training and learned a little about the MDMP, and those who did not receive any type of advanced or continued training. Harding demonstrated the differences of a work culture, continuity, and employees' ability to adapt more easily among those who received training in a set standard than among those workers who did not receive training (2007). Civilians have been an important part of the federal work force but Gardner (2004) explained the misuse of the middleman by showing that information discrimination flowed from the top down. In this process the "meso" or subunit level of the organization (House, Rousseau, & Thomas-Hunt, 1995), was left out of the operational process to create plans as the section or department leader saw fit (Gardner, 2004, p. 18).

Gardner (2004) further explained that senior managers and leaders should not just focus on the bottom line of an organization to save time and money, but also should understand who was and who would be responsible for the final decisions. If the MDMP was viewed not just as a collection of archaic documents, procedures, processes, regulations, or guidelines but rather was viewed as a record of past events and experiences to provide a future forecast for commanders, leaders might use it differently. The MDMP is only a methodology, but mixed with transforming technology, and the process is envisioned as unified and workable, the MDMP could be applied as a time saving business process as Padgett (2010) suggested.

Padgett (2010) conducted a case study on a research and development decisions among U.S. military leaders in Latin America who applied the MDMP to determine the economics of Latin America according to science and technology. Padgett explained through surveys why the MDMP, rather than other types of military decision methods, was an excellent tool to use that involved technology. Padgett (2010), suggested leaders used the MDMP provide information regarding U.S. Army leadership decision-making concerning where to locate the U.S. Army International S&T mining locations, specifically with regard to Latin America versus another world region. An additional purpose was to identify elements in the decision that could become foundational for future Army decision-making (Padgett, 2010).

This study concludes with an analysis of the MDMP 120-day model strengths and limitations and indicates aspects of the MDMP intuitive theory still to be explored. The main study described by Heiden (2005) focused on how to better use the MDMP and if it is necessary in a DoD environment.

Theory and Research Specific to the Problem

Decision-making is a daily cognitive process conducted by businesses and military leaders alike. Both military and business decision making have similar factors, these parallels include that leaders are attempting to impose their view of the future on the external environment, which includes the enemy or competitor companies (Heiden, 2005). Each military branch follows some MDMP system, though the applications are varied according to each branch's operational needs. Decision-making is the process of selecting a course of action as the one most favorable to accomplish the mission. This decision can be deliberate, using the military decision-making process (MDMP) and a full staff, or the commander alone can do it very quickly (Department of the Army, 2003). During operations, deliberate decisions usually are disseminated as fully developed written orders; less deliberate decisions are disseminated as fragmentary orders (FRAGOs) (Department of the Army, 2005b). Deciding includes knowing *if* to decide, then *when* and *what* to decide, and understanding the consequences. Decisions are how military commanders translate their vision of the end state into action. There are two ways to make decisions: analytic and intuitive (Department of the Army, 2003). Analytic Decision-making is the traditional view is that decision-making is a structured, analytic process based on generating several alternative solutions, comparing these solutions to a set of criteria, and selecting the best course of action (COA) as described in field manual 6-0, p. 2-13, 2003. This process emphasizes analytical reasoning processes, which are guided by experience and used when time is available (Department of the Army, 2003, pp. 2-11). Analytic decision-making is time-consuming but produces an optimal, more fully coordinated plan. It is not appropriate to all situations, especially decision-making during execution. The Army's analytical approach is the MDMP (Department of the Army, 2005b).

Intuitive Decision-making is the other way commanders make decisions is intuitive decision-making. Intuitive decision-making is the act of reaching a conclusion, which emphasizes pattern recognition based on knowledge, judgment, experience, education, intelligence, boldness, perception, and character (Department of the Army, 2003, p. 2-12). This approach focuses on assessment of the situation vice comparison of multiple options that is used by the U.S Army & U.S. Marine Corps. It focuses on assessing the situation rather than comparing multiple COAs. It is used when time is short or speed of decision is important, intuitive decision-making replaces methodical analysis of options with assessment, obtains a satisfactory solution rather than an optimal one, and uses analysis to refine the decision (Department of the Army, 2003, p. 2-13).

Theory for this research briefly discusses how decisions are made but further elaborate on how Klein's interpretation of decision making; intuitive and analytical plays an important role in the Army's MDMP and some of the complications with the process. Commanders make decisions on the battlefield using the MDMP but this decision-making process standard of use is applied in the same tactical structure for daily business operations. Deciphering decisions during combat situations is a complicated endeavor of determining important variables such as the final objective, the mission, resources and measurement of the overall operational performance. When using the MDMP across the Army or in the Department of Defense (DoD) as an enterprise-wide governance for different events and operations, it is important to have a streamlined decision making process to assist, interagency partners, mission supporters, operations officers, staffs and commanders to make the right decision fast. The decisions made should vary to either pursue new missions or adjust some variables to current missions. Additionally, funding for daily operations or missions based on decisions become difficult with current military budget cuts (Department Budget Priorities, 2012), when more personnel are involved in the decision process.

Heiden's research explored and explained some difficulties with applying the MDMP and using the complete process with the difficulties when applying a decision theoretic concept to the MDMP's Army centric governance process (2005). Specifically, typical situations, which arise using the MDMP in a business operations environment such as selection-bias, non-decentralization, asymmetric information

distribution, and rapid turnaround time requirement, are explored using the decision and naturalistic theoretic techniques. A triangulation approach: interview, survey and observation are used to explore the decision theoretical approach. The JFHQ-NCR/MDW must evaluate current business operations and look at Army's MDMP use in daily business operations, what is going on with other DoD agencies, how decisions are made, how operations are processed, how business practices are executed and how the military is linked to it all or is attached to a different organization.

The Purpose of the Military Decision-Making Process

The MDMP has been the army's keystone for planning operations, problem solving, troop leading procedures, and formatting plans and orders (U.S. Department of the Army, 2005b). The established Army field manual included doctrine on the historical implementation of a decision process and attempted adaptive changes to modernize the manual for 21st century battles. According to Wampler, Centric & Salter (1998), research has shown that a registered, specified reason why the Army leaders used the MDMP for civilian business processes. Wampler et. al (1998), related that there were several other versions to the MDMP (p. 2) and a civilian business process did not exist; however, detailed explanation of the past publications clarified the purpose of the document and other standard reasons for the U.S. Army's continued use of the battlefield MDMP for all situations, missions, events, operations and business processes (1998).

Shattuck (1995) detailed a lack of communication and flexibility between subordinates and superiors, especially in the distribution and receipt of operations' orders. Information flow from top down and bottom up had been an issue in the military for several decades. Shattuck's concerns were the human-to-human dimensions of an operation, which allowed for gaps of understanding between the planner, mission receiver, commander's intent, and execution orders. A driving force for the MDMP and the Army operation was the commander's intent, a clear, concise statement of what the force must do and the conditions the force must endure to succeed regarding the enemy, terrain, and the desired end state. The statement was the commander's visualization to focus efforts throughout the operations process (U.S. Department of the Army, 2001a). The commander has a viable role in all stages of development for the MDMP during planning; the commander's intent along with critical information requirements and guidance were the driving forces of the MDMP (U.S. Department of the Army, 2005b).

