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Preferred Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Exhibited by United States Marine Corps Special Operations Officers: A Quantitative Non-Experimental Study

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PREFERRED LEADERSHIP STYLE, COGNITIVE OPERATOR COMPETENCIES, AND SENIOR LEADER COMPETENCIES EXHIBITED BY UNITED STATES MARINE CORPS SPECIAL OPERATIONS OFFICERS: A QUANTITATIVE NON-EXPERIMENTAL STUDY

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Approved by
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APPROVAL OF DISSERTATION

We, the faculty supervising the work of **Timothy John Scott**, affirm that the dissertation, **Preferred Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Exhibited by United States Marine Corps Special Operations Officers: A Quantitative Non-Experimental Study** meets the high academic standards for original scholarship and creative work established by the EdD Program in **Leadership Studies** and the College of Education and Professional Development. This work also conforms to the editorial standards of our discipline and the Graduate College of Marshall University. With our signatures, we approve the manuscript for publication.

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DEDICATION

I dedicate this dissertation to my family. My wife Dana's support has been unwavering, and I could not have made it through this process without her numerous sacrifices. I hope this serves as an example to my daughters, Kat and Maggie, and shows them that any level of educational attainment is achievable.

ACKNOWLEDGMENTS

I want to start by thanking Dr. Bobbi Nicholson. I emailed her inquiring about the program. After several exchanges, I still waffled on formally applying. Her email response offered an irresistible challenge: “You might as well try. The worst that can happen is that in a few years, you have an EdD.” I am glad I applied. Separately, her guidance in building my research proposal was simply outstanding. I was delighted that Drs. Dennis Anderson and Charles Bethel served as my committee members. Having graduated from Marshall University’s Leadership Studies MA program, I was familiar with both. Dr. Anderson, my committee chair, was extremely helpful throughout the process. He guided me from start to finish with a no-nonsense, straightforward approach that kept me focused. Dr. Bethel’s enthusiasm was infectious and left me feeling more confident each time he provided feedback. The inclusion of LtCol, USMC, ret., Russell Worth Parker, J.D. completed the committee trifecta. As a retired Marine Corps Special Operations Officer with decades of experience, Worth brought a unique perspective to the process that I very much appreciated.

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ABSTRACT

Research identifies existing commonalities between leadership style and conceptual, technical, and interpersonal competencies. Marine Forces Special Operations Command has not explored leadership style and leader competencies and how they relate to the cognitive operator concept described in *Marine Special Operations Forces 2030: A Strategic Vision for the Future*. By not thoroughly exploring how they relate, Marine Forces Special Operations Command may not understand the level of interdependence between leadership style and senior leader competencies and the mastery of cognitive operator competencies. This quantitative non-experimental study explores the relationship between preferred leadership style, cognitive operator competencies, and senior leader competencies exhibited by United States Marine Corps Special Operations Officers. Sixty United States Marine Corps Special Operations Officers completed a survey comprised of demographic data, a Multifactor Leadership Questionnaire subset, a cognitive operator competencies questionnaire, and a senior leader competencies questionnaire. A series of t-tests determined significant relationships between transformational, transactional, and passive avoidant leadership characteristics and cognitive operator competencies; transactional and passive avoidant leadership characteristics and senior leader competencies; and cognitive operator competencies and senior leader competencies. The relationship between transformational leadership characteristics and senior leader competencies was insignificant. Additionally, several ancillary findings resulted from stratifying survey responses according to participant characteristics. The information generated by this study can be used to compare against Marine Forces Special Operations Command's officer training continuum and determine where to best incorporate training on preferred leadership style, cognitive operator competencies, and senior leader competencies.

CHAPTER ONE

INTRODUCTION

Over the last twenty years, the military operational environment has changed significantly, becoming more decentralized and more complex. Military leaders must exhibit greater cognitive flexibility and think more critically to function in increasingly volatile, uncertain, complex, and ambiguous (VUCA) environments (Harman, 2012, p. 9). Military scholars describe the current operational environment as more strategic. Because it has become more strategic, military leaders must learn senior leader competencies earlier in their careers.

In 2018, Marine Forces Special Operations Command (MARSOC) published *MARSOF 2030: A Strategic Vision for the Future*. *MARSOF 2030* defines cognitive operator competencies Special Operations Officers (SOOs) must possess for success in the future operational environment (Headquarters, Marine Forces Special Operations Command, 2018, p. 13). Although *MARSOF 2030* defines required competencies, it does not fully explore the relationship between a SOO's preferred leadership style, senior leader competencies, and cognitive operator competencies as defined in *MARSOF 2030.*

By not fully explaining how they relate, MARSOC potentially misses understanding the level of interdependence between leadership style and senior leader competencies and the mastery of cognitive operator competencies. If the level of interdependence among the three is fully understood, MARSOC's leaders can use this study's results to validate their current training continuum and identify deficiencies that require additional training.

Background

In the early 20th Century, when the study of leadership was in its infancy, scientific approaches favored the role innate qualities played in determining potential leadership ability.

Known as trait leadership, it claimed that effective leadership relied on a set of specific traits (Burns, 1978, p. 24). There is a significant amount of data on trait theory leadership. Empirical research identified "49 attributes…mentioned in 25 conceptual and empirical reviews of leadership literature between 1924 and 2011" and grouped them into "cognitive, social, personal, motives, self-beliefs, and knowledge and skills" (Zaccaro, Dubrow, & Kolze, 2012, p. 32). Meta-analysis further identified sub-categories within each group that correlate the sub-categories with either leader emergence or leader effectiveness, thus linking leadership attributes to specific outcomes.

Over time, researchers have identified the primary characteristics of trait leadership. Between 1949 and 2004, six studies identified numerous leadership traits. Although there is no consensus on leadership traits, qualities such as integrity, sociability, self-confidence, intelligence, and determination are central tenets of leadership contained in the majority of research studies on preferred leaders' traits (Northouse, 2015, p. 19). There is near consensus among researchers that neuroticism, extraversion, openness, agreeableness, and conscientiousness are five factors that make up a person's personality. Studies have shown that these "Big Five" personality traits strongly associate with leadership (Northouse, 2015, p. 22).

Scholars subsequently introduced new theories emphasizing a link between leadership and effectiveness in certain situations, the most popular theories being the situational and contingency leadership models (Ayman & Lauritsen, 2018, p. 139). The situational and contingency leadership models encompass various ideas regarding how conditions impact the leader, the situation, and outcomes. In the early 1960s scholars devised the contingency model, which focuses on the leader's orientation (task or relationship) as measured by the least preferred

coworker (LPC) scale, and leader situational control measured by team climate, leader's task structure, and leader's position power (Ayman & Lauritsen, 2018, p. 142).

Research on contingency models is categorized into five theories: contingency model of leadership effectiveness, cognitive resource theory, normative model of leadership decision making, path-goal theory, and situational leadership theory. Most major research on contingency models began in the late 1960s and early 1970s. Research initially focused on a leader's internal states and traits, a leader's perceived behavior, and leadership categorization (Ayman & Lauritsen, 2018, p. 149).

In 1973, Downton introduced a theory of charisma consisting of charismatic, inspirational, and transactional leadership. Downton's approach includes both positive and negative transactions that form the basis of trust between leaders and followers. The approach further states that the transcendental ideas posed by charismatic leaders have a potent effect on followers and their ability to identify with the leader. Later, researchers introduced testable propositions to explain charismatic leader behavior by describing the charismatic leaders' characteristics, attempting to prove that emotional interaction between leaders and followers is the main factor in charismatic leadership (Downton, 1973, as cited in Antonakis, 2018, pp. 62-63).

Conger and Kanungo view charismatic leadership from the aspect of leader validation via followers in three stages: "Effective charismatic leaders assess the status quo to determine needs…articulate a vision of the future that will inspire the follower…and demonstrate conviction that the mission is achievable" (Conger & Kanungo, 1988, as cited in Antonakis, 2018, p. 64). Shamir, House, and Arthur (1993) tied charismatic leadership to a collective purpose, emphasizing how moral correctness leads to increased confidence and strength.

On the other hand, transactional leadership follows an exchange process; leaders recognize followers' needs and then define an appropriate exchange process to meet the needs of both (Washington, Sutton, & Sauser, 2014, p. 14). Transactional leadership is traditionally viewed as being more widespread than transformational leadership. According to Burns (1978), transactional leadership "forms the bulk of relationships among leaders and followers" (p. 4). In some settings, transactional leadership is appropriate because leaders use it to assess motivations accurately and employ rewards that satisfy a wide range of employee needs.

The Marine Corps teaches that the situation dictates the most appropriate leadership style to use in a given situation. Telling, selling, participating, and delegating are the most common leadership styles used in the Marine Corps (Headquarters, United States Marine Corps, 2016, p. 18-1). Leadership style variance depends on factors such as ability, experience, motivation of subordinates, mission complexity, organization's size, subordinate expectations, trust in subordinates, the leader's morale, leader's degree of confidence, previous success with a specific style, styles the leader was previously exposed to, the leader's personality, and subordinate personalities (Headquarters, United States Marine Corps, 2016, pp. 18-2-18-4).

Although the study of leadership theory is important, some scholars believe that so many theories and concepts exist that it is difficult to sift through all the available information. Instead of focusing too much attention on theories, leadership practitioners should understand the individual capabilities or competencies required for specific jobs (Gigliotti, 2019, p. 21). Leadership competencies focus on the "doing" of leadership, whereas theories focus on the "knowing" of leadership. Boyatzis defines competencies as "underlying characteristics of a person which results in effective and/or superior performance in a job" (Boyatzis, 1982, as cited

in Chouhan & Srivastava, 2014, p. 15). Leadership competencies include five categories: analytic, personal, organizational, positional, and communication.

The competency concept is important because one can learn leadership capabilities, leadership competencies improve with education, and organizations and institutions can improve performance by carefully crafting leader competencies and training their leaders. Organizations can use the inherent flexibility and uniqueness of the competency concept to create an integrative framework for leader development. Leaders are more effective when they combine an effective leadership style with competency-based capabilities, expertise, and knowledge (Chow, Salleh, & Ismail, 2017, pp. 150-151).

The United States Army War College (USAWC) "educates and develops leaders for service at the strategic level while advancing the knowledge in the global application of land power" (United States Army War College, 2018 p. 64). The 10-month senior leader course includes a four-credit hour course on strategic leadership. During the course, students learn requisite knowledge, skills, and attributes to lead effectively in VUCA operational environments. The course begins with a foundation in strategic thinking and progresses to teaching students strategic and ethical decision making, command climate, and organizational change (United States Army War College, 2018, p. 8). The USAWC teaches that competencies exist at the conceptual, technical, and interpersonal levels (Waters, 2019, p. 61).

The United States Marine Corps identifies fourteen leadership traits and eleven leadership principles that leaders use to develop their leadership abilities and subordinates' leadership abilities. Presumably, Marines who apply the traits and principles are successful leaders. The traits and principles are related to two of Boyatzis' five leadership competency

categories, personal and organizational, and apply to Marines of all ranks and military occupational specialties.

MARSOF 2030 characterizes the future operating environment and establishes four innovation pathways that "represent the 'what'; conceptual visions which can provide MARSOC distinct value in the future operating environment" (p. 9). One of the innovation pathways, the "cognitive operator," is oriented toward the individual special operations Marines who make up MARSOC. According to *MARSOF 2030*,

> Raiders must be able to seamlessly integrate a wide range of complex tasks; influencing allies and partners; developing an understanding of emerging problems; informing decision-makers; applying national, theater, and interagency capabilities to problems; and fighting as adeptly in the information space as the physical. This set of competencies defines the 'Cognitive Operator'. (Headquarters, United States Marine Corps, 2018, p. 17)

MARSOC's approach is consistent with Gigliotti's (2019) view that competencies should relate to individual capabilities pertaining to specific jobs. The cognitive operator competencies defined in *MARSOF 2030*, characteristics used to describe the contemporary military operational environment, and military senior leader competencies share common themes. According to Flowers, the contemporary military operational environment elements include more complex political and military factors, changes in mission execution style, and an increase in joint and combined operations that require officers to learn strategic leadership earlier in their career (2004, p. 40). Waters (2019) defines the military senior leader competencies an officer must possess to succeed in the strategic environment: the ability to thrive in the joint, interagency,

intergovernmental, and multinational environment; consensus building; negotiation skills; and problem-solving ability.

Statement of the Problem

Despite the commonalities between cognitive operator competencies, characteristics of the contemporary military operational environment, and military senior leader competencies, MARSOC has not explored leadership style and leader competencies and how they relate to the cognitive operator concept. By not thoroughly clarifying how they relate, MARSOC potentially misses understanding the level of interdependence between leadership style and senior leader competencies and the mastery of cognitive operator competencies. To comprehensively implement the cognitive operator concept, MARSOC must determine whether SOOs exhibit a preferred leadership style or specific senior leader competencies and decide whether they are compatible with the cognitive operator competencies defined in *MARSOF 2030*.

Purpose of the Study

The purpose of this study is to determine whether SOOs exhibit a preferred leadership style or specific senior leader competencies compatible with the cognitive operator competencies defined in *MARSOF 2030*. This research supports MARSOC's ongoing efforts to develop their cognitive Raider innovation pathway as it relates to the leadership training continuum of SOOs.

Research Questions

The following questions guided the research:

1. Is there a significant relationship between SOOs' preferred leadership styles and senior leader competencies?
2. Is there a significant relationship between SOOs' preferred leadership styles and cognitive operator competencies?