Most military field manuals are used as a guideline for making decisions and creating procedures. The MDMP was the foundation for decision procedure with a logical approach to decision-making in which commanders and their staff examined a situation, reached conclusions, and made informed decisions. To describe the MDMP, Army Field Manual 5-0 (U.S. Department of the Army, 2005b), was used as a common reference for planning as part of the U.S. Army officer education system. The main aspects of the MDMP are described in the next section, showing how the process by nature was time consuming and analytical.

MDMP Use in the Organization

The U.S. Army's MDMP is used daily in military and civilian operations within the Joint Forces Headquarters – National Capital Region/Military District of Washington (JFHQ-NCR/MDW). The JFHQ-NCR/MDW is the lead ceremonial organization in the National Capital Region (NCR). Staff of the JFHQ-NCR/MDW may be used in planned events such as ceremonial support during a presidential inauguration, National Veterans' Day observance at Arlington National Cemetery, or worldwide events involving the president, vice president, heads of state, or members of Congress (U.S. Army, n.d.). Staff also may be used in responding to and providing assistance for natural disasters and terrorist attacks, such as those of September 11, 2001, which are in direct coordination with Department of Defense (DoD) and non-DoD agencies (U.S. Army, n.d.). During natural disasters, officers would use the MDMP to establish immediate command and control of subordinate military units (U.S. Army, n.d.). The JFHQ-NCR/MDW has complex and unique missions, but overall the organization has three primary functions (U.S. Army, n.d.):

1. Respond to crisis, disaster, or security requirements in the NCR (U.S. Army, n.d)

through implementation of various contingency plans.

2. Provide base operations support through installations for U.S. Army and DoD

organizations throughout the National Capital Region. Specialized support is provided during personal property shipping throughout the region, continental

United States wide rotary-wing airlifts and Arlington National

Cemetery operations.

3. Conduct local and worldwide official ceremonies on behalf of the nation's civilian and military

leaders (U.S. Army, n.d.).

Other Armed Forces' units use a process similar to the MDMP. For example, the U.S. Marines have deployments with many operational missions and refer to their decision-making doctrine, the Marine Corps Planning Process (MCWP 5-1), 2010. Similar to the U.S. Army and the U.S. Marine Corp Headquarters, other branches of the Armed Forces have component-focused documents for decision-making processes: (United States Navy, USN, 1995, Department of the Army, USA, 2005 and the United States Marine Corp, MCWP 5-1, 2010). This has resulted in a variety of practices and methods used in determining a structure to make decisions. According to the U.S. Army Field Manual 101-5, however, "The military decision-making process (MDMP) is a single, established, and proven analytical process, and an adaptation of the Army's analytical approach to problem solving, which is a tool that assists commanders and staff in developing estimates and a plan" (U.S. Department of the Army, 1997, p. 5-1).

Constant changes in daily operations and missions outside the JFHQ-NCR/MDW 120-day MDMP model require an expeditious operational decision-making process for simplicity. The technical expertise of MDW personnel, and specifically the joint/general three (J/G3) operations directorate and the joint/general 33 section (J/G33) operations division, provides skilled planners, operations analysts, and a MDMP experienced staff. Primary purposes of the J/G3 leaders are to write operations orders using the MDMP to establish and sustain command and control throughout any event. According to Field Manual 101-5 (U.S. Department of the Army, 1997), the MDMP has been used as a synchronization doctrine to avoid confusion and duplication of efforts, primarily with a tactical procedure.

The deliberate MDMP is a seven-step analytical process that personnel use to guide actions from the receipt of a mission from higher headquarters to the production of an operations order, which will be issued to subordinate units and participants for execution (U.S. Department of the Army, 2010). The foundational use of the MDMP is a positive military building block. In contrast, prolonged use of the MDMP can result in degradation of the situation: (a) the process can be slowed down although a customer or client requires rapid action, and (b) an implicitly negative influence on the planning and execution capability of some daily operations' leaders has been demonstrated (e.g. not completing the operation on time due to the process).

Limitations of Social and technological Outreach in the Organization

As of October 2010, tremendous strides have been made in authorized open computer usage and technology adaptation within the JFHQ-NCR/MDW, which now has a command portal and allows participation on social media sites such as Face book and Twitter (U.S. Army, n.d). The information security concerns over experimentation of social software on Department of Defense computers are not trivial (Mayfield, 2011, p. 82). Concern has been expressed about open social media use due to incidents such as the Wiki leaks scandal, which was a breach which rattled U.S. foreign relations and imperiled valuable military and diplomatic sources which was is a pestilence to most military commands (Dishneau & Jelinek, 2011). The step of establishing a social media use policy and gradually evolving steps to secure new technological ideas, accompanied by structured policy usage, efficient occupational use, and integration of a standard organization system should help to ease open computer use uncertainties (George, Skovira, Grant & Jabro, 2008). Although the MDMP and technology use have been useful tools for the synchronization of operations and information distribution, the relationship between the decision-making process and the efficiency of computer system distribution remains poorly defined yet asynchronous (Soubie & Zarate, 2005).

Two potential benefits could result from adjusting to an effective technological operational environment with or without the use of MDMP and maintaining a continued, fluid connection between the customer and the commander: (a) enabling stability in complex operational situations and (b) reducing operating time. In 2006, a new Microsoft; Access database process was assimilated in the Ceremonies and Activities division of the Military District of Washington; the automated system has since been upgraded in 2012, permitting the conversion of email data to become operations orders in the renamed Ceremonies and Special Events Office, streamlining the process and a decision support system (DSS). Power (1997) explained that DSS includes a wide variety of systems, tools, and technologies. According to Power, the term DSS commonly was understood to mean an online analytical process, which would be an interactive information system used in making decisions, but which was only one aspect of a complete DSS.

The Military Decision Making Process (MDMP) as a Procedural Tool

Some procedural methods of the MDMP, not used in the in the JFHQ-NCR/MDW have been either nonexistent or obsolete, which have led to redundancy and rework. An example is having two sections in the organization executing the same missions at the same time but received in different manners. Customer-related inefficiency and time wastes have resulted from the use of inefficient technological programs and improper use of staff resources in mission planning. The standard operating cycle for the production of an operations order using the MDMP in the J/G3 and J/G33 division is 120 days, with some operations requiring up to 180 days or more to complete the decision-making process, planning, and execution. Even in the best circumstances, commanders are unlikely to have perfect knowledge of every continual mission or operation in the organization. The commander must often bridge the gap between what they know at the time of the decision with a feel for the mission. This is expressed as a statement of a goal or end state for the action (an objective), a way to achieve the goal (a concept), and an allocation of means (resources) for the operations (Department of the Army, 2003, p. 2-19). Figure 2 outlines specific annual operations requirements of the command, using the deliberate MDMP methodology as a procedural tool outlined.



UNCLASSIFIED / FOUO
TRUSTED AGENT INFORMATION

J/G3 FY11 Operational Timeline

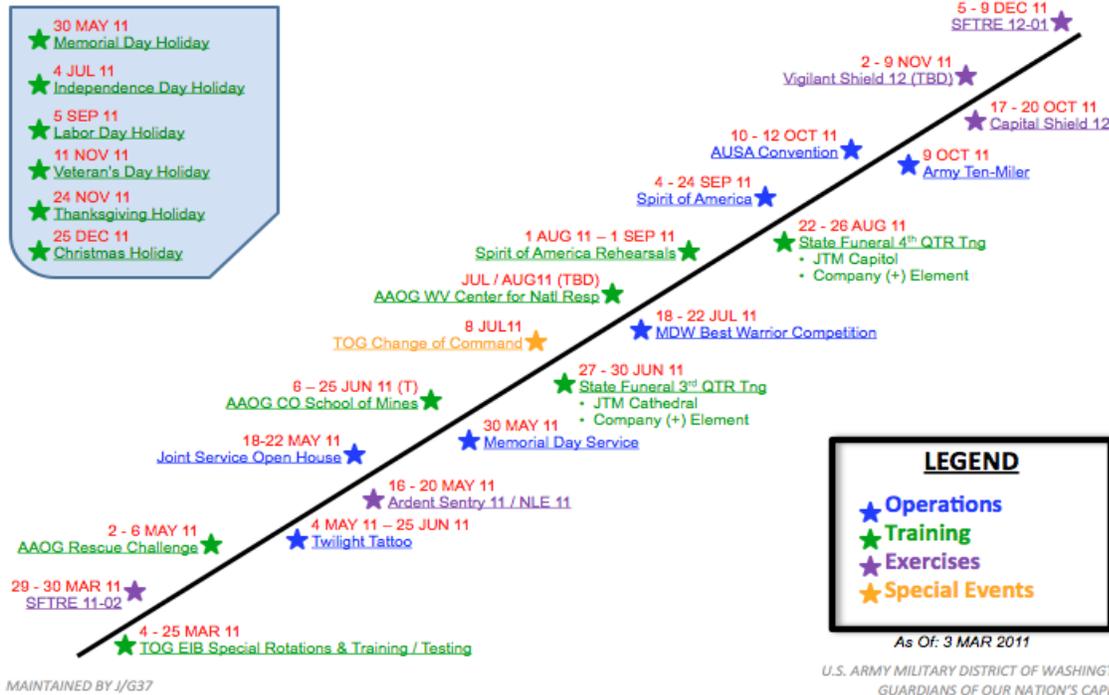


Figure 2: Organizational Operational Timeline

The CESO leaders within the same division as the J/G3 and J/G33 leaders do not use the foundational MDMP for coordination, planning, and execution of repeated events or operational processes and events that will be completed within 72 hours (i.e., short notice) to 30 days maximum. The complete process for the J/G33 division has not produced the same results every time for repeated events, which has resulted in (a) more operating time, (b) decreased production, and (c) increased manpower and effort in the decision-making process.

The MDMP has been the current doctrinal framework for decision making and planning at tactical levels of the U.S. Army (Headquarters, Department of the Army, 2008). Vowell (2004) stated that Contrary viewpoints and research shows that this approach to decision-making is not necessarily representative of how true decisions are made. As a result, many leaders in the U.S. Army have argued a need to change the MDMP to reflect more of the experience and abilities of the commander versus detailed analysis from his staff.

Army use of the MDMP may not be directly conveyed to another type of federal, civilian, or private sector organization in terms of the explicit processes, measurements, and assessments for making decisions because the MDMP is based on battle command decisions. The MDMP routine for operational and tactical decisions has been the fundamental pillar for the U.S. Army in combat situations. According to Army Field Manual (FM) 3-0, at the center of the operations process is a battle command, which is:

The art and science of understanding, visualizing, describing, directing, leading, and assessing forces to accomplish missions (U.S. Department of the Army, 2008, p. 5-2). While commanders are the most important participants in the operations process, the staff

and subordinate commanders assist the commanders in the exercise of battle command during all activities of the operations process. (U.S. Department of the Army, 2008a, p. 5-15).

Needs for such a foundational process is not evident in the non-traditional combat environments as in the Washington D.C. area, unlike those in Iraq and Afghanistan. Since the MDMP is a derivative of combat operations, in non-tactical environments the MDMPs often results in delays for Congressional and daily operational missions.

With the right leadership and experienced personnel, the MDMP can be an outstanding processing tool with a list of checks and balances often not used in the civilian workforce, but which have been applied to other sectors beyond the DoD with positive results. The MDMP has been proven as successful in the private business industry (Smith, 2008). Smith (2008) conducted research that was focused on a method of using the MDMP with support vector machines in airports to formalize a standard procedure for predicting and alleviating delays at all airports, especially during peak times of operation. The MDMP is a valuable tool, as has been proven throughout military history in countless wars and at different levels in private businesses as mentioned in table 1 earlier in this chapter.

The proposal of this research was that to utilize more technology with the MDMP would not be a complete panacea, but could provide additional and expeditious information sharing that would result in a more smooth and effective flow of operations in military and civilian settings. A pilot process design will be developed for use in the CESO and J/G33 divisions. The intention of the new process would be (a) to produce orders and official tasks to deal more efficiently with operations, (b) to reach the customer without misconstrued information, and (c) to expedite the MDMP in a more intuitive and streamlined manner.

The Seven Steps of the Military Decision-Making Process (Deliberate)

There are seven foundational steps in the MDMP, which follow a directional and cross directional flow, which is used by the commander, and his staff as shown in Figure 3, needs to be completed in the order prescribed in the process (U.S. Department of the Army, 1997).



Figure 3: Courses of Action Development Plan and Analysis

Each step results in subsequent substeps; thus, errors committed early in the process would have effects on later steps in the process, however, there may not be distinct points to which one step ends and another begins (U.S. Department of the Army, 2005b, p. 3-11).

Step 1: Receipt of Mission

The purpose of this step (one) was to alert all participants of the pending planning requirements to accomplish the task (U.S. Department of the Army, 2005b). Standard operating procedures included a determination of who would be involved as part of the planning staff. Planning staff estimated (a) how much time was available, (b) how much time was needed for the initial assessment, and (c) what types of tools would be involved during this initial stage of the MDMP such as understanding standard operating procedures and everyone knowing their roles (U.S. Department of the Army, 1997, 2005b).