3. Is there a significant relationship between SOOs' senior leader competencies and cognitive operator competencies?

Significance of the Study

SOOs deploy with their Marine Special Operations Teams to austere, hostile, denied, or politically sensitive operational environments characterized as VUCA. During deployments, SOOs frequently interact with senior host-nation military leaders, senior U.S. military leaders, and senior U.S. government officials. Knowing whether SOOs exhibit a preferred leadership style or specific senior leader competencies compatible with the cognitive operator competencies defined in *MARSOF 2030* will allow leaders to use this study's results to validate their current training continuum and identify deficiencies that require additional training.

Definition of Terms

Marine Forces Special Operations Command. A component of United States Special Operations Command, Marine Forces Special Operations Command's (MARSOC) mission is to "recruit, train, sustain and deploy scalable, expeditionary forces worldwide to accomplish special operations missions assigned by U.S. Special Operations Command (USSOCOM)" (Headquarters, Marine Corps Forces Special Operations Command, 2021).

Special Operations Officer. A Marine Corps Officer "responsible for the organization, training, planning, employment and execution of the Marine special operations teams (MSOT), Marine special operations company (MSOC) and Marine raider battalions (MRB) across the spectrum of the special operations core activities of special reconnaissance (SR), direct action (DA), foreign internal defense (FID), security force assistance (SFA) and counter-terrorism (CT) tasks in support of unconventional warfare (UW), and countering weapons of mass destruction

(CWMD) as part of the Marine Corps component to USSOCOM" (Headquarters, United States Marine Corps, 2019, pp. 1-21).

Limitations of the Study

This study is designed to identify whether SOOs exhibit a preferred leadership style, senior leader competencies, or cognitive operator competencies. The survey was limited to a single period and a specific sample of SOOs. The findings are limited to the perceptions of specific SOOs who responded to the survey rather than being generalizable to the larger population of SOOs. As a result, the findings may not apply to MARSOC Marines within different military occupational specialties. The application of any conclusions should therefore be done only in settings that have the same or similar characteristics (McMillan, 2015). Methodological choices may create some potential limitations, as well. The study instruments have the potential to elicit biased responses which, because participants self-report answers, may reflect social desirability or halo effects (Dodd-McCue & Tartaglia, 2010).

The researcher's own professional experience as a SOO may constitute a source of empathy and provide an experiential background that enhances effectiveness in eliciting and understanding respondents' perceptions; it may also, however, be viewed as a limitation in that it is a potential source of bias.

Methods

This non-experimental quantitative research study used a correlational research design to determine whether SOOs exhibit a preferred leadership style and/or senior leader competencies and whether relationships exist between preferred leadership style, senior leader competencies, and cognitive operator competencies. According to Plano-Clark and Creswell, the purpose of correlational research is to identify existing relationships among variables and describe their

direction and strength without attempting to manipulate variables by way of intervention (2010, p. 173). The study's population included all SOOs assigned to Headquarters, MARSOC or one of the Command's subordinate units. The study used data collected from an electronic survey instrument that the researcher distributed to the SOOs by electronic mail (email). After presenting the inferential statistics, the researcher used a series of t-tests to determine the relationship between preferred leadership style, cognitive operator competencies, and senior leader competencies.

Summary

MARSOF 2030 defines the cognitive operator competencies required for SOOs to succeed in the future operating environment, described as being more decentralized, complex, and VUCA. *MARSOF 2030* does not fully explore the relationship among cognitive operator competencies, senior leader competencies, and preferred leadership style. By understanding the relationship between the three, MARSOC can better assess whether their training continuum fully prepares SOOs for deployments to hostile, denied, and politically sensitive areas.

CHAPTER TWO

LITERATURE REVIEW

Introduction

Three sections comprise the following literature review. The first section examines literature related to preferred and least preferred leadership styles in the military setting. The second section identifies literature that links senior leader competencies to leadership style at conceptual, technical, and interpersonal levels as defined by Waters (2019) and categorizes *MARSOF 2030's* cognitive operator competencies within Waters' framework. The last section highlights literature which identifies the importance of senior and strategic leader competency training for junior military officers.

Leadership Styles in the Military

Stanciulescu and Beldman (2019) argue that a leader's style is crucial because it influences organizational efficacy. Military organizations are most effective when led by charismatic leaders. Charismatic leaders expect subordinates to operate effectively within understood organizational goals and standards. Leaders have a clear vision for their organization and positively encourage followers to succeed. They are well-spoken, well-written, and possess above average interpersonal skills. Stanciulescu and Beldman concluded that charismatic leaders encourage positive subordinate image and more effectively achieve organizational goals (p. 60).

Verren (2012) tested the Contextual Leadership Theory using a random sample of 175 members of the California National Guard's 640th aviation support battalion and observed the sample at deployed and home base locations. The researcher concluded that there was no significant difference in leader behavior between combat and home base locations, no significant difference in leader type between combat and home base locations, and no significant

relationship between rank, education, combat experience, and leader behavior during combat conditions (p. 84).

Port (2019) studied the perceptions of preferred leadership style in various military contexts from the follower's perspective. He explored the qualities that Marines look for in their leaders during a crisis, in training, and while on routine deployments (non-combat) using Goldman, Boyatzis, and McKee's six different leadership styles "visionary, coaching, affiliative, democratic, pacesetter, and commanding" (p. 3). He hypothesized that followers would prefer different leadership styles according to specific circumstances. The study results indicated followers prefer leadership styles which vary according to context (p. 115).

Although Port's study indicated a preference for different leadership styles depending on specific circumstances or context, Vecchio, Bullis, and Brazil (2006) conducted a constructive replication of previous comprehensive tests of the Situational Leadership Theory. The researchers administered the ten-item Leadership Behavior Description Questionnaire to 860 U.S. Military Academy cadets during an eight-week field training exercise. The researchers studied whether squad members' readiness for self-direction served as a determinant for the squad leader to change their behavior style accordingly. The study's results showed no statistically significant relationship between leader style and follower attributes, leading the researchers to conclude that the Situational Leadership Theory might not have practical utility (pp. 407-410).

A qualitative exploratory case study conducted by Dunn (2016) examined the effects of the Situational Leadership Theory. His study focused on how followers perceive their leader's adaptability and whether it influenced ordinary day-to-day organizational issues (p. iii). Dunn found that most followers perceived that their leaders used a delegating leadership style. Still,

situational leadership did not positively relate to followers' behavior, mission accomplishment, job satisfaction, or a cohesive working environment, and followers and leaders lacked bidirectional communication (p. 129). In Dunn's case study, the followers were seasoned senior enlisted servicemembers led by senior officers. Using Hersey's situational leadership model, the followers were "Level R4: Able and Confident and Willing" and worked for leaders who demonstrated a delegating or an "S4 style" of leadership allowing the followers to operate with a great degree of autonomy (Hersey, 2009, p. 12).

Yeakey (2000) applied the Situational Leadership Theory to a U.S. Army National Guard battalion. He wanted to understand whether a prescribed leader-behavior subordinate readiness match resulted in higher subordinate performance or higher subordinate satisfaction, and whether a relationship existed between leader effectiveness, job satisfaction, and command climate (p. 183). His study showed that the battalion's leaders performed effectively, and followers had a high degree of satisfaction with the organizations. On the other hand, followers indicated their leaders did not effectively adjust their leadership styles according to subordinate behavior. The leader's inability to adjust directly related to the leader's lack of ability to positively influence unit readiness (p. 184). His study highlights a challenge with the Situational Leadership Theory; the instruments available to test the theory do not account for numerous interpersonal variables and organizational complexities. Yeakey recommends conducting additional studies using different collection techniques to test the leader-subordinate behavior model (p. 195).

In their paper on shared leadership in the military context, Lindsay, Day, and Halpin (2011) discussed the notion that leadership styles relying on shared power and earned authority seem incompatible with the vertical, hierarchical military system which typically uses position and rank authority as prerequisites for assuming specific leadership roles (p. 540). They

acknowledge that the military structure makes shared leadership more difficult but conclude that there are military organizations which exhibit shared leadership concepts. Army Special Forces teams typically have a higher level of professional and individual expertise and frequently deploy to austere environments resulting in teams demonstrating more shared leadership qualities (pp. 541-542).

Burns (1978) introduced the concepts of transformational and transactional leadership. The main difference between the two leadership styles is how each one views leader follower interaction in terms of what leaders and followers offer one another. Each concept has distinct differences. A Transformational leader "recognizes and exploits an existing need or demand of a potential follower" but also "seeks to satisfy higher needs and engages the full person of the follower." Transactional leaders "approach followers with an eye to exchanging one thing for another" and "form the bulk of relationships among leaders and followers" (p. 4).

Studies on transformational leadership have identified significant correlations between transformational leadership style and charismatic leaders. Although both leadership styles support empowering followers, Hamad suggests leaders can be transformational without being charismatic. However, he argues transformational leaders must display a high degree of charisma in the military setting because military subordinates operate effectively when their leaders inspire and motivate them (2015, p. 4).

Williams (2019) surveyed Louisiana National Guard soldiers to understand how soldiers perceive authoritarian, transformational, and transactional leadership styles (p. 80). The survey participants overwhelmingly favored transformational leadership over authoritarian leadership. Williams concluded that National Guard leaders exhibited an authoritarian leadership style because "control is essential and there is minimal room for error" (p. ii). Although the military

emphasizes interpersonal interactions as an essential communication method between leader and subordinate, an authoritarian leadership style can complicate relationships because it centralizes control and decision-making with the leader (pp. 64-66). Williams' conclusion is consistent with Johnston, Kelly, and Oliver's (2019) research on the relationship between authoritarian leadership and its effects on employee task performance. They posited that "LMX [leader member exchange] mediates the relationship between authoritarian leadership and employee task performance" and concluded that authoritarian leadership negatively relates to task performance and positively relates to lower levels of LMX (pp. 1-2).

Bass, Avolio, Jung, and Berson (2003) studied whether transactional or transformational leaders, as rated by their followers, predicted performance in U.S. Army units operating in uncertain, challenging, and stressful situations. The researchers administered the Multifactor Leadership Questionnaire (MLQ) to 1,594 soldiers. The soldiers rated the direct effects of their platoon sergeants' and platoon commanders' leadership styles during typical garrison assignments. The researchers analyzed the survey responses to predict the unit's potency, cohesion, and performance in a stressful, uncertain, and complex field evolution (pp. 208-210). Their results indicated transactional and transformational platoons had a positive and direct relationship with platoon performance. In comparison, transformational leaders positively related to potency, cohesion, and performance, but transactional platoon leaders positively associated with potency and cohesion. Similarly, platoon sergeants' transformational leadership styles positively related to potency, cohesion, and performance, whereas platoon sergeants with a transactional leadership style positively related to cohesion and performance. Passive avoidant leadership in both platoon commanders and platoon sergeants was negatively associated with ratings of performance, potency, and cohesion. The researchers concluded that transactional and

transformational leadership predicted positive unit performance in uncertain, challenging, and stressful situations (pp. 213-215).

A similar study in Canada examined the effects of transformational, transactional, and active management-by-exception leadership styles (in officer and enlisted ranks) in the Canadian military. Additionally, the study investigated whether the military's hierarchical structure and followers' expectations moderated the relationship between perceived effectiveness behaviors and expected outcomes. Researchers administered the MLQ to 704 officers and enlisted soldiers to rate their leaders' actual and expected behavior. The researchers found neither transformational nor transactional effects were moderated by rank or follower expectations. Further, the frequency of transformational leadership behavior increased with rank even though the frequency of perceived and expected transactional behaviors did not. Lastly, the researchers concluded the Canadian military should encourage transformational and transaction leadership at all ranks and echelons (Ivey & Kline, 2010, pp. 257-259).

According to Cote (2014), some military leaders demonstrate command-style leadership. Scholars generally understand command-style leadership as coercive and autocratic. It can be useful in combat environments and determinantal to unit morale in a peacetime environment. Innate and learned behaviors contribute to an officer's command-style leadership. Other factors such as career experience, age, rank, early exposure to leadership training, and the nature of the mission contribute to the use of command-style leadership. An officer's wisdom and intellectual discipline are pivotal because they moderate command-style leadership. Cote's study determined that leadership styles change over time, particularly as officers gain additional rank and experience (pp. 101-102).

Fosse, Skogstad, Einarsen, and Martinusse (2019) conducted a meta-analysis on the frequency of studies on what they describe as destructive leadership in the military context. The researchers defined the military context as having distinct qualities from other working environments. Military organizations must continuously train and prepare for physically and emotionally hostile situations and extreme environmental conditions (p. 709). They divided destructive leadership into two categories: active destructive leadership, which is characterized by abusive supervision, and passive destructive leadership, which is defined by a laissez-faire leadership approach (p. 709). The researchers concluded that active and passive forms of destructive leadership in the military context are "negatively related to leader performance and efficiency and subordinate health-related, attitude related, and behavior related variables" (p. 712).

Conceptual Competencies and Leadership Style

"Strategic issues are generally complex and ill-defined, and most information available is ambiguous and incomplete" and "have such complex second and third order effects that a completely accurate prediction in their outcomes is not possible" (Waters, 2019, p. 62). Senior leaders use strategic thinking and problem solving to conceptualize environmental complexity. Similarly, SOOs must possess conceptual competencies to "develop an understanding of emerging problems" and "fight as adeptly in the information space as the physical" (Headquarters, Marine Forces Special Operations Command, 2018, p. 17).

Gross (2016) studied the relationship between leadership style and strategic thinking in small and medium enterprises. He aimed to determine whether transactional, transformational, or laissez-faire leadership related positively with strategic thinking (p. 26). Gross administered the MLQ and Strategic Thinking Scale to 200 small and medium enterprise employees in North

Carolina. His analysis demonstrated that both transactional and transformational leadership styles had a positive and statically significant relationship to strategic thinking, whereas the laissez-faire style had a positive, statistically insignificant relationship with strategic thinking (p. 31).