Step 2: Conduct Mission Analysis

The next step was conducting a mission analysis; a thorough mission analysis was crucial to planning and could be live saving, but was time consuming (U.S. Department of the Army, 2005b). The commander was reliant on accurate situational understanding from mission analysis to visualize the operation (U.S. Department of the Army, 2005b). According to the Army Field Manuals 5-0 and 101-5, mission analysis had 16 tasks that did not need to be performed sequentially but many steps of mission analysis are done concurrently (U.S. Department of the Army, 1997, 2005b). When good staff work is conducted, this assists the commander in visualizing the battlefield and set the stage for the MDMP. For example in step one (1), analyze the higher Headquarters operation order. First, establish horizontal and vertical nesting, for all combat and combat service support elements. Sometimes a staff doesn't look at

plans properly or misinterpret the higher headquarters' mission, intent, and guidance, resulting in wasted time and omit a required step in Table two (2).

1. Analysis of higher mission and intent
2. Identify specified, implied tasks and essential tasks
3. Review task organization and assets
4. Determine restrictions and constraints
5. Assess risk
6. Identify critical facts and assumptions
7. Conduct risk assessment
8. Determine Commander's critical information requirement
9. Determine initial recon requirements
10. Plan use of available time
11. Develop restated mission
12. Conduct mission analysis brief
13. Approve restated mission
14. Develop initial and proposed Commander's intent
15. Issue Commander's guidance
16. Issue warning order

Table 2 Mission Analysis - 16 Required Subsequent tasks (U.S. Department of the Army, 2005b, p. 4-7).

Review facts/assumptions.

The intent is to conduct a detailed analysis of each course of action, which will result in the ability to compare each COA, and allow for staff recommendations to the commander about the best solution to the mission (U.S. Department of the Army, 1997).

Mission analysis tools.

There are several visual, verbal and doctrinal tools required which assist in generating staff direction in order to refine the notions of the mission analysis as summarized in FM 101-5 (1997). The tools are used to assist personnel in creating and tracking information for the proposed order as illustrated in Table 3 below and include:

- Operations orders Standard Operating Procedures • Policies • Regulations and any other relevant documents.
- Maps or terrain analysis products • Course of Action sketches • Synchronization Matrices • Event templates • Unit symbols (to move on map or sketch).
- Verbal guidance and Staff estimates.

Table 3 Mission Analysis - Tools for Staffs (U.S. Department of the Army; 1997, 2005b).

A proper mission analysis ensures all levels of personnel understood their roles in the higher command's operations and the limitations of the mission. The senior leader or executive officer must ensure that the staff had sufficient time to execute a thorough mission analysis, which sometimes did not occur in the National Capital Region due to mission turnaround time. The mission analysis helps the commander to visualize the battlefield while the staff develops courses of action. The result of the mission analysis step was a clearly defined articulation of the problem to be solved, a mission statement that would be used to focus the operation.

Step 3: Course of Action Development

A course of action (COA) would be the feasible, suitable, distinguishable, and acceptable options that, if implemented, would result in mission accomplishment or resolution to problems. The COA development was based on information from mission analysis, commander's guidance and intent, and operational design; at least three options should be developed (U.S. Department of the Army, 2005b). Upon completion of the mission analysis brief, the commander issued guidance regarding course of action development, including course of actions to consider and courses of action that should not be considered. Each course of action considered must be suitable (can accomplish mission), be feasible (within the capabilities of the unit), be acceptable (the means justifies the ends), be distinguishable (each course of action must be distinguishable from the others), and completed at the mission's accomplishment (U.S. Department of the Army, 1997). Other steps used during course of action development process are show in Table four (4).

Key inputs	Steps	Key outputs	
<ul style="list-style-type: none"> Higher headquarters' plan or order or a new mission anticipated by the commander 	<p>Step 1: Receipt of Mission</p>	<ul style="list-style-type: none"> Commander's initial guidance Initial allocation of time 	
Warning order			
<ul style="list-style-type: none"> Higher headquarters' plan or order Higher headquarters' knowledge and intelligence products Knowledge products from other organizations Design concept (if developed) 	<p>Step 2: Mission Analysis</p>	<ul style="list-style-type: none"> Mission statement Initial commander's intent Initial planning guidance Initial CCIRs and EEFI Updated IPB and running estimates Assumptions 	
Warning order			
<ul style="list-style-type: none"> Mission statement Initial commander's intent, planning guidance, CCIRs, and EEFI Updated IPB and running estimates Assumptions 	<p>Step 3: Course of Action (COA) Development</p>	<ul style="list-style-type: none"> COA statements and sketches <ul style="list-style-type: none"> Tentative task organization Broad concept of operations Revised planning guidance Updated assumptions 	
<ul style="list-style-type: none"> Updated running estimates Revised planning guidance COA statements and sketches Updated assumptions 	<p>Step 4: COA Analysis (War Game)</p>	<ul style="list-style-type: none"> Refined COAs Potential decision points War-game results Initial assessment measures Updated assumptions 	
<ul style="list-style-type: none"> Updated running estimates Refined COAs Evaluation criteria War-game results Updated assumptions 	<p>Step 5: COA Comparison</p>	<ul style="list-style-type: none"> Evaluated COAs Recommended COAs Updated running estimates Updated assumptions 	
<ul style="list-style-type: none"> Updated running estimates Evaluated COAs Recommended COA Updated assumptions 	<p>Step 6: COA Approval</p>	<ul style="list-style-type: none"> Commander-selected COA and any modifications Refined commander's intent, CCIRs, and EEFI Updated assumptions 	
Warning order			
<ul style="list-style-type: none"> Commander-selected COA with any modifications Refined commander's intent, CCIRs, and EEFI Updated assumptions 	<p>Step 7: Orders Production</p>	<ul style="list-style-type: none"> Approved operation plan or order 	
CCIR	commander's critical information requirement	EEFI	essential element of friendly information
COA	course of action	IPB	intelligence preparation of the battlefield

Table 4 *Steps in the COA Development Process* (U.S. Department of the Army; 1997, 2005b).

Steps to Develop Courses of Action (COAs)

The first step of a formal course of action development is to review and update facts, assumptions, and forces available that were identified during mission analysis. When developing a course of action, the executive officer or senior leader must ensure that the entire staff is involved with the action scheme of maneuver development to ensure its feasibility. The course of action and the S-3 operations directorate must ensure that all available assets are incorporated into the scheme of maneuver. Furthermore, when developing multiple courses of actions, the executive officer and the S-3 operations directorate must ensure that each course of action is uniquely different from the others. Finally, a course of action is complete when the following issues are addressed in Table five (5).

- Analyze relative combat power • Array initial forces • Assign Headquarters/task organization • Allow no more than the concept sketches or brief done for projects
- Generate options • Develop scheme of maneuver • Prepare course of action statements and sketches

Table 5 *Course of Action Completion Minimal tasks Required Matrix* (U.S. Department of the Army, 1997, 2005b).

Step 4: COA Analysis (List Assumptions)

A war-gaming process, which consists of eight steps in which staff visualized the operation at critical points, was used to ensure that all assets would be synchronized in time and space to accomplish the mission and meet the commander's intent. A successful War-game depends on good preparation before it begins. Products were gathered from the mission analysis and course of action development. The course of action sketch is posted with (a) lists of specified, implied, and essential tasks (b) facts and critical assumptions; (c) requests for information; (d) the synchronization matrix (used to record results); and (e) a list of available assets. All seats were oriented to the course of action sketch and the synchronization matrix, and all posted materials could be seen clearly.

Choosing selection criteria ahead of the start of war-gaming reduces bias in the comparison of courses of actions. The senior leader determines the war-game method based on time available and scope of the operation. The J/G3 staff operations directorate runs the war game to analyze accurate use of assets at the critical time and place. When developing assumptions, the following actions listed in Table six (6) should be considered to ensure mission success as part of the MDMP.

- Assess the validity and relevance of assumption • Make additional assumptions, if necessary • Determine whether there is any new information that will validate existing assumptions • List critical events and decision points - Determine evaluation criteria
- Select war-game method • Select method to record and display results • War-game battle and assess results • Remain unbiased - List advantages and disadvantages (as found) • Assess COA feasibility, acceptability, and suitability continuously
- Avoid drawing premature conclusions and gathering facts to support such conclusions
- Compare COAs during comparison process, not during the War Games

Table 6 *Assumption Developments* (U.S. Department of the Army, 1997).

Step 5: COA Comparison

After war-gaming each course of action, a COA comparison was conducted to select the COA best fit for the mission. Weighted criteria were assigned before a subjective analysis of each COA by listing its respective advantages and disadvantages regarding the evaluation criteria established before war-gaming. The staff used this analysis to determine which course of action best supports the respective evaluation

criteria. The COA that the staff rates the best for a specific evaluation criteria is given a "1," the second best a "2," and the third a "3" (U.S. Department of the Army, 1997, p. 5-24). During the course of action comparison, objectivity was paramount as and each graded course of action was compared to the evaluation criteria.

Step 6: Course of Action Approval

The commander approved a COA with clear, concise statement of intent describing what the force must do to succeed concerning the enemy, the terrain, and the desired end state. The intent provides the link between the mission and the concept of operations by stating the key tasks that, along with the mission, would be the basis for subordinates to exercise initiative if unanticipated opportunities arise or if the original concept of operations no longer applies. Intent is normally expressed in four or five sentences and is mandatory for all orders. The mission and the commander's intent must be understood two echelons down (U.S. Department of the Army, 1997). The last step in the process was to produce the orders.

Step 7: Orders Production

Orders are published under the staff supervision of the preparation and execution of the functional area strategic plan (FASP), to ensure that the battalion would be prepared to accomplish its mission. Subordinate units use troop-leading procedure along with the MDMP, or in place of the MDMP, because of the size of the element. The executive officer and the J/G3 staff operations directorate must ensure that staff had time to properly monitor the preparation for executing the mission (U.S. Department of the Army, 1997). Staff thought through possible contingencies to ensure that the unit had options should a particular situation arise. By anticipating these contingencies, the staff reduced the troops' reaction time if the situation arose, and the battalion could maintain the initiative and freedom of action to execute the functional area strategic plan.

During the execution phase, staff tracked the battle to anticipate any unforeseen problems caused by the enemy, weather, or other aspects of "friction." The commander's critical information requirement was used to filter incoming information and focus the battle staff on important data that were signals of a changing situation (U.S. Department of the Army, 1997). A shell operations order was produced after going through all the steps of the MDMP and using the traditional five-paragraph field operations order format as described in Table seven (7). An OPORD contains, as a minimum, descriptions of the following:

- Task organization • Situation • Mission • Execution

- Administrative and logistic support • Command and signal for the specified operation

OPORDs always specify an execution date and time.

Table 7 Minimum Requirements for a Five-Paragraph Operations Order (U.S. Department of the Army, 1997).

In 1906, the Army adopted the five-paragraph order to standardize the process by which orders were based. In 1909, Captain Roger S. Fitch wrote *Estimating Tactical Situations and Publishing Field Orders* (Fitch, 1909), this document served to set the foundation for the standard military decision making

process. Later, aspects of the military decision making methodologies from the German, Russian, and French Armies were integrated into the U.S. Army's process.

Estimates

An estimate is a formal process to analyze a problem from a specific functional area viewpoint. Tangen (2009) demonstrated a best practice by saving time, money, and military equipment for modern day implementation through quantification. The capability-based assessment doctrine used for acquisitions of new systems or technologies is a complex but practical document when used in the appropriate manner (U.S. Army Cost, 2011).

As specified in Field Manual 5-0, the disadvantage of using the full MDMP was the time consumption (U.S. Department of the Army, 2005b). The longer higher headquarters' leaders spent planning, the less time remained for the subordinates to plan, prepare, and execute operations (Nawoichyk, 2008). Nawoichyk (2008) added that although FM 5-0 had a guideline for conducting planning in a time-constrained environment; the focus had been on structured decision making processes. Existing operations often cannot support a structured decision making process that takes a significant amount of time to conduct (Nawoichyk, 2008).

Army Field Manual 101-5 (1997) and 5-0 (2005b, 2010) showed the formal process of estimates as conducted by staff officers to fully analyze a problem from a specific functional area viewpoint. These tailored problem analysis processes were specific to staff officer's functional area of expertise (U.S. Department of the Army, 1997; 2005b). Commander's estimates were broader analyses of a problem that were used as a checks and balance system to ensure that all planners thoroughly analyzed the problem. Figure 4 demonstrates the estimates process in relation to the MDMP.