Goldsmith (2009) studied the relationship between leadership style and participation in strategic decision-making in chief learning officers (CLO) employed by U.S. companies subscribing to the American Society for Training and Development's Learning Executive Magazine and LX Exchange magazine. Seventy respondents participated in a survey comprised of the MLQ, the Strategic Decisions Index, and researcher-developed demographic data. His results indicated more than fifty percent of the respondents demonstrated a transformational leadership style and found a significant relationship between leadership style and participation in strategic decision-making (p. 115). His research supports the notion that CLOs should have continued involvement in strategic decisions even though managers in most organizations do not consider CLOs C-level executives and CLOs do not usually report to the CEO (p. 145). More broadly, in terms of talent management, the study's results imply that organizations can and should identify candidates from within the organization who exhibit transactional or transformational leadership styles because of their positive relationship with strategic decision making (p. 149).

Leaders must manage and solve organizational-level problems. According to Waters, problem management at organizational levels requires an incremental decision-making process. Senior leaders modify initial problem-solving approaches and cast aside alternatives that impede progress. Leaders must view systems as a whole and avoid solving problems individually (2019, pp. 64-65).

Kerns (2016) explains why organizations benefit from decision leaders who exhibit strong problem-solving skills. Decisive problem solving is a competency which cuts across numerous roles performed by the organizational leader. Kerns defines the decision leader as someone who reaches "a desired outcome using the appropriate amount of quality information which is transferred to actionable knowledge and plans of action within a reasonable timeframe" (p. 62). He asserts that leaders who implement problem solving effectively enhance their overall effectiveness and increase achievement of desired results (p. 73).

Kim (2000) examined the relationship between problem-solving styles, leadership styles, and team climate exhibited by employees in South Korean workplaces and whether they contribute to creative behavior and innovation. He administered a survey comprised of the Work Preference Inventory, Problem-Solving Style Inventory, MLQ, Team Climate Inventory, and Self-Reported Creative Behavior scale to 559 participants employed by a South Korean semiconductor manufacturing company (p. 33). Multiple regression analysis showed a positive association between creative behavior and bisociative problem solving, a positive and significant association between transformational and transactional leadership styles and creativity, and a significant and positive relationship between creativity and innovation (pp. 71-77).

According to Andres and Herrmann (2021), the strategic leader's influence on organizational innovation is an increasingly important topic. Alblooshi, Shamsuzzaman, and Haridy (2021) studied the relationship between leadership styles and organizational innovation. They reviewed sixty-four articles on the relationship between leadership styles and innovation and derived findings through descriptive analysis. The researchers concluded that transformative leaders develop radical innovation whereas transactional leaders positively influence incremental innovation. Both transformative and transactional leaders enhance organizational climate;

transformational leaders better adapt to change, and their employees exhibit creative behavior and have a higher job satisfaction than their counterparts led by transactional leaders (pp. 359-365).

Eun and Weon studied innovation among Korean government and non-governmental organizations (NGO). They surveyed 2220 government and NGO workers regarding their respective organization's ability to innovate; specifically, they administered a nine-item survey asking about "inclination toward innovation, problem-solving skills, and ability to manage innovation" (2009, p. 300). The researchers identified leadership style as the most crucial determinant in innovation. Another portion of the survey found that performance-based awards, knowledge sharing, and a strong learning culture were essential determinants (p. 302). Although the study did not discuss preferred leadership style, one can infer that followers would favor transformational and transactional leaders given the relationship between transformational leadership and intellectual stimulation (culture of learning) and the transactional leader's propensity to reward performance (performance-based awards).

Technical Competencies and Leadership Style

Waters differentiates between strategic level technical competencies and tactical or operational level technical competencies. At the tactical and operational levels, technical skills give the senior leader a frame of reference but are not as relevant at the strategic level. At the strategic level, senior leaders must possess technical competencies that allow them to understand complex systems, operate within the joint, interagency, and multinational environment (JIIM), and lead strategic change management (2019, p. 67). Likewise, SOOs must demonstrate systems understanding and adeptly navigate the JIIM environment to "apply national, theater, and

interagency capabilities to problems" (Headquarters, Marine Forces Special Operations Command, 2018, p. 17).

Skarzauskiene (2009) conducted a quantitative study exploring the relationship between systems thinking and leadership performance competency. She administered the Emotional and Social Competency Inventory Self-Assessment and the Leadership Current Performance Self-Assessment instrument to 201 participants from a random sample of large and midsized Lithuanian enterprises employees. After performing data regression analysis, she found "systems thinking increases when the level of leadership performance raises" and systems thinking influences "all three dimensions of performance (personal, relationship, organizational)" (pp. 101-102). In a separate empirical study, Skarzauskiene concluded that systems thinking allows organizations to better understand the global environment, improves problem-solving and decision making, helps create better strategies, improves strategic planning, aids in understanding the interrelationships between systems which help and hinder organizational change, and helps integrate processes (2010, p. 60). Strus' (2015) phenomenological study explored the lived experiences of Millennial United States Air Force Officers' leadership development programs. She concluded that Millennial "characteristics of community, loyalty, achievement, ambition, [and] hopeful outlook" are "aligned with United States Air Force core values" (p. 169). According to Strus, Generation X Air Force leaders should increase transformational leadership styles and systems thinking approaches to increase Millennial Air Force Officer retention. The most effective way for Generation X Air Force leaders to effect change is to modify the current Air Force leadership program curricula (p. 169).

Charchian (2001) discussed how interagency operations increasingly involve military personnel and require a level of coordination and consensus-building differing from military-

only operations. Coordination and consensus-building rely on military leaders to understand one another's organizational culture to build positive relationships. He identified such factors as differences in command and control, decision making, lack of hierarchical structure, and consensus based decision making as factors which vary between military and non-military organizations (pp. 5-8). He highlighted consensus building as an essential competency required for successful interagency collaboration. Leaders build consensus through dialogue and trust-building and must understand and appreciate the complex nature of the respective interagency organization's mission, understand the most effective communication method to use with the agencies, and understand that an environment's dynamic nature makes assessments difficult (p. 10).

Rhinelander (2020) used a qualitative organizational ethnographic approach to study the organizational language and cultural differences between U.S. governmental, non-governmental, and military organizations deployed to the Horn of Africa. He sought to analyze "structure, cultures, themes, values, and interpretations" within each organization (p. 7). He conducted an exhaustive organizational literature review, 525 minutes of semi-structured interviews, data coding, and analysis. His analysis identified numerous cultural mismatches between organizations which negatively impacted their relationships. He concluded that establishing effective and reliable collaboration methods between intergovernmental organizations is critical to face challenging problems which multiple government agencies must solve together (p. 119).

According to Costumato (2021), scholars are interested in studying the concept of collaboration in public management. Solving complex and unpredictable problems often requires collaboration because the problem's solution is usually outside the scope of any singular organization's expertise (p. 247). Costumato hypothesized that literature related to collaborative

governance and public network performance influences the understanding of interinstitutional performance. His review aimed to bridge the gap between the two separate literature streams and identify common elements between them (p. 257). After a thorough review process, Costumato analyzed sixty articles dealing with public interagency collaboration. He identified several determinants of public interinstitutional performance: trust, power-sharing, management strategies, leadership style, and formalization (pp. 259-262). The author's findings indicated that transformational, adaptive, and collaborative leadership styles best promote interinstitutional organizational collaboration (p. 263).

Korbi (2015) posits that organizations can use the Theory of Synthesis to develop leadership models that aid in strategic change implementation. Accordingly, a leader facing strategic change must be a change agent, a good strategist, an agent of communication, and an agent of influence (p. 13). By analyzing relevant literature, Korbi concluded that several models lead to more effective organizational change: charismatic/instrumental leadership, operational/institutional leadership, transactional/transformational leadership, and individual/collective leadership. (p. 23).

Belias and Athanasios (2014) argue that leadership style plays a pivotal role in organizational change, particularly when a change strategy influences organizational culture and begins with a clear vision of the future. They theorize transformational leadership, organizational culture, and a climate of organizational innovation are specific organizational behaviors which contribute to successful change processes (pp. 464-465).

Interpersonal Competencies and Leadership Style

According to Waters (2019), interpersonal competencies such as communication skills, consensus building, and negotiation are important because senior leaders must be able to

maintain intergroup relationships with subordinates and focus on intragroup relationships between groups and stakeholders (p. 68). Two of *MARSOF 2030*'s cognitive operator competencies exist at the interpersonal level: "influencing allies and partners" and "informing decision makers" (Headquarters, Marine Forces Special Operations Command, 2018, p. 17).

Studies show that senior leaders require effective communication skills. Men (2014) studied the relationship between a transformational leadership style, communication, and employee satisfaction (p. 264). The study found that transformational leaders demonstrated excellent internal strategic communication, frequently used face-to-face communication to encourage two-way communication, and listened effectively to employees (pp. 277-278).

Raisienė, Pulokienė, & Valickas, A (2018) examined the influence of a leader's traits and qualities in international projects that require external cooperation. Their study involved Lithuanian, Latvian, and Belarussian project managers and project team members working on a European Union-led trans-border cooperation program. The researchers' multistage process included a survey and semi-structured interviews conducted with different target groups within the project teams. They concluded that effective multilateral project managers exhibit five components: technical knowledge, team building competence, meeting project members' needs, integrating everyday project activities with a vision and long-term goals, and the "capability to secure well-times, open, and adequate communication inside and outside the project team" (p. 194).

Building consensus is a process which includes building shared understanding around strategic issues. Leadership is a central tenet of the consensus building process (Wodak, Kwon, & Clarke, 2011, p. 593). Wodak, Kwon, and Clarke's study focused on discursive aspects of how leaders realize leadership, whether leaders build consensus using authoritarian or egalitarian

speaking styles, and the method by which transactional and transformational leadership styles are discursively deployed. Their analysis "demonstrated [that] the egalitarian and transformational leadership style encourages an in-depth discussion of issues, whereas the more authoritarian transactional leadership style may lead to the making of hasty decisions" (p. 611).

In Japan, Ishikawa (2012) studied the relationship between shared leadership, gatekeeping leadership, and transformational leadership on building consensus in research and development team performance. Ishikawa's results "suggested that transformational leadership has an indirect effect on shared leadership through the norm for maintaining consensus in such a way that transformational leadership has a positive impact on the norm for maintaining consensus and the norm for maintaining consensus has a negative effect on shared leadership" (p. 274).

According to Charchian, some military leaders have difficulty building consensus because the military's planning approach focuses on rigid analytical and decision-making processes that inhibit consensus building. When communication does occur during the process, it becomes a competitive discourse where one person attempts to gain an advantage over another. Military leaders must be adept at using role-playing and effective processes and develop shared understanding to build consensus and conduct complex operations (2001, pp. 11-12).

Headquarters Department of the Army (ADP 6-22, 2019) views negotiation as a competency "that extends influence beyond the chain of command to include unified action partners…leaders use indirect means of influence: diplomacy, negotiation, mediation, arbitration, partnering, conflict resolution, consensus building, and coordination" (pp. 5-11). The U.S. Army emphasizes negotiation skills for junior officers and periodically evaluates company-grade leaders on their ability to extend influence beyond the chain of command through negotiation

("Negotiation skills critical for Army leaders," 2014). According to Waters (2019) negotiation skills are essential because senior leader relations rely less on direct orders prevalent in linear senior subordinate relationships and more on lateral relationships absent of subordination (p. 68). Makhdom & Ghazali (2013) state that limited information exists on the relationship between leadership and negotiation. However, their research found a positive relationship between leadership and negotiation, particularly in leadership styles which demonstrate respect for subordinates' ideas, and those characterized by trust and participative behavior (p. 36). They contend that persuasion and negotiation are fundamental aspects of leadership (p. 39).

Senior and Strategic Leader Competency Training

Kucukozyigit analyzed literature about changes in the military operational environment. He observed four major shifts in the operational environment since the end of the Cold War: "Widespread interaction with civilian populations, coalition forces, civilian agencies, and non-governmental organizations; devolution of authority to lower organizational levels; perilous command and control tools becoming inadequate; the transition from one type of security environment to another with short notice" (2020, p. 8). He concluded that changes to the operational environment also changed the skills required of military officers to succeed in the VUCA environment.

He suggests certain leadership skill sets are required for leaders to succeed in a VUCA environment: "decision-making, endorsement of others, awareness, soft skills, cultural literacy, and adaptability" (Kucukozyigit, 2020, p. 95). Military leaders should recognize the complexity of the operational environment and tailor their leadership training accordingly.

According to Moilanen (2002), the U.S. Army must develop its leaders' tactical, technical, interpersonal, and conceptual competencies. The leaders should be adaptive, critical

thinkers capable of working in any operational environment. He claims that today's operational environment is complex enough that junior leaders need operational and strategic-level leader skills.

Flowers (2004) explains the need for strategic leadership education earlier in an officer's career. He contends that increased political and military battlefield complexity, the contemporary operating environment, and increased joint and multinational operations require the U.S. Army to reexamine its traditional ways of transforming tactical leaders into strategic leaders (Flowers, 2004). He recommends defining a set of leadership competencies which simultaneously function at different levels of warfare. Specifically, junior officers should be able to "predict second and third-order effects, negotiate, understand globalization, build consensus, analyze complex and ambiguous situations, think innovatively and critically, and communicate effectively" (Flowers, 2004).

Strategic leadership competency training for junior military officers is not limited to the U.S. Military. Instructors at The Royal Military Academy at Sandhurst (RMAS) in the United Kingdom recognized the need to train British Lieutenants to be strategic-minded military officers. Through a series of military exercises, the students learn that a thorough understanding of the complex operational environment and operating in the strategic environment relates directly to their mission command culture, emphasizing initiative, responsibility, and trust (Jacobs, 2019, p. 85).