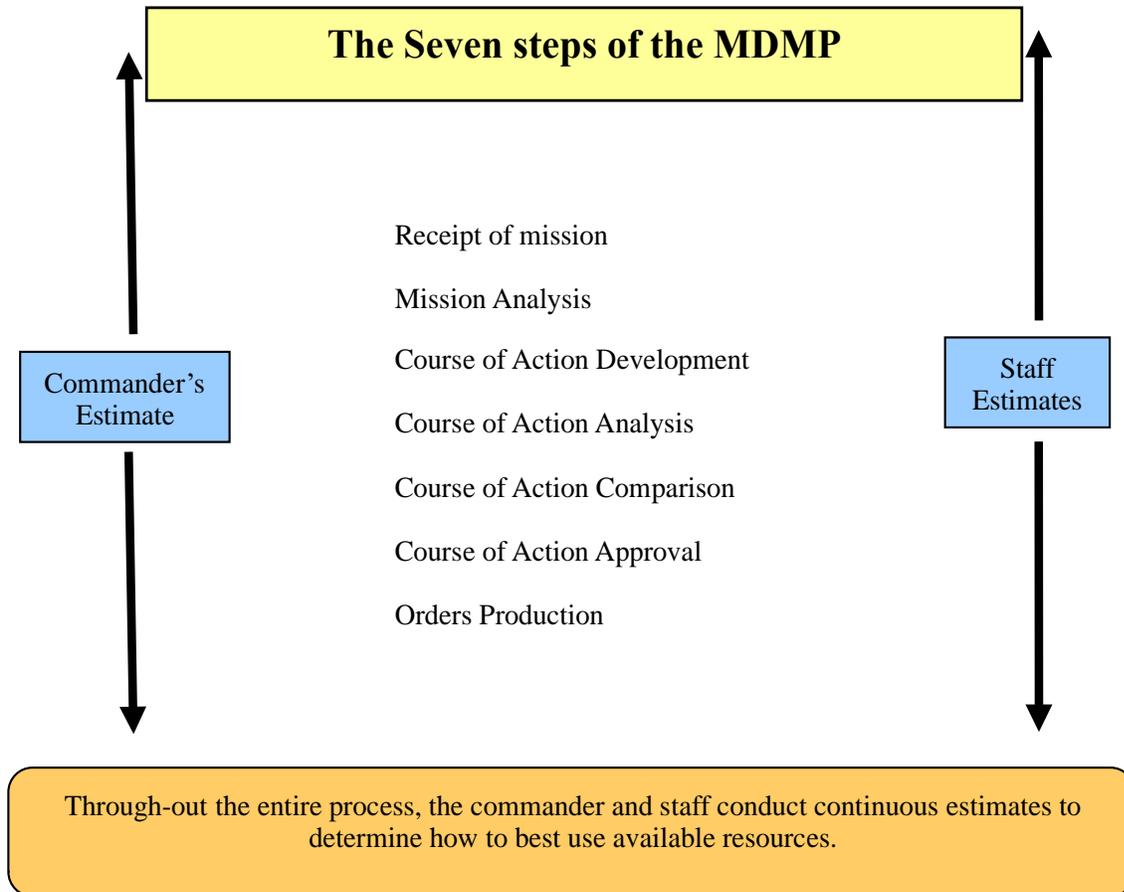


Figure 4: The seven steps of the military decision-making estimate process (U.S. Department of the Army, 1997).

Importance of Military Decision Making Processes

Although the MDMP has continued as the army's decision process, it should change with each era to fit the most reflective situation or operation (Schuring, 1996). The unit's ability to adapt different procedures needs to be apparent and maintain a standard because of continual changes and unanticipated missions, which occur frequently. In addition, sometimes-unforeseen situations result in frequent personnel changes. A standard like MDMP provides a fundamental and common framework that facilitates an easy to use by anyone approach to the Army's operational processes. A common denominator of technology (a) could simplify the planning of new operations, (b) could be used with rapid integration of new personnel, and (c) accommodate unforeseeable missions that have time constraints. This is especially important for personnel who have not worked together before because it means processing can be completed on time.

The U.S. Army's definition of decision making has been based on rational decision making, although the definition of analytical decision making is a systematic process based on reduction of the problem into specific manageable parts. Army leaders further defined decision making as "selecting a course of action from several courses of actions as the one most favorable to accomplish the mission" (U.S. Department of the Army, 2005b, p. 1-4). The MDMP process, though valid for certain situations, was of concern due to the time constraints related to all information concerning the problem identified, with

numerous solutions developed to solve the problem. The solutions developed are evaluated based on identified criteria and the best solution is then selected (U.S. Department of the Army, 2005b). The U.S. Army's basic analytical problem-solving method is shown in Figure 5.

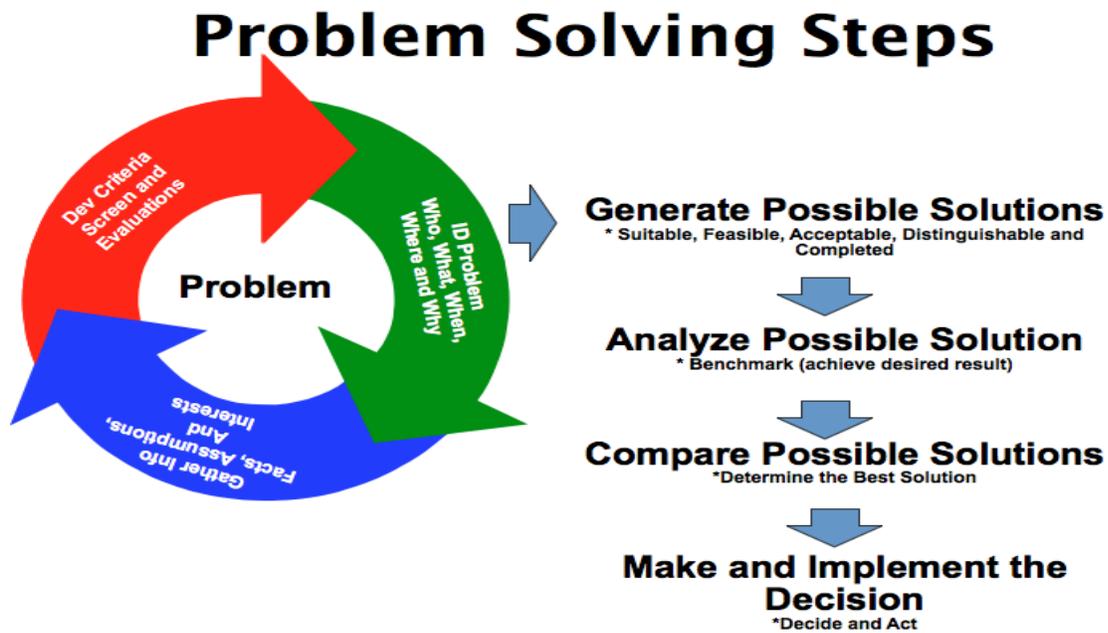


Figure 5: The U.S. Army's analytical problem-solving method (U.S. Department of the Army, 2005b).

According to FM 5-0 (U.S. Department of the Army, 2005b), the MDMP planning model had established procedures for (a) analyzing, developing, and comparing mission courses of action against criteria of success and each other; (b) selecting the optimum course of action; and (c) producing a plan or order. Commanders and their staff used the MDMP to organize their planning activities and thoughts to make clear, concise, and sound judgments in the execution of orders. A common understanding of the mission and the commander's intent must exist to develop effective plans and orders. All of these activities must be accomplished in a very short time, which required the commander and his or her staff to master the steps of MDMP. The full MDMP was the foundation for planning in a time-constrained environment (U.S. Department of the Army, 2005b).