In Denmark, the ideal of the Danish officer has changed drastically in the last 35 years. Danish officers rarely deployed outside their borders during the Cold War. Today, Denmark contributes to numerous overseas contingency operations supporting the North Atlantic Treaty Organization (NATO) (Nyemann & Staun, 2020, p. 97). The Danish military decided to treat

their young military officers as strategic enablers, junior officers trained to recognize unpredictable and uncertain environments and understand international relations, diplomatic skills, and cross-cultural norms (Nyemann & Staun, 2020, p. 103).

Norway changed its officer training to produce more strategic-minded junior officers. Norway's former chief of defense conceptualized the term *strategic mindedness*. Norway's concept related to Lykke's military strategy of ends, ways, and means but also included the aspect of Norway's role in the NATO alliance. The Norwegian Ministry of Defense (MoD) trains its officers in strategic mindedness and competencies to work in complex environments. Although there is no agreed-upon definition of strategic mindedness, Norway's MoD directly relates strategic mindedness to strategic thinking (Roennfeldt, 2020, p. 80).

Despite the research suggesting that junior leaders would benefit from strategic leadership training earlier in their careers, the U.S. Military has largely ignored training junior officers in strategic or senior leader competencies. Senior Lieutenant Colonels and Colonels with nearly twenty years of military experience attend the Army War College, which provides training in strategic and senior leader competencies. The hesitance to train junior leaders in strategic leadership is due in part to the notion that junior leaders simply do not need to learn strategic leader competencies (Border, 2005, p. 6). Other detractors take a one-dimensional look at leadership training and feel that junior leaders should only concentrate on the tactical level of warfare.

Traditionally, military services (Army, Navy, Air Force, and Marines) individually manage professional military education (PME). As Shiver (2016) explains, USSOCOM identified that service-level PME did not teach special operations forces (SOF) senior enlisted service members the requisite level of critical thought and strategic understanding needed to lead

in strategic and operational level operating environments. USSOCOM designed the SOF Career Education Program (CEP), a comprehensive four-stage PME program teaching service members strategic and senior leader competencies at relatively junior ranks. Coursework includes critical thinking, military-strategic theory, joint interagency, intergovernmental, multinational environment, and change management and innovation (p. 6).

CHAPTER THREE

METHODS

Introduction

The purpose of this study was to determine whether SOOs exhibit a preferred leadership style and specific senior leader competencies compatible with the cognitive operator competencies defined in *MARSOF 2030.* The researcher administered a survey to the SOOs assigned to MARSOC. The survey combined the MLQ subset with two questionnaires developed by the researcher: the cognitive operator competencies questionnaire (COCQ) and the senior leader competencies questionnaire (SLCQ). The researcher analyzed the survey's inferential statistics to determine the relationship between leadership style, senior leader competencies, and cognitive operator competencies.

Research Design

This non-experimental quantitative research study used a correlational research design to determine whether SOOs exhibit a preferred leadership style and/or senior leader competencies and whether relationships exist among preferred leadership style, senior leader competencies, and cognitive operator competencies. According to Plano-Clark and Creswell, the purpose of correlational research is to identify existing relationships among variables and describe their direction and strength without attempting to manipulate variables by way of intervention (2010, p. 173). Upon completion of the survey, the researcher collected the data, analyzed each section independently, and tested relationships between sections to the answer the research questions. The survey contained four independent sections: demographic data, the MLQ subset, the COCQ, and the SLCQ.

Research Questions

The following questions guided the research:

1. Is there a significant relationship between SOOs' preferred leadership styles and senior leader competencies?
2. Is there a significant relationship between SOOs' preferred leadership styles and cognitive operator competencies?
3. Is there a significant relationship between SOOs' senior leader competencies and cognitive operator competencies?

Population

This study's population included all SOOs in the ranks of Captain, Major, and Lieutenant Colonel assigned to MARSOC: Marine Forces Special Operations Command Headquarters, Marine Raider Regiment, Marine Raider Support Group, and Marine Raider Training Center at the time of survey distribution, except for five SOOs whom the researcher directly or indirectly supervised. The researcher did not have supervisory responsibility over any of the respondents. This research used census data since the survey was distributed to all SOOs assigned to MARSOC. According to the Australian Bureau of Statistics, a census is "a collection of information from all units in the population or a complete enumeration of the population" (n.d.). The current population size of SOOs assigned to Marine Forces Special Operations Command is (N=111). The researcher expects that the relatively short duration of survey availability, voluntary nature of the survey, and number of SOOs who are deployed overseas or training within the United States will limit overall participation.

Instrumentation

Upon approval from Marshall University's IRB (Appendix A) and MARSOC's deputy commander (Appendix B), the researcher administered a one-time, self-administered cross-sectional survey using the Qualtrics web-based survey tool (Appendix C). The first section included demographic data which cataloged rank, number of years as a SOO, number of deployments as a SOO, and the highest level of PME attained for each of the respondents. The researcher made a license purchase from www.mindgarden.com and received permission to administer the MLQ subset (Appendix D). Questions related to transformational, transactional, and passive avoidant leadership characteristics comprised the survey's second section. The researcher omitted nine MLQ questions related to outcomes of leadership characteristics because they are outside of the study's scope. The researcher constructed the final two survey sections of the survey, a series of Likert scaled self-assessment questions. The third section, the COCQ, was used to determine whether the survey's respondents exhibited cognitive operator competencies and the fourth section, the SLCQ, was used to determine whether the survey's respondents exhibited senior leader competencies. Two scales make up the COCQ: applied competencies (AC) and educational attainment (EA). The conceptual competencies (CC) scale, technical competencies (TC) scale, and interpersonal competencies (IC) scale used questions from the COCQ and the SLCQ. Table 1 associates scale name, scale abbreviation, and survey question numbers.

Table 1

Association Between Level, Scale Name, Abbreviation, and Survey Questions

Level	Scale name	Abbreviation	Question numbers
Conceptual	Conceptual competencies	CC	40, 46, 47, 50, 57
Technical	Technical competencies	TC	44, 48, 49, 51, 56
Interpersonal	Interpersonal competencies	IC	38, 42, 52, 53, 54, 55
Educational	Educational attainment	EA	37, 39, 41, 43, 45
Applied	Applied competencies	AC	38, 40, 42, 44, 46

The survey instrument contained author-generated questions; therefore, the researcher conducted a pilot study prior to administering the survey. The researcher chose respondents from SOOs in the ranks of Captain, Major, and Lieutenant Colonel from an available population serving in billets external to MARSOC, MARSOC's Headquarters, the Marine Raider Regiment, the Marine Raider Support Group, and the Marine Raider Training Center, and from SOOs within MARSOC who worked directly or indirectly for the researcher and were therefore excluded from the survey's population. The researcher administered the pilot study in conditions similar to the survey by sending respondents an email with a survey link, survey instructions, and survey consent form. Additionally, respondents provided the researcher with feedback on length of time it took them to complete the survey, clarity of questions, and survey format. The researcher made necessary changes to the survey prior to administering it to the population.

Data Collection

This study used data collected from an electronic survey questionnaire which the researcher distributed to the respondents. Upon approval from the Marshall University Institutional Review Board (Appendix A) and the Deputy Commander, Marine Forces Special Operations Command (Appendix B), the Marine Forces Special Operations Command's Manpower Officer provided the researcher a password protected Microsoft Excel spreadsheet

listing the rank, last name, first name, middle initial, and email address of the Marine Special Operations Officers assigned to MARSOC. The researcher stored the password protected Microsoft Excel spreadsheet on his personal government issued computer, which required the researcher to log in with his government issued identification card and six-digit personal identification number. The researcher accessed Microsoft Outlook 365 through the USSOCOM's Special Operations Forces unclassified network and built an email distribution list of the population. The researcher emailed the population an anonymous survey link, survey instructions, and an IRB-stamped survey consent form (Appendix E). The respondents submitted their completed surveys anonymously to the Qualtrics website. To further maintain respondent confidentiality, the researcher was the only person with access to the password protected Microsoft Excel spreadsheet that contained respondents' demographic data and the only person with access to the survey results on the Qualtrics website.

Data Analysis

The researcher used a password protected Microsoft Excel spreadsheet to record, calculate, and analyze the survey data. First, the researcher presented the survey's descriptive statistics. The descriptive statistics included the demographic data and the results of each individual question with respondent distribution across Likert scale responses. Next, the researcher referred to Avolio and Bass' MLQ manual scoring key, grouped the survey items according to the five transformational scales, two transactional scales, and two passive avoidant scales, and calculated the mean for each grouping which is expressed throughout the study as mean transformational (TFL) leadership characteristics scores, mean transactional (TAL) leadership characteristics scores, and mean passive avoidant (PAL) leadership characteristics scores (2004, p. 8). Replicating a technique used by Sabbah, Ibrahim, Khamis, Bakhour, Sabbah,

Droubi, and Sabbah, the researcher interpreted the mean TFL leadership characteristics scores, TAL leadership characteristics scores, and PAL leadership characteristics scores as: "the mean range of 4.00-3.21 = *frequently, if not always*, from 3.20-2.41 = *fairly often*, 2.40-1.61 = *sometimes*, 1.60-0.81 = *once in a while*, and 0.80-0.00 = *not at all*" (2020, p. 4).

For the COCQ and the SLCQ, the researcher calculated a mean and SD for all 60 respondents and means and SD stratified by respondent characteristics, questionnaire, and survey scale. The data were exported from Qualtrics to Microsoft excel and arranged for each calculation. The researcher used Microsoft Excel's analysis function to conduct each t-test. The researcher administered 7 paired two sample, two-tailed t-tests to determine statistical significance between the mean of paired observations of inferential statistics between groups. The first t-test compared the mean TFL leadership characteristics score to the mean SLCQ score. The second t-test compared the mean TAL leadership characteristics score to the mean SLCQ mean. The third t-test compared the mean PAL leadership characteristics score to the mean SLCQ score. The fourth t-test compared the mean TFL leadership characteristics score to the mean COCQ score. The fifth t-test compared the mean TAL leadership characteristics score to the mean COCQ score. The sixth t-test compared the mean PAL leadership characteristics score to the mean COCQ score. The seventh t-test compared the senior leader competencies questionnaire results to the cognitive operator competency questionnaire results. Table 2 displays the linkage between research question, specific survey questions, and method of analysis.

Table 2

Linkage Between RQs, Survey Questions, and Method of Analysis

Research question	Used the following survey questions	Method of analysis
Research question #1 Is there a significant relationship between SOOs' preferred leadership styles and senior leader competencies?	MLQ in survey Section 2, questions 1-36. Senior leader competencies questionnaire in survey Section Four, questions 47-57.	Data were analyzed categorically. **Categories:** Preferred leadership style Senior leader competency. **Descriptive Statistics:** Mean **Inferential Statistics:** Paired two sample, two-tailed t-test.
Research question 2: Is there a significant relationship between SOOs' preferred leadership styles and cognitive operator competencies?	MLQ in survey Section 2, questions 1-36. Cognitive operator competencies questionnaire in survey Section Three, questions 38, 40, 42, 44, and 46.	Data were analyzed categorically. **Categories:** Preferred leadership style Cognitive operator competencies **Descriptive Statistics:** Mean **Inferential Statistics:** Paired two sample, two-tailed t-test.
Research question 3: Is there a significant relationship between SOOs' senior leader competencies and cognitive operator competencies?	Senior leader competencies questionnaire in survey Section 4, questions 47-57. Cognitive operator competencies questionnaire in survey Section 3, questions 38, 40, 42, 44, and 46.	Data were analyzed categorically. **Categories:** Senior leader competencies Cognitive operator. competencies **Descriptive Statistics:** Mean **Inferential Statistics:** Paired two sample, two-tailed t-tests.

Summary

This qualitative non-experimental study used a correlational research design and examined the relationship between leadership style, cognitive raider competencies, and senior leader competencies among SOOs. The researcher designed a four-section survey using the Qualtrics web-based survey tool and administered the survey to the population of SOOs assigned to the MARSOC headquarters. Lastly, the researcher used Microsoft Excel to record, calculate, and analyze the survey data.

CHAPTER FOUR

DATA PRESENTATION AND FINDINGS

Introduction

Chapter Four contains this study's findings and is divided into six sections. The first section includes an overview of data collection methods and survey participation rates. The survey's demographic information is provided in Section Two. In Sections Three, Four, and Five the researcher presents descriptive statistics for the survey's three sections: the MLQ's subset questions, the COCQ, the SLCQ; and the CC, TC, and IC survey scales. Section Six presents the study's findings by research question.

Data Collection

After approval from Marshall University's Institutional Review Board (IRB) and MARSOC's Deputy Commander, the researcher emailed the survey population on January 25th, 2022, inviting them to voluntarily participate in the 61-question *SOO Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Survey.* The initial email included an IRB approved anonymous survey consent form and an online survey link. The researcher emailed all SOOs in the ranks of Captain, Major, and Lieutenant Colonel assigned to MARSOC (N=111). Population reminder emails were sent on January 31st and February 7th, 2022. The researcher closed the survey at 6:00 P.M. on February 8, 2022, with a 54% response rate.

Population Characteristics

Sixty SOOs participated in the survey. Twenty respondents (33.33%) were Captains, 24 respondents (40.00%) were Majors, and 16 respondents (26.67%) were Lieutenant Colonels. Sixteen respondents (26.67%) have been a SOO for 0-4 years, 20 respondents (33.33%) have been a SOO for 5-8 years, 15 respondents (25.00%) have been a SOO for 9-12 years, and nine

respondents (15.00%) have been a SOO for 13-16 years. Six respondents (10.00%) have not deployed as a SOO, 29 respondents (48.33%) have 1-2 deployments as a SOO, 21 respondents (35.00%) have 3-4 deployments as a SOO, and four respondents (6.66%) have five or more deployments as a SOO. Twenty respondents (33.33%) have completed company level PME, 34 respondents (56.66%) have completed intermediate level PME, no respondents (0.00%) have completed advanced intermediate PME, two respondents (3.33%) have completed coursework at the Naval Postgraduate School, no respondents (0.00%) have completed top level school, and four respondents (6.66%) have not completed any level of PME. These data are presented in Table 3.

Table 3

Respondents' Descriptive Characteristics

Respondent characteristics	n	%
Rank		
Captain	20	33.33
Major	24	40.00
Lieutenant Colonel	16	26.67
Number of years as a SOO		
0-4 years	16	26.67
5-8 years	20	33.33
9-12 years	15	25.00
13-16 years	9	15.00
Number of deployments as a SOO		
0	6	10.00
1-2	29	48.33
3-4	21	35.00
Five or more	4	6.66
Highest level of PME attained		
Company level	20	33.33
Intermediate level	34	56.66
Advanced intermediate	0	0.00
Naval Postgraduate School	2	3.33
Top level	0	0.00
No PME complete	4	6.66

Note. PME = professional military education.

Multifactor Leadership Questionnaire Subset

The MLQ is a 45-question survey that includes items related to leadership style and leadership outcomes. The researcher omitted nine MLQ questions related to leadership outcomes and administered a 36-question MLQ subset comprised of nine 4-question scales grouped according to TFL, TAL, and PAL leadership characteristics. The researcher calculated the mean and standard deviation (SD) from the five 4-question transformational scales to determine an overall TFL leadership characteristics score, calculated the mean and SD from the two 4-question transactional scales to determine an overall TAL leadership characteristics score, and

calculated the mean and SD from the two 4-question passive avoidant scales to determine an overall PAL leadership characteristics score. The researcher stratified the results according to participant characteristics. The mean and SD TFL leadership characteristics score for all 60 respondents was 3.15 (.37), the mean and SD TAL leadership characteristics score for all 60 respondents was 3.32 (.51), and the PAL leadership characteristics score for all 60 respondents was .78 (.31).

Twenty Captains participated in the survey. The mean and SD TFL leadership characteristics score for Captains was 3.06 (.35), the mean and SD TAL leadership characteristics score for Captains was 2.40 (.58), and the mean and SD PAL leadership characteristics score for Captains was .96 (.43). Twenty-four Majors participated in the survey. The mean and SD TFL leadership characteristics score for Majors was 3.13 (.36), the mean and SD TAL leadership characteristics score for Majors was 2.23 (.43), and the mean and SD PAL leadership characteristics score for Majors was .73 (.30). Sixteen Lieutenant Colonels participated in the survey. The mean and SD TFL leadership characteristics score for Lieutenant Colonels was 3.33 (.37), the mean and SD TAL leadership characteristics score for Lieutenant Colonels was 2.35 (.54), and the mean and SD PAL leadership characteristics score for Lieutenant Colonels was .64 (.31).

Sixteen respondents with 0-4 years as a SOO participated in the survey. The mean and SD TFL leadership characteristics score for respondents with 0-4 years as a SOO was 3.03 (.39), the mean and SD TAL leadership characteristics score for respondents with 0-4 years as a SOO was 2.50 (.57), and the mean and SD PAL leadership characteristics score for respondents with 0-4 years as a SOO was 1.02 (.45). Twenty respondents with 5-8 years as a SOO participated in the survey. The mean and SD TFL leadership characteristics score for respondents with 5-8 years

as a SOO was 3.18 (.35), the mean and SD TAL leadership characteristics score for respondents with 5-8 years as a SOO was 2.21 (.48), and the mean and SD PAL leadership characteristics score for respondents with 5-8 years as a SOO was .78 (.31). Fifteen respondents with 9-12 years as a SOO participated in the survey. The mean and SD TFL leadership characteristics score for respondents with 9-12 years as a SOO was 3.12 (.31), the mean and SD TAL leadership characteristics score for respondents with 9-12 years as a SOO was 2.34 (.44), and the mean and SD PAL leadership characteristics score for respondents with 9-12 years as a SOO was .70 (.29). Nine respondents with 13-16 years as a SOO participated in the survey. The mean and SD TFL leadership characteristics score for respondents with 13-16 years as a SOO was 3.38 (.39), the mean and SD TAL leadership characteristics score for respondents with 13-16 years as a SOO was 2.20 (.54), and the mean and SD PAL leadership characteristics score for respondents with 13-16 years as a SOO was .52 (.24).

Six respondents with no deployments as a SOO participated in the survey. The mean and SD TFL leadership characteristics score for respondents with no deployments as a SOO was 3.09 (.59), the mean and SD TAL leadership characteristics score for respondents with no deployments as a SOO was 2.60 (.69), and the mean and SD PAL leadership characteristics score for respondents with no deployments as a SOO was .77 (.20). Twenty-nine respondents with 1-2 deployments as a SOO participated in the survey. The mean and SD TFL leadership characteristics score for respondents with 1-2 deployments as a SOO was 3.07 (.32), the mean and SD TAL leadership characteristics score for respondents with 1-2 deployments as a SOO was 2.30 (.45), and the mean and SD PAL leadership characteristics score for respondents with 1-2 deployments as a SOO was .88 (.41).

Twenty-one respondents with 3-4 deployments as a SOO participated in the survey. The mean and SD TFL leadership characteristics score for respondents with 3-4 deployments as a SOO was 3.22 (.36), the mean and SD TAL leadership characteristics score for respondents with 3-4 deployments as a SOO was 2.32 (.50), and the mean and SD PAL leadership characteristics score for respondents with 3-4 deployments as a SOO was .73 (.32). Four respondents with five or more deployments as a SOO participated in the survey. The mean and SD TFL leadership characteristics score for respondents with five or more deployments as a SOO was 3.48 (.27), the mean and SD TAL leadership characteristics score for respondents with five or more deployments as a SOO was 1.96 (.62), and the mean and SD PAL leadership characteristics score for respondents with five or more deployments as a SOO was .37 (.20).

Twenty respondents have completed company level PME. The mean and SD TFL leadership characteristics score for respondents who have completed company level PME was 3.00 (.34), the mean and SD TAL leadership characteristics score for respondents who have completed company level PME was 2.21 (.45), and the mean and SD PAL leadership characteristics score for respondents who have completed company level PME was 1.02 (.44). Thirty-four respondents have completed intermediate level PME. The mean and SD TFL leadership characteristics score for respondents who have completed intermediate level PME was 3.21 (.35), the mean and SD TAL leadership characteristics score for respondents who have completed intermediate level PME was 2.29 (.49), and the mean and SD PAL leadership characteristics score for respondents who have completed intermediate level PME was .64 (.26). No respondents have completed advanced PME. Two respondents have completed coursework at the Naval Postgraduate School. The mean and SD TFL leadership characteristics score for respondents who have completed coursework at the Naval Postgraduate School is 3.45 (.35), the

mean and SD TAL leadership characteristics score for respondents who have completed coursework at the Naval Postgraduate School was 2.37 (.53), and the mean and SD PAL leadership characteristics score for respondents who have completed coursework at the Naval Postgraduate School was .68 (.26). No respondents have completed top level PME. Four respondents have not completed any level of PME. The mean and SD TFL leadership characteristics score for respondents who have not completed any level of PME was 3.28 (.50), the mean and SD TAL leadership characteristics score for respondents who have not completed any level of PME was 3.03 (.53), and the mean and SD PAL leadership characteristics score for respondents who have not completed any level of PME was .84 (.27).

Overall, SOOs are more TFL than TAL, and are less likely to exhibit PAL characteristics. Stratified by participant characteristics, Captains, SOOs with 0-4 years of experience, SOOs with 1-2 deployments, and SOOs who have completed company level PME were least likely to exhibit TFL leadership characteristics. Lieutenant Colonels, SOOs with 13-16 years of experience, SOOs with five or more deployments, and SOOs who have completed Naval Postgraduate School coursework were the most likely. Majors, SOOs with 13-16 years of experience, SOOs with five or more deployments, and SOOs who have completed company level PME were the least likely to exhibit TAL leadership characteristics. Captains, SOOs with 0-4 years of experience, SOOs with no deployments, and SOOs who have not completed PME were the most likely. Captains, SOOs with 0-4 years of experience, SOOs with 1-2 deployments, and SOOs who have completed intermediate level PME were the most likely to exhibit PAL leadership characteristics. Lieutenant Colonels, SOOs with 13-16 years of experience, SOOs with five or more deployments, and SOOs who have completed intermediate level PME were the least likely. These data are presented in Table 4.

Table 4

MLQ Subset Stratified by Respondent Characteristics and Leadership Characteristics

Respondent characteristics	n	MLQ mean (SD)		
		TFL	TAL	PAL
Respondents	60	3.15 (.37)	3.32 (.51)	.78 (.31)
Rank				
Captain	20	3.06 (.35)	2.40 (.58)	.96 (.43)
Major	24	3.13 (.36)	2.23 (.43)	.73 (.30)
Lieutenant Colonel	16	3.33 (.37)	2.35 (.54)	.64 (.31)
Number of years as a SOO				
0-4 years	16	3.03 (.39)	2.50 (.57)	1.02 (.45)
5-8 years	20	3.18 (.35)	2.21 (.48)	.78 (.31)
9-12 years	15	3.12 (.31)	2.34 (.44)	.70 (.29)
13-16 years	9	3.38 (.39)	2.20 (.54)	.52 (.24)
Number of Deployments as a SOO				
0	6	3.09 (.59)	2.60 (.69)	.77 (.20)
1-2	29	3.07 (.32)	2.30 (.45)	.88 (.41)
3-4	21	3.22 (.36)	2.32 (.50)	.73 (.32)
Five or more	4	3.48 (.27)	1.96 (.62)	.37 (.20)
Highest level of PME attained				
Company level	20	3.00 (.34)	2.21 (.45)	1.02 (.44)
Intermediate level	34	3.21 (.35)	2.29 (.49)	.64 (.26)
Advanced intermediate	0	0	0	0
Naval Postgraduate School	2	3.45 (.35)	2.37 (.53)	.68 (.26)
Top level	0	0	0	0
No PME completed	4	3.28 (.50)	3.03 (.53)	.84 (.27)

Note. MLQ = multifactor leadership questionnaire; TFL= transformational leadership; TAL = transactional leadership; PAL = passive avoidant leadership; PME = professional military education. Adapted from "The association of leadership styles and nurses well-being: A cross-sectional study in healthcare settings," by I. M. Sabbah, T. T. Ibrahim, R. H. Khamis, H. A. Bakhour, S. M. Sabbah, N. S. Droubi, and H. M. Sabbah, 2020, *The Pan African medical journal, 36*, p. 328 (https://doi.org/10.11604/pamj.2020.36.328.19720). Copyright 2020 by Ibtissam Mohamad Sabbah et al. and the Pan African Medical Journal.

Cognitive Operator Competencies Questionnaire

Respondents were asked to answer 10 cognitive operator competencies questions. Five questions related to whether the respondents have received formal training in cognitive operator competencies and comprise the EA scale. Five questions asked the respondents to self-assess their ability to practically apply cognitive operator competencies and comprise the AC scale. Respondents were first asked whether, since becoming a SOO, they have received formal training in how to influence allies and partners and whether they are capable of influencing allies and partners. Five respondents (8.33%) strongly disagreed they have received formal training in how to influence allies and partners. Fifteen respondents (25.00%) disagreed that they have received formal training in how to influence allies and partners. Thirty-one respondents (51.66%) agreed that they have received formal training in how to influence allies and partners. Nine respondents (15.00%) strongly agreed that they have received formal training in how to influence allies and partners. No respondents (0.00%) strongly disagreed that they are capable of influencing allies and partners. No respondents (0.00%) disagreed that they are capable of influencing allies and partners. Twenty-seven respondents (45.76%) agreed that they are capable of influencing allies and partners. Thirty-two respondents (54.23%) strongly agreed that they are capable of influencing allies and partners.

Respondents were asked whether, since becoming a SOO, they have received formal training in how to develop an understanding of emerging problems and whether they understand how to develop an understanding of emerging problems. Six respondents (10.00%) strongly disagreed that they have received formal training in how to develop an understanding of emerging problems. Twenty-two respondents (36.66%) disagreed that they have received formal training in how to develop an understanding of emerging problems. Twenty-four respondents

(40.00%) agreed that they have received formal training in how to develop an understanding of emerging problems. Eight respondents (13.33%) strongly agreed they have received formal training in how to develop an understanding of emerging problems. No respondents (0.00%) strongly disagreed that they understand how to develop an understanding of emerging problems. Two respondents (3.33%) disagreed that they understand how to develop an understanding of emerging problems. Thirty-three respondents (55.93%) agreed that they understand how to develop an understanding of emerging problems. Twenty-four respondents (40.67%) strongly agreed that they understand how to develop an understanding of emerging problems.

Respondents were asked whether, since becoming a SOO, they have received formal training in how to inform decision makers and whether they are confident in their ability to inform decision makers. Five respondents (8.33%) strongly disagreed that they have received formal training in how to inform decision makers. Twenty respondents (33.33%) disagreed that they have had formal training in how to inform decision makers. Twenty-seven respondents (45.00%) agreed that they have had formal training in how to inform decision makers. Eight respondents (13.33%) strongly agreed that they have had formal training in how to inform decision makers. No respondents (0.00%) strongly disagreed that they are confident in their ability to inform decision makers. Three respondents (5.00%) disagreed that they are confident in their ability to inform decision makers. Twenty-one respondents (35.00%) agreed that they are confident in their ability to inform decision makers. Thirty-six respondents (60.00%) strongly agreed that they are confident in their ability to inform decision makers.