Literature Summary

Many variables were considered in terms of the literature reviewed for the study. De Jong & Grant, 2006, related the commonality between hybrid metaheuristic planning and military decision making, elaborating on what types of algorithms should be used between the planner and the system process. De Jong & Grant researched artificial intelligence because computers have become a significant component in the lives of people in the western world as an endless source of communication, information storage, socializing, media, and reporting (2006).

Heiden (2005) described how to implement automated systems in the MDMP for an evolving military and for other practical business and academic uses. Heiden also explained how time has evolved with technology and equipment use; although the army process has continued to work, it becomes too time consuming without modern technology. Heiden suggested that further research should be conducted in this area. Additionally, Heiden determined that the idea of a best practice for making decisions might not exist

as a single process. Heiden's expressed that using an automated process with the MDMP was not a new concept.

Smith (2008) focused on a method of using the MDMP with support vector machines to formalize a standard procedure in predicting and alleviating delays at airports during peak times of operation. Smith explained that the FAA process was hindered. Information was not standardized and significant setbacks occurred during inclement weather because benchmarks were evaluated during perfect weather conditions. Smith's evaluation involved use of the skeletal fundamentals of the U.S. Army MDMP to establish a practical use of the system with support vector technology.

Contribution of the Study

The research conducted adds to the current body of knowledge in several ways. One contribution is that I propose a new intuitive conceptual framework for extracting unwarranted information from the military decision making process out of current standardized military doctrine and procedures. By combining non-tactical events or missions, advantages as described using the Decision-Making Theory and the Deliberate Military Decision-Making Process, which consists of an intuitive practice coupled with locally produced processes for better accuracy and shorter turn-around time.

Decision-Making Theory

Others contributory factors towards the body of knowledge are, pragmatic, theoretical and methodological contributions. Pragmatically: The shorten process of the MDMP establishes a streamlined way of conducting efficient operations orders in the JFHQMCR/MDW with less redundancy. This presents a best practice or better way that continuously offers a novel method for a more precise MDMP organizational structure, keeping from using all the outlined steps in the MDMP, reiterating the same information over several different levels of operations. It doesn't fear unintended consequences of the changed actions in the processes, as it identifies them and prepares to counteract them. In addition, realistically the shorter process doesn't seek to redefine the definition of the MDMP but explains the processes "as is", and reforms it into something better.

Theoretically: the MDMP as stated by Dr. Gary Klein, a noted cognitive psychologist is a decision-making process that Army leaders and staffs use when making tactical decisions with sufficient time (1998). However, Dr. Klein also noted that the decision making process is sometimes made through judgment as a *tacit* naturalistic decision-making approach (or intuitive) when mission or event times are short instead of the normal *deliberate* (or analytic) approach. *FM 101-5* (1997) describes the MDMP as a proven analytical process that provides the commander and staff with a tool to develop feasible plans (1997). However, not everyone agrees that the MDMP is the best method for developing and implementing plans for military operations. Several authors oppose of the MDMP because it solely focuses on planning at the expense of execution and inadequate COA development and in a process where steps must be done sequentially, this requires a tremendous amount of time and effort to the planning process (Innocenti, 2001 p.45). Most military decisions typically involve both systems; the research of the study will examine the process and conditions under which each approach of the system is liable to be more effective. Accepting this dichotomy may cause concern as analytically one may assume that staff members or Army leaders' untrained intuitive processes may present situations where analysis contradicts intuitions.

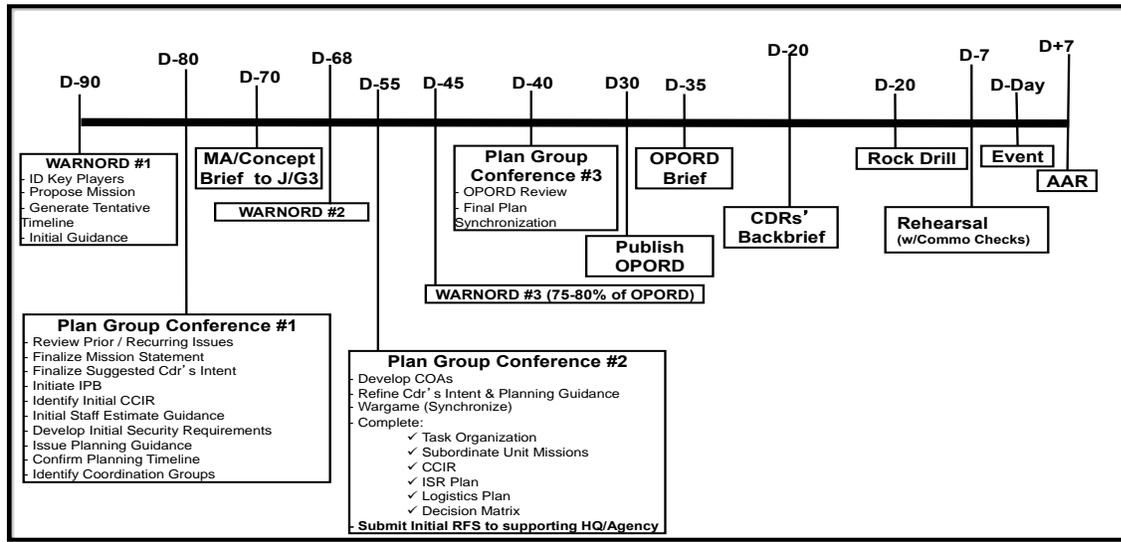
Methodologically: I propose two simple methodologies for developing adaptive courses of actions using the MDMP for long missions 120 or more away and short missions (less than 24 hours) notification. This concept concentrates on three elements for problem solving (a) Define the mission, event, problem or situation (a quick mission analysis as well as required resources). (b) Create an immediate solution to the

problem (think of the course of actions [COA] needed to resolve the problem – write it and inform those involved with the mission) and (c) distribute the information, follow up then back-brief the key leaders. For missions longer than 120 days or more, Figure 6 provides a graphic depiction of the process. This ends-ways-means methodology helps to provide coherent COAs for the JFHQ-NCR/MDW and advances the current process saving time.

UNCLASSIFIED / FOUO



J/G33 90-Day Planning Process



UNCLASSIFIED / FOUO

As of 15 July 12

Figure 6: Ninety - 90 Day or greater JFHQ/NCR-MDW Planning Process.

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Strategic Enrollment Management: A Refresher on Growing and Sustaining Enrollment for Your Institution

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~A PAGE FROM THE REGISTRAR'S CORNER~

My Story

Below I share with administrators and emerging leaders the benefit of my many years of higher education experience at an institution located on the East Coast as they relate to enrollment management.