Respondents were asked whether, since becoming a SOO, they have received formal training on how to apply national, theater, and interagency capabilities to problems and whether they are capable of applying national, theater, and interagency capabilities to problems. Four

respondents (6.66%) strongly disagreed that they have received formal training in how to apply national, theater, and interagency capabilities to problems. Twenty respondents (33.33%) disagreed that they have received formal training in how to apply national, theater, and interagency capabilities to problems. Twenty-four respondents (40.00%) agreed that they have received formal training in how to apply national, theater, and interagency capabilities to problems. Twelve respondents (20.00%) strongly agreed that they have received formal training in how to apply national, theater, and interagency capabilities to problems. No respondents (0.00%) strongly disagreed that they are capable of applying national, theater, and interagency capabilities to problems. Two respondents (3.33%) disagreed that they are capable of applying national, theater, and interagency capabilities to problems. Twenty-eight respondents (46.66%) agreed that they are capable of applying national, theater, and interagency capabilities to problems. Thirty respondents (50.00%) strongly agreed that they are capable of applying national, theater, and interagency capabilities to problems.

Respondents were asked whether, since becoming a SOO, they have received formal training in how to conduct operations in the information domain and whether their level of proficiency in conducting operations in the information domain is equal to or better than their level of proficiency in the physical domain. Eleven respondents (18.33%) strongly disagreed that they have received formal training in how to conduct operations in the information domain. Twenty-three respondents (38.33%) disagreed that they have received formal training in how to conduct operations in the information domain. Twenty-one respondents (35.00%) agreed that they have received formal training in how to conduct operations in the information domain. Five respondents (8.33%) strongly agreed that they have received formal training in how to conduct operations in the information domain. Thirteen respondents (21.66%) strongly disagreed that

their level of proficiency in conducting operations in the information domain is equal to or better than their level of proficiency in the physical domain. Twenty-eight respondents (46.66%) disagreed that their level of proficiency in conducting operations in the information domain is equal to or better than their level of proficiency in the physical domain. Fifteen respondents (25.00%) agreed that their level of proficiency in conducting operations in the information domain is equal to or better than their level of proficiency in the physical domain. Four respondents (6.66%) strongly agreed that their level of proficiency in conducting operations in the information domain is equal to or better than their level of proficiency in the physical domain.

Since becoming a SOO, forty respondents (66.66%) agreed or strongly agreed that they have received formal training on influencing allies and partners. Fifty-nine respondents (100%) agreed or strongly agreed they are capable of influencing allies and partners. Thirty-two respondents (53.33%) agreed or strongly agreed they have received formal training on developing an understanding of emerging problems and fifty-seven respondents (96.60%) understand how to develop an understanding of emerging problems. Thirty-five respondents (58.33%) agreed or strongly agreed they have received formal training on how to inform decision makers and fifty-seven respondents (95.00%) are confident in their ability to inform decision makers. Thirty-six respondents (60.00%) agreed or strongly agreed they have received formal training on applying national, theater, and interagency capabilities to problems and fifty-eight respondents (96.66%) are capable of applying national, theater, and interagency capabilities to problems. Twenty-six respondents (43.33%) agreed or strongly agreed they have received formal training on how to conduct operations within the information domain and nineteen respondents (31.66%) assess their level of proficiency in conducting operations in the

information domain is equal to or better than their level of proficiency in the physical domain. Table 5 contains these data.

Table 5

COCQ Descriptive Statistics

COCQ questions	Strongly disagree n (%)	Disagree n (%)	Agree n (%)	Strongly agree n (%)
1. Since becoming a SOO, I have received formal training on influencing allies and partners.	5 (8.33%)	15 (25.00%)	31 (51.66%)	9 (15.00%)
2. I am capable of influencing allies and partners.	0 (0.00%)	0 (0.00%)	27(45.76%)	32 (54.23%)
3. Since becoming a SOO, I have had formal training on developing an understanding of emerging problems.	6 (10.00%)	22 (36.66%)	24 (40.00%)	8 (13.33%)
4. I understand how to develop an understanding of emerging problems.	0 (0.00%)	2 (3.33%)	33 (55.93%)	24 (40.67%)
5. Since becoming a SOO, I have received formal training on how to inform decision makers.	5 (8.33%)	20 (33.33%)	27 (45.00%)	8 (13.33%)
6. I am confident in my ability to inform decision makers.	0 (0.00%)	3 (5.00%)	21 (35.00%)	36 (60.00%)
7. Since becoming a SOO, I have received formal training on applying national, theater, and interagency capabilities to problems.	4 (6.66%)	20 (33.33%)	24 (40.00%)	12 (20.00%)
8. I am capable of applying national, theater, and interagency capabilities to problems.	0 (0.00%)	2 (3.33%)	28 (46.66%)	30 (50.00%)
9. Since becoming a SOO, I have received formal training on how to conduct operations within the information domain.	11 (18.33%)	23 (38.33%)	21 (35.00%)	5 (8.33%)
10. My level of proficiency in conducting operations in the information domain is equal to or better than my level of proficiency in the physical domain.	13 (21.66%)	28 (46.66%)	15 (25.00%)	4 (6.66%)

Note. COCQ = cognitive operator competencies questionnaire.

The researcher calculated the overall mean and SD for the COCQ's two scales: the AC scale and EA scale and stratified the results according to participant characteristics. The mean and SD AC scale score for all 60 respondents was 3.21 (.43) and the mean and SD EA scale score for all 60 respondents was 2.59 (.88).

Twenty Captains participated in the survey. The mean and SD AC scale score for Captains was 3.15 (.43) and the mean and SD EA scale score for Captains was 2.40 (.68). Twenty-four Majors participated in the survey. The mean and SD AC scale score for Majors was 3.17 (.44) and the mean and SD EA scale score for Majors was 2.48 (.80). Sixteen Lieutenant Colonels participated in the survey. The mean and SD AC scale score for Lieutenant Colonels was 3.35 (.40) and the mean and SD EA scale score for Lieutenant Colonels was 2.58 (.94).

Sixteen respondents have served between 0-4 years as a SOO. The mean and SD AC scale score for respondents with 0-4 years as a SOO was 3.21 (.44) and the mean and SD EA scale score for respondents with 0-4 years as a SOO was 2.55 (.67). Twenty respondents have served between 5-8 years as a SOO. The mean and SD AC scale score for respondents with 5-8 years as a SOO was 3.03 (.43) and the mean and SD EA scale score for respondents with 5-8 years as a SOO was 2.18 (.71). Fifteen respondents have served between 9-12 years as a SOO. The mean and SD AC scale score for respondents with 9-12 years as a SOO was 3.41 (.41) and the mean and SD EA scale score for respondents with 9-12 years as a SOO was 2.77 (1.06). Nine respondents have served between 13-16 years as a SOO. The mean and SD AC scale score for respondents with 13-16 years as a SOO was 3.26 (.41) and the mean and SD EA scale score for respondents with 13-16 years as a SOO was 2.55 (.47).

Six respondents have not deployed as a SOO. The mean and SD AC scale score for respondents with no deployments as a SOO was 3.30 (.41) and the mean and SD EA scale score

for respondents with no deployments as a SOO was 2.83 (.81). Twenty-nine respondents have deployed 1-2 times as a SOO. The mean and SD AC scale score for respondents with 1-2 deployments as a SOO was 3.13 (.47) and the mean and SD EA scale score for respondents with 1-2 deployments as a SOO was 2.39 (.79). Twenty-one respondents have deployed 3-4 times as SOO. The mean and SD AC scale score for respondents with 3-4 deployments as a SOO was 3.23 (.40) and the mean and SD EA scale score for respondents with 3-4 deployments as a SOO was 2.42 (.83). Four respondents have deployed five or more times as SOO. The mean and SD AC scale score for respondents with five or more deployments as a SOO was 3.60 (.23) and the mean and SD EA scale score for respondents with five or more deployments as a SOO was 2.90 (.47).

Twenty respondents have attended company level PME. The mean and SD AC scale score for respondents who have attended company level PME was 3.16 (.41) and the mean and SD EA scale score for respondents who have attended company level PME was 2.25 (.77). Thirty-four respondents have attended intermediate level PME. The mean and SD AC scale score for respondents who have attended intermediate level PME was 3.20 (.44) and the mean and SD EA scale score for respondents who have attended intermediate level PME was 2.58 (.80). No respondents have completed advanced level PME. Two respondents have completed coursework at the Naval Postgraduate School. The mean and SD AC scale score for respondents who have completed coursework at the Naval Postgraduate School was 3.60 (.00) and the mean and SD EA scale score for respondents who have attended Naval Postgraduate School was 2.50 (.28). No respondents have completed top level PME. Four respondents have not completed any level of PME. The mean and SD AC scale score for respondents who have not completed any level of

PME was 3.30 (.52) and the mean and SD EA scale score for respondents who have not completed any level of PME was 2.75 (.95). These data are presented in Table 6.

Table 6

COCQ Mean and SD Stratified by Respondent Characteristics and Survey Scales

Respondent characteristics	n	COCQ scales mean (SD)	
		AC	EA
Respondents	60	3.21 (.43)	2.59 (.88)
Rank			
Captain	20	3.15 (.43)	2.40 (.68)
Major	24	3.17 (.44)	2.48 (.80)
Lieutenant Colonel	16	3.35 (.40)	2.58 (.94)
Number of years as a SOO			
0-4 years	16	3.21 (.44)	2.55 (.67)
5-8 years	20	3.03 (.43)	2.18 (.71)
9-12 years	15	3.41 (.41)	2.77 (1.06)
13-16 years	9	3.26 (.41)	2.55 (.47)
Deployments as a SOO			
0	6	3.30 (.41)	2.83 (.81)
1-2	29	3.13 (.47)	2.39 (.79)
3-4	21	3.23 (.40)	2.42 (.83)
Five or more	4	3.60 (.23)	2.90 (.47)
Highest level of PME attained			
Company level	20	3.16 (.41)	2.25 (.77)
Intermediate level	34	3.20 (.44)	2.58 (.80)
Advanced intermediate	0	0	0
Naval Postgraduate School	2	3.60 (.00)	2.50 (.28)
Top level	0	0	0
No PME completed	4	3.30 (.52)	2.75 (.95)

Note. PME = professional military education; COCQ = cognitive operator competencies questionnaire; AC = applied competencies scale; EA = educational attainment scale.

Senior Leader Competencies Questionnaire

Respondents were asked 11 questions related to senior leader competencies. No respondents (0.00%) strongly disagreed that they are intent focused. No respondents (0.00%)

disagreed that they are intent focused. Twenty-eight respondents (46.66%) agreed that they are intent focused. Thirty-two respondents (53.33%) strongly agreed that they are intent focused.

Respondents were asked whether they assess issues using an enterprise-wide, integrated perspective. No respondents (0.00%) strongly disagreed that they assess issues using an enterprise-wide, integrated perspective. Eight respondents (13.33%) disagreed that they assess issues using an enterprise-wide, integrated perspective. Thirty-nine respondents (65.00%) agreed that they assess issues using an enterprise-wide, integrated perspective. Thirteen respondents (21.66%) strongly agreed that they assess issues using an enterprise-wide, integrated perspective.

Respondents were asked whether they understand the broader social systems within which MARSOC operates. No respondents (0.00%) strongly disagreed that they understand the broader social systems within which MARSOC operates. Five respondents (8.33%) disagreed that they understand the broader social systems within which MARSOC operates. Thirty-six respondents (60.00%) agreed that they understand the broader social systems within which MARSOC operates. Nineteen respondents (31.66%) strongly agreed that they understand the broader social systems within which MARSOC operates.

Respondents were asked whether they consider second and third order effects to understand problems. No respondents (0.00%) strongly disagreed that they consider second and third order effects to understand problems. No respondents (0.00%) disagreed that they consider second and third order effects to understand problems. Twenty-four respondents (40.00%) agreed that they consider second and third order effects to understand problems. Thirty-six respondents (60.00%) strongly agreed that they consider second and third order effects to understand problems.

Respondents were asked whether they understand the concept of systems thinking. One respondent (1.72%) strongly disagreed that they understand the concept of systems thinking. Nine respondents (15.55%) disagreed that they understand the concept of systems thinking. Twenty-eight respondents (48.27%) agreed that they understand the concept of systems thinking. Twenty respondents (34.48%) strongly agreed that they understand the concept of systems thinking.

Respondents were asked whether they are capable of using reason and logic to build consensus. No respondents (0.00%) strongly disagreed that they are capable of using reason and logic to build consensus. One respondent (1.66%) disagreed that they are capable of using reason and logic to build consensus. Twenty-seven respondents (45.00%) agreed that they are capable of using reason and logic to build consensus. Thirty-two respondents (53.33%) strongly agreed that they are capable of using reason and logic to build consensus.

Respondents were asked whether they are less likely to compromise when their interests are threatened. Four respondents (6.66%) strongly disagreed that they are less likely to compromise when their interests are threatened. Twenty-eight respondents (46.66%) disagreed that they are less likely to compromise when their interests are threatened. Twenty-seven respondents (45.00%) agreed that they are less likely to compromise when their interests are threatened. One respondent (1.66%) strongly agreed that they are less likely to compromise when their interests are threatened.

Respondents were asked whether they communicate with persuasion to people outside of MARSOC. No respondents (0.00%) strongly disagreed that they communicate with persuasion to people outside of MARSOC. Six respondents (10.00%) disagreed that they communicate with persuasion to people outside of MARSOC. Thirty-three respondents (55.00%) agreed that they

communicate with persuasion to people outside of MARSOC. Twenty-one respondents (35.00%) strongly agreed that they communicate with persuasion to people outside of MARSOC.

Respondents were asked whether they are satisfied in their ability to communicate MARSOC's operating concepts to people outside of the organization. Five respondents (8.33%) strongly disagreed that they are satisfied in their ability to communicate MARSOC's operating concepts to people outside of the organization. Sixteen respondents (26.66%) disagreed that they are satisfied in their ability to communicate MARSOC's operating concepts to people outside of the organization. Twenty-seven respondents (45.00%) agreed that they are satisfied in their ability to communicate MARSOC's operating concepts to people outside of the organization. Twelve respondents (20.00%) strongly agreed that they are satisfied in their ability to communicate MARSOC's operating concepts to people outside of the organization.

Respondents were asked whether they view issues and events through a political lens to better understand motivations and rationale. No respondents (0.00%) strongly disagreed that they view issues and events through a political lens to better understand motivations and rationale. Five respondents (8.47%) disagreed that they view issues and events through a political lens to better understand motivations and rationale. Forty-four respondents (74.57%) agreed that they view issues and events through a political lens to better understand motivations and rationale. Ten respondents (16.94%) strongly agreed that they view issues and events through a political lens to better understand motivations and rationale.

Respondents were asked whether they are future oriented. No respondents (0.00%) strongly disagreed that they are future oriented. Three respondents (5.00%) disagreed that they are future oriented. Twenty-nine respondents (48.33%) agreed that they are future oriented.

Twenty-eight respondents (46.66%) strongly agreed that they are future oriented. These data are presented in Table 7.

Table 7

SLCQ Descriptive Statistics

SLCQ questions	Strongly disagree n (%)	Disagree n (%)	Agree n (%)	Strongly agree n (%)
1. I am intent focused.	0 (0.00%)	0 (0.00%)	28 (46.66%)	32 (53.33%)
2. I assess issues using an enterprise-wide integrated approach.	0 (0.00%)	8 (13.33%)	39 (65.00%)	13 (21.66%)
3. I understand the broader social systems within which MARSOC operates.	0 (0.00%)	5 (8.33%)	36 (60.00%)	19 (31.66%)
4. To understand problems, I consider second and third order effects.	0 (0.00%)	0 (0.00%)	24 (40.00%)	36 (60.00%)
5. I understand the concept of systems thinking.	1 (1.72%)	9 (15.55%)	28 (48.27%)	20 (34.48%)
6. I am capable of using reason and logic to build consensus.	0 (0.00%)	1 (1.66%)	27 (45.00%)	32 (53.33%)
7. When my interests are threatened, I am less likely to compromise.	4 (6.66%)	28 (46.66%)	27 (45.00%)	1 (1.66%)
8. I communicate with persuasion to people outside of MARSOC.	0 (0.00%)	6 (10.00%)	33 (55.00%)	21 (35.00%)
9. I am satisfied with my ability to communicate MARSOC's operating concepts to people outside of the organization.	5 (8.33%)	16 (26.66%)	27 (45.00%)	12 (20.00%)
10. I see issues and events through a political lens to better understand a person's motivations and rationale.	0 (0.00%)	5 (8.47%)	44 (74.57%)	10 (16.94%)
11. I am future oriented.	0 (0.00%)	3 (5.00%)	29 (48.33%)	28 (46.66%)

Note. SLCQ = senior leader competencies questionnaire.

The researcher calculated the overall mean and SD for the SLCQ and stratified the results according to participant demographics. The mean and SD SLCQ score for all 60 respondents was 3.18 (.31)

Twenty Captains participated in the survey. The mean and SD SLCQ score for Captains was 3.15 (.33). Twenty-four Majors participated in the survey. The mean and SD SLCQ score for Majors was 3.16 (.30). Sixteen Lieutenant Colonels participated in the survey. The mean and SD SLCQ score for Lieutenant Colonels was 3.25 (.31).

Sixteen respondents have served between 0-4 years as a SOO. The mean and SD SLCQ score for respondents with 0-4 years as a SOO was 3.19 (.33). Twenty respondents have served between 5-8 years as a SOO. The mean and SD SLCQ score for respondents with 5-8 years as a SOO was 3.14 (.34). Fifteen respondents have served between 9-12 years as a SOO. The mean and SD SLCQ score for respondents with 9-12 years as a SOO was 3.25 (.26). Nine respondents have served between 13-16 years as a SOO. The mean and SD SLCQ score for respondents with 13-16 years as a SOO was 3.15 (.32).

Six respondents have not deployed as a SOO. The mean and SD SLCQ score for respondents with no deployments as a SOO was 3.26 (.44). Twenty-nine respondents have deployed 1-2 times as a SOO. The mean and SD SLCQ score for respondents with 1-2 deployments is 3.13 (.30). Twenty-one respondents have deployed 3-4 times as a SOO. The mean and SD SLCQ score for respondents with 3-4 deployments was 3.22 (.28). Four respondents have deployed five or more times as a SOO. The mean and SD SLCQ score for respondents with five or more deployments as a SOO was 3.17 (.39).

Twenty respondents have completed company level PME. The mean and SD SLCQ score of respondents who have completed company level PME was 3.03 (.29). Thirty-four respondents

have completed intermediate level PME. The mean and SD SLCQ score of respondents who have completed intermediate level PME was 3.21 (.29). No respondents have completed advanced intermediate PME. Two respondents have completed coursework at the Naval Postgraduate School. The mean and SD SLCQ score of respondents who have completed coursework at the Naval Postgraduate School was 3.45 (.12). No respondents have completed top level PME. Four respondents have not completed any level of PME. The mean and SD SLCQ score of respondents who have not completed any level of PME was 3.56 (.21). These data are presented in Table 8.

Table 8

SLCQ Mean and SD Stratified by Respondent Characteristics

Respondent demographics	n	SLCQ mean (SD)
Respondents	60	3.18 (.31)
Rank		
Captain	20	3.15 (.33)
Major	24	3.16 (.30)
Lieutenant Colonel	16	3.25 (.31)
Number of years as a SOO		
0-4 years	16	3.19 (.33)
5-8 years	20	3.14 (.34)
9-12 years	15	3.25 (.26)
13-16 years	9	3.15 (.32)
Deployments as a SOO		
0	6	3.26 (.44)
1-2	29	3.13 (.30)
3-4	21	3.22 (.28)
Five or more	4	3.17 (.39)
Highest level of PME attained		
Company level	20	3.03 (.29)
Intermediate level	34	3.21 (.29)
Advanced intermediate	0	0
Naval Postgraduate School	2	3.45 (.12)
Top level	0	0
No PME completed	4	3.56 (.21)

Note. SLCQ = senior leader competencies questionnaire; PME = professional military education.

Conceptual, Technical, and Interpersonal Competencies Scales

The CC, TC and IC scales are derived from specific COCQ and SLCQ questions (see Table 2). The researcher calculated the overall mean and SD for the CC, TC, and IC scales and stratified the results according to participant characteristics. The mean and SD CC scale score for all 60 respondents was 3.16 (.57), the mean and SD TC scale for all 60 respondents was 3.15 (.54), and the mean and SD IC scale score for all 60 respondents was 3.17 (.76).

Twenty Captains participated in the survey. The mean and SD CC scale score for Captains was 3.05 (.79), the mean and SD TC scale score for Captains was 3.09 (.40), and the mean and SD IC scale score for Captains was 3.16 (.38). Twenty-four Majors participated in the survey. The mean and SD CC scale score for Majors was 3.16 (.42), the mean and SD TC scale score for Majors was 3.09 (.73), and the mean and SD IC scale score for Majors was 3.12 (.34). Sixteen Lieutenant Colonels participated in the survey. The mean and SD CC scale score for Lieutenant Colonels was 3.28 (.43), the mean and SD TC scale score for Lieutenant Colonels was 3.31 (.32), and the mean and SD IC scale score for Lieutenant Colonels was 3.06 (.89).

Sixteen respondents with 0-4 years as a SOO participated in the survey. The mean and SD CC scale score for respondents with 0-4 years as a SOO was 3.03 (.89), the mean and SD TC scale score for respondents with 0-4 years as a SOO was 3.15 (.37), and the mean and SD IC scale score for respondents with 0-4 years as a SOO was 3.20 (.38). Twenty respondents with 5-8 years as a SOO participated in the survey. The mean and SD CC scale score for respondents with 5-8 years as a SOO was 3.08 (.37), the mean and SD TC scale score for respondents with 5-8 years as a SOO was 2.99 (.81), and the mean and SD IC scale score for respondents with 5-8 years as a SOO was 3.11 (.41). Fifteen respondents with 9-12 years as a SOO participated in the survey. The mean and SD CC scale score for respondents with 9-12 years as a SOO was 3.34 (.37), the mean and SD TC scale score for respondents with 9-12 years as a SOO was 3.26 (.25), and the mean and SD IC scale score for respondents with 9-12 years as a SOO was 3.07 (.91). Nine respondents with 13-16 years as a SOO participated in the survey. The mean and SD CC scale score for respondents with 13-16 years as a SOO was 3.24 (.44), the mean and SD TC scale score for respondents with 13-16 years as a SOO was 3.31 (.40), and the mean and SD IC scale score for respondents with 13-16 years as a SOO was 3.05 (.23).

Six respondents with no deployments as a SOO participated in the survey. The mean and SD CC scale score for respondents with no deployments as a SOO was 3.36 (.55), the mean and SD TC scale score for respondents with no deployments as a SOO was 3.23 (.51), and the mean and SD IC scale score for respondents with no deployments as a SOO was 3.25 (.32). Twenty-nine respondents with 1-2 deployments as a SOO participated in the survey. The mean and SD CC scale score for respondents with 1-2 deployments as a SOO was 3.05 (.69), the mean and SD TC scale score for respondents with 1-2 deployments as a SOO was 3.05 (.68), and the mean and SD IC scale score for respondents with 1-2 deployments as a SOO was 2.98 (.69).

Twenty-one respondents with 3-4 deployments as a SOO participated in the survey. The mean and SD CC scale score for respondents with 3-4 deployments as a SOO was 3.20 (.38), the mean and SD TC scale score for respondents with 3-4 deployments as a SOO was 3.21 (.32), and the mean and SD IC scale score for respondents with 3-4 deployments as a SOO was 3.26 (.35). Four respondents with five or more deployments as a SOO participated in the survey. The mean and SD CC scale score for respondents with five or more deployments as a SOO was 3.40 (.46), the mean and SD TC scale score for respondents with five or more deployments as a SOO was 3.35 (.43), and the mean and SD IC scale score for respondents with five or more deployments as a SOO was 3.12 (.15).

Twenty respondents have completed company level PME. The mean and SD CC scale score for respondents who have completed company level PME was 2.97 (.77), the mean and SD TC scale score for respondents who have completed company level PME was 3.03 (.35), and the mean and SD IC scale score for respondents who have completed company level PME was 3.06 (.42). Thirty-four respondents have completed intermediate level PME. The mean and SD CC scale score for respondents who have completed intermediate level PME was 3.18 (.40), the

mean and SD TC scale score for respondents who have completed intermediate level PME was 3.14 (.64), and the mean and SD IC scale score for respondents who have completed intermediate level PME was 3.21 (.64). No respondents have completed advanced PME. Two respondents have completed coursework at the Naval Postgraduate School. The mean and SD CC scale score for respondents who have completed coursework at the Naval Postgraduate School was 3.70 (.41), the mean and SD TC scale score for respondents who have completed coursework at the Naval Postgraduate School was 3.70 (.14), and the mean and SD IC scale score for respondents who have completed coursework at the Naval Postgraduate School was 3.16 (.47). No respondents have completed top level PME. Four respondents have not completed any level of PME. The mean and SD CC scale score for respondents who have not completed any level of PME was 3.60 (.36), the mean and SD TC scale score for respondents who have not completed any level of PME was 3.53 (.46), and the mean and SD IC scale score for respondents who have not completed any level of PME was 3.37 (.20). These data are presented in Table 9.

Table 9

CC, TC, and IC Scales Mean and SD Stratified by Participant Characteristics

Respondent characteristics	n	CC	TC	IC
		Mean (SD)	Mean (SD)	Mean (SD)
Respondents	60	3.16 (.57)	3.15 (.54)	3.17 (.76)
Rank				
Captain	20	3.05 (.79)	3.09 (.40)	3.16 (.38)
Major	24	3.16 (.42)	3.09 (.73)	3.12 (.34)
Lieutenant Colonel	16	3.28 (.43)	3.31 (.32)	3.06 (.89)
Number of years as a SOO				
0-4 years	16	3.03 (.89)	3.15 (.37)	3.20 (.38)
5-8 years	20	3.08 (.37)	2.99 (.81)	3.11 (.41)
9-12 years	15	3.34 (.37)	3.26 (.25)	3.07 (.91)
13-16 years	9	3.24 (.44)	3.31 (.40)	3.05 (.23)
Number of deployments as a SOO				
0	6	3.36 (.55)	3.23 (.51)	3.25 (.32)
1-2	29	3.05 (.69)	3.05 (.68)	2.98 (.69)
3-4	21	3.20 (.38)	3.21 (.32)	3.26 (.35)
Five or more	4	3.40 (.46)	3.35 (.43)	3.12 (.15)
Highest level of PME attained				
Company level	20	2.97 (.77)	3.03 (.35)	3.06 (.42)
Intermediate level	34	3.18 (.40)	3.14 (.64)	3.21 (.64)
Advanced intermediate	0	0	0	0
Naval Postgraduate School	2	3.70 (.41)	3.70 (.14)	3.16 (.47)
Top level	0	0	0	0
No PME completed	4	3.60 (.36)	3.53 (.46)	3.37 (.20)

Note. CC = conceptual competencies; TC = technical competencies; IC = interpersonal competencies.