In close to forty years of administrative experience in higher education most being leadership, I am known to be a transformational leader with high energy, innovation, passion, problem resolution, and a staunch visionary. I have had the unique opportunity to work with ten college presidents each having their own distinct style of leadership. Working under the leadership of each, afforded me the opportunity to closely observe leadership styles, communication skills, decision making, political acumen, extent of knowledge of college operations, and style of governance; thus, creating an illustrious frame of reference on college leadership and administration.

During almost four decades of experience, I have worked in numerous capacities that gave me an opportunity to observe, research, provide reports, and develop processes and procedures for the presidents that affected enrollment at the institution. My broad enrollment management experiences began in Continuing Education including credit and non-credit enrollment to Student Affairs in the capacity of Executive Director of Recruitment, Admissions and Registration/Registrar. I have acquired an awesome amount of experience across the board that include admissions, recruitment, retention, advisement, marketing, scheduling, planning, program development and management, system analysis, customized training, accelerated learning and degree completion.

I was responsible for the development and implementation of an initiative known as the Graduation Project which created a paradigm shift in the delivery and educational preparation of students resulting in the production of the highest number of graduates the institution had in a number of years – 43% over the previous year (2004), and almost 80% over the past three years. In recent years, I was credited with developing an intrusive Advisement Model designed to promote retention, created a student performance monitoring model to also promote retention and developed an automated Degree Completion Model that facilitated college completion. These initiatives all contributed to re-engineering the educational and student service infrastructure as related to degree completion. Many of these initiatives received national recognition. Actually, all initiatives were designed, developed and implemented using zero dollars for the institution with the exception of the Graduation Project.

- **WHAT IS ENROLLMENT MANAGEMENT?** Simply put, planning, forecasting and sustaining enrollment. The president of the college should monitor enrollment on a daily basis almost like monitoring one's checkbook. It is important to know at any given time how many students are enrolled. If there is a drop in enrollment-- if so, what caused enrollment to drop? In forecasting, what impact will the drop or surge have on college funding sources? If a drop is contemplated, what impact will that have on the college budget, scheduling, personnel, and/or facilities expenditures? Will there have to be a reduction in force or furloughs? Will there be funds for promotions/raises? Will funds be available to pay for contracted goods and services? Enrollment Management is important for maintaining the well-being of an institution which includes quality educational programs and instruction, affordable tuition, accessibility, recruitment, retention, completion and student services to meet the needs of students.

- **WHAT IS STRATEGIC ENROLLMENT MANAGEMENT?** Strategic Enrollment Management is developing a plan of action that includes setting enrollment projections. Enrollment projections take into consideration the following factors:
 - The **budget sources** for the institution that include tuition and fees, grants, financial aid, state, local and federal aid, scholarships, fund raising and property rentals. College degree and certificate programs. Continuing Education certificate and short term training offerings must also be considered.

 - **College expenditures** that include instruction costs (faculty contracts, books, technology, equipment supplies), facilities (building maintenance, fuel, grounds maintenance), and personnel.

 - **Recruitment Team**. Recruiters should have a passion for your institution and be able to sell to an individual why they should enroll in your school. They must look presentable to the public demonstrating and represent you institution in a manner that would be inviting and appealing to anyone seeking to enroll in a college. The college should establish enrollment projections that take into consideration fund allowances for instruction, classroom/lab space accommodations, student services, other facilities utilizations, books/supplies and other expenditures including commencement exercises. The enrollment projection should be reviewed and modified as needed each year. A recruitment plan based upon the mission, goals, and values included in the college's strategic enrollment plan should be developed by this group.

 - **Marketing Team** should be established to develop or fine tune recruitment materials and other promotional materials for the institution including media ads. This team usually collaborates with representatives from the following offices to support students in the recruitment and admissions processes: Admissions, Financial Aid, Advisement, Student Accounting, Test Center, Institutional Advancement/Planning, and Continuing Education. Representation from faculty should also be members of this committee. A strategic marketing plan should be developed by this group that encompasses the college-wide, mission, goals and values. This team should be directed by the VP's for Marketing and Student Affairs. It should be known that according to research, students look for quality programs, image of the institution and affordability. In cities and states where competition for students is great, those institutions must make image a

priority in order to be competitive with neighboring institutions. It is no different than when we as consumers go shopping, we go where the reputation is good and we get the best product for our money. Students seek institutions with a great image that attracts and give them a sense of pride, of course a great education and affordability.

- **Degree and Certificate Programs** should be relevant and responsive to local and national workforce needs and to the needs of individuals. Quality programs should provide academic excellence that meet accreditation standards and be taught by a diverse faculty who have an excellent command of the English language. Academic programs should be tracked, reviewed and assessed for efficiency and effectiveness on a regular basis. Quality programs are a must!!!

- **WHO IS INVOLVED?** The president of the institution leads the charge in enrollment management. A system of daily reporting is usually made available each day showing the entire enrollment period from the previous year compared to the current registration period with a focus of highlighting status of enrollment for specific enrollment periods. This information is also shared with the president's cabinet and Marketing Committee. Actually, enrollment management involves every component of the college structure.

A similar reporting mechanism should be developed and monitored to determine the status of enrollment for classes to help with making prudent decisions to open, close or cancel classes. This too, requires daily monitoring during registration periods. Managing enrollment/classes is also like keeping a handle on fiscal management/resources for the institution. Administrators should remember without students, there is no institution.

- **WHAT ROLES DO THE PARTICIPANTS PLAY?** The president's cabinet should have enrollment as a topic on the agenda weekly for discussion. The president's cabinet should receive a briefing on new admits, registration activity, recruitment initiatives (when, where, what, how), and number of completers. The Marketing Team should report at least once a month to the president's office providing details of marketing/media activities/community outreach and feedback.

Every employee of the institution should know they play a part in enrollment management. Their contributions in the work they perform should exude a welcome attitude, competency, enthusiasm, passion, dedication and commitment. With these qualities, who would not want to enroll and graduate from your institution?

Summary

As the old adage says, "it take a village to raise a child", enrollment management is the responsibility of every employee of the institution. Everyone's job performance and commitment to the college contributes to the well- being of the institution. Enrollment Management must remain on the president's radar to ensure the sustainability of the institution. The Enrollment Management committee appointed by the president should be the catalyst for driving the enrollment of the college to greater heights in a strategically planned manner while at the same time, preserving the financial stability of the institution.

It is important to note that enrollment management serves as the linchpin that keeps an institution educationally and fiscally sound while at the same time meeting the educational and training needs of the

global workforce. In order for your institution to be a student's first choice for their education, it is advisable for prudent leaders to place enrollment management as a major priority and to be strategic in planning for the institutions long-term viability. Moreover, enrollment management serves as an integral part of the institution's strategic plan reflecting its mission, goals, and objectives.

Featured Spring/Summer 2016 Reading