Findings by Research Question

Is there a significant relationship between SOOs' preferred leadership styles and senior leader competencies?

To determine whether a relationship exists between SOOs' preferred leadership style and senior leader competencies, the researcher performed 3 paired two-sample two-tailed t-tests. The first t-test determined the relationship between the between the mean TAL leadership

characteristics score and the mean SLCQ score. The researcher used the following research hypothesis: There is a significant relationship between SOOs' TFL leadership characteristics and senior leader competencies. The researcher used the following null hypothesis: There is no significant relationship between SOOs' TFL leadership characteristics and senior leader competencies. The researcher exported the *SOO Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Survey* results from Qualtrics to an Excel spreadsheet and arranged the mean of each respondent's answers to the 20 MLQ questions related to TFL leadership characteristics and 11 SLCQ questions into two separate spreadsheet columns. Using the imported data, the researcher administered a paired two-sample two-tailed t-test with an established test significance of $p<0.05$. The obtained value from the t-test was -0.60. The probability of this happening by chance, presented in the Excel output as P(t<=t) two tail 0.54, is greater than 0.05. Fail to reject the null hypothesis. There is no significant relationship between SOOs' TFL leadership characteristics and senior leader competencies. Table 10 displays the results.

Table 10

T-test Results Between Mean TFL Leadership Characteristics Score and Mean SLCQ Score

Scale	Observations	Mean	Variance	t-stat	Df	p	Decision
TFL	60	3.15	.13	-0.60	59	**p>.05	Fail to reject the
SLCQ	60	3.18	.09				null hypothesis

Note. TFL = transformational leadership; SLCQ = senior leader competencies questionnaire.

The second t-test determined the relationship between TAL leadership characteristics and senior leader competencies. The researcher used the following research hypothesis: There is a significant relationship between SOOs' TAL leadership characteristics and senior leader competencies. The researcher used the following null hypothesis: There is no significant

relationship between SOOs' TAL leadership characteristics and senior leader competencies. The researcher exported the *SOO Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Survey* results from Qualtrics to an Excel spreadsheet and arranged the respondent's answers to the eight MLQ questions related to TAL leadership characteristics and 11 SLCQ questions into two separate columns. Using the imported data, the researcher administered a paired two-sample two-tailed t-test with an established test significance of $p<0.05$. The obtained value from the t-test was -15.23. The probability of this happening by chance, presented in the Excel output as P(t<=t) two tail 9.25904E-43, is less than 0.05. The null hypothesis is rejected. There is a significant relationship between SOOs' transactional leadership characteristics and senior leader competencies. Table 11 displays the results.

Table 11

T-test Between Mean TAL Leadership Characteristics Score and Mean SLCQ Score

Scale	Observations	Mean	Variance	t-Stat	Df	p	Decision
TAL	478	2.32	.26	-15.23	59	**p<.05	Reject the null
SLCQ	657	3.18	.21				hypothesis

Note. TFL = transactional leadership; SLCQ = senior leader competencies questionnaire.

The third t-test determined the relationship between PAL leadership characteristics and senior leader competencies. The researcher used the following research hypothesis: There is a significant relationship between SOOs' PAL leadership characteristics and senior leader competencies. The researcher used the following null hypothesis: There is no significant relationship between SOOs' PAL leadership characteristics and senior leader competencies. The researcher exported the *SOO Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Survey* results from Qualtrics to an Excel spreadsheet and arranged the respondent's answers to the eight MLQ questions related to PAL leadership characteristics and

11 SLCQ questions into two separate columns. Using the imported data, the researcher administered a paired two-sample two-tailed t-test with an established test significance of $p<0.05$. The obtained value from the t-test was -37.35. The probability of this happening by chance, presented in the Excel output as P(t<=t) two tail 9.25904E-43, is less than 0.05. The null hypothesis is rejected. There is a significant relationship between SOOs' PAL characteristics and senior leader competencies. Table 12 displays the results.

Table 12

T-test Between Mean PAL Leadership Characteristics Score and Mean SLCQ Score

Scale	Observations	Mean	Variance	t-Stat	Df	p	Decision
PAL	60	.78	.13	-37.35	59	**p<.05	Reject the null
SLCQ	60	3.18	.-09				hypothesis

Note. PAL = passive avoidant leadership; SLCQ = senior leader competencies questionnaire.

Is there a significant relationship between SOOs' preferred leadership styles and cognitive operator competencies?

To determine whether a relationship exists between SOOs' preferred leadership styles and cognitive operator competencies, the researcher performed 3 paired two-sample two-tailed t-tests. The first t-test determined the relationship between TFL leadership characteristics and cognitive operator competencies. The researcher used the following research hypothesis: There is a significant relationship between SOOs' TFL leadership characteristics and cognitive operator competencies. The researcher used the following null hypothesis: There is no significant relationship between SOOs' TFL leadership characteristics and cognitive operator competencies. The researcher exported the *SOO Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Survey* results from Qualtrics to an Excel spreadsheet and arranged the respondent's answers to the 20 MLQ questions related to TFL leadership characteristics and

10 COCQ questions into two separate columns. Using the imported data, the researcher administered a paired two-sample two-tailed t-test with an established test significance of $p<0.05$. The obtained value from the t-test was 4.58. The probability of this happening by chance, presented in the Excel output as P(t<=t) two tail 2.44011E-05, is less than 0.05. The null hypothesis is rejected. There is a significant relationship between SOOs' TFL leadership characteristics and cognitive operator competencies. Table 13 displays the results.

Table 13

T-test Between Mean TFL Leadership Characteristics Score and Mean COCQ Score

Scale	Observations	Mean	Variance	t-Stat	Df	p	Decision
TFL	60	3.15	.13	4.58	59	**p<.05	Reject the null
COCQ	60	2.87	.21				hypothesis

Note. TFL= transformational leadership; COCQ = cognitive operator competencies questionnaire.

The second t-test determined the relationship between TAL leadership characteristics and cognitive operator competencies. The researcher used the following research hypothesis: There is a significant relationship between SOOs' TAL leadership characteristics and cognitive operator competencies. The researcher used the following null hypothesis: There is no significant relationship between SOOs' TAL leadership characteristics and cognitive operator competencies. The researcher exported the *SOO Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Survey* results from Qualtrics to an Excel spreadsheet and arranged the respondent's answers to the eight MLQ questions related to TAL leadership characteristics and 10 cognitive operator competencies questions into two separate columns. Using the imported data, the researcher administered a paired two-sample two-tailed t-test with an established test significance of $p<0.05$. The obtained value from the t-test was -7.89. The probability of this

happening by chance, presented in the Excel output as P(t<=t) two tail 8.3468E-11, is less than 0.05. The null hypothesis is rejected. There is a significant relationship between SOOs' TAL leadership characteristics and cognitive operator competencies. Table 14 displays the results.

Table 14

T-test Between Mean TAL Leadership Characteristics Score and Mean COCQ Score

Scale	Observations	Mean	Variance	t-Stat	Df	p	Decision
TAL	60	2.32	.26	-7.89	59	**p<.05	Reject the null
COCQ	60	2.87	.21				hypothesis

Note. TFL= transactional leadership; COCQ = cognitive operator competencies questionnaire.

The third t-test determined the relationship between PAL leadership characteristics and cognitive operator competencies. The researcher used the following research hypothesis: There is a significant relationship between SOOs' PAL leadership characteristics and cognitive operator competencies. The researcher used the following null hypothesis: There is no significant relationship between SOOs' PAL leadership characteristics and cognitive operator competencies. The researcher exported the *SOO Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Survey* results from Qualtrics to an Excel spreadsheet and arranged the respondent's answers to the eight MLQ questions related to PAL leadership characteristics and 10 COCQ questions into two separate columns. Using the imported data, the researcher administered a paired two-sample two-tailed t-test with an established test significance of p<0.05. The obtained value from the t-test was -26.34. The probability of this happening by chance, presented in the Excel output as P(t<=t) two tail 1.26015E-34, is less than 0.05. The null hypothesis is rejected. There is a significant relationship between SOOs' PAL leadership characteristics and cognitive operator competencies. Table 15 displays the results.

Table 15

T-test Between Mean PAL Leadership Characteristics Score and Mean COCQ Score

Scale	Observations	Mean	Variance	t-Stat	Df	p	Decision
PAL	60	.78	.13	-26.34	59	**p<.05	Reject the null
COCQ	60	2.87	.21				hypothesis

Note. PAL= passive avoidant leadership; COCQ = cognitive operator competencies questionnaire.

Is there a significant relationship between SOOs' senior leader competencies and cognitive operator competencies?

To determine whether a relationship exists between SOOs' senior leader competencies and cognitive operator competencies, the researcher performed 1 paired two-tailed t-test. The researcher used the following research hypothesis: There is a significant relationship between SOOs' senior leader competencies and cognitive operator competencies. The researcher used the following null hypothesis: There is no significant relationship between SOOs' senior leader competencies and cognitive operator competencies. The researcher exported the *SOO Leadership Style, Cognitive Operator Competencies, and Senior Leader Competencies Survey* results from Qualtrics to an Excel spreadsheet and arranged the respondent's answers to the 11 SLCQ questions and 10 COCQ questions into two separate columns. Using the imported data, the researcher administered a paired two-sample two-tailed t-test with an established test significance of $p<0.05$. The obtained value from the t-test was 5.73. The probability of this happening by chance, presented in the Excel output as P(t<=t) two tail 3.7043E-07, is less than 0.05. The null hypothesis is rejected. There is a significant relationship between SOOs' senior leader competencies and cognitive operator competencies. Table 16 displays the results.

Table 16

T-test Between Mean SLCQ Score and Mean COCQ Score

Scale	Observations	Mean	Variance	t-Stat	Df	p	Decision
SLCQ	60	3.18	.09	5.73	1253	**p<.05	Reject the null
COCQ	60	2.87	.21				hypothesis

Note. SLCQ = senior leader competencies questionnaire; COCQ = cognitive operator competencies questionnaire.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter contains six sections. The first section restates the study's purpose, and the second section restates the study's research questions. Section 3 reviews the data collection methods, describing how the researcher collected, analyzed, and presented the data. Section 4, the summary of findings section, discusses the data analysis and results for each of the study's three research questions. Section 5, additional findings, and recommendations for further research, addresses items of interest not discussed in the summary of findings section. It elaborates on ancillary findings identified after stratifying results according to participant demographics, ties the ancillary findings to literature reviewed in Chapter Two, recommends ways to investigate further the findings, and introduces recommendations for further research. The final section is the summary.

Recommendations include: investigating why Captains score higher on the PAL leadership characteristics scale compared to Majors and Lieutenant Colonels; why Lieutenant Colonels have lower IC scale scores compared to Captains and Majors; why 34.9% of SOOs are dissatisfied with their ability to communicate MARSOC's operating concept to people outside of the organization; and why 56.6% of SOOs disagree or strongly disagree that they have received formal training to conduct operations in the information environment. Additional recommendations include evaluating whether MARSOC's training continuum, including doctrine and formal training courses, incorporates cognitive operator competencies; replicating this study to the Critical Skills Operators (CSO) (enlisted Marine special operators) population;

and developing a cognitive operator competency model that provides SOOs and CSOs standards-based, measurable competency attainment criteria for different ranks and billets.

Purpose

The purpose of this study was to determine whether SOOs exhibited a preferred leadership style or specific senior leader competencies compatible with the cognitive operator competencies defined in *MARSOF 2030*. This research supported MARSOC's ongoing efforts to develop their cognitive Raider innovation pathway as it relates to the leadership training continuum of SOOs.

Research Questions

The following questions guided the research:

4. Is there a significant relationship between SOOs' preferred leadership styles and senior leader competencies?
5. Is there a significant relationship between SOOs' preferred leadership styles and cognitive operator competencies?
6. Is there a significant relationship between SOOs' senior leader competencies and cognitive operator competencies?

Data Collection

The researcher's primary means of data collection was through an automated process that captured respondents' survey results and posted the results to the researcher's Qualtrics survey account. Once the survey closed, the researcher exported the Qualtrics data to an Excel spreadsheet. He further manipulated the data and arranged it according to participant characteristics such as rank, number of years as a SOO, number of deployments as a SOO, and level of PME attained by each respondent. The researcher further stratified the data according to

the survey's TFL, TAL, and PAL leadership characteristics, the COCQ and the SLCQ, and the AC, EA, CC, TC, and IC scales.

Summary of Findings

Research Question 1. Is there a significant relationship between SOOs' preferred leadership styles and senior leader competencies?

To answer this question, the researcher performed 3 paired two-sample two-tailed t-tests. The first t-test compared the mean TFL leadership characteristics score to the mean SLCQ score. The second t-test compared the mean TAL leadership characteristics score to the mean SLCQ score. The third t-test compared the mean PAL leadership characteristics score to the mean SLCQ score. The obtained value from the first t-test failed to reject the null hypothesis, indicating a statistically insignificant difference between SOOs' TFL leadership characteristics and senior leader competencies. The obtained value from the two-remaining t-tests rejected their null hypotheses, indicating a statistically significant difference between TAL and PAL leadership characteristics and senior leader competencies.

Research Question 2. Is there a significant relationship between SOOs' preferred leadership styles and cognitive operator competencies?

To answer this question, the researcher performed 3 paired two-sample two-tailed t-tests. The first t-test compared the mean TFL leadership characteristics score to the mean COCQ score. The second t-test compared the mean TAL leadership characteristics score to the mean cognitive operator competencies score. The third t-test compared the mean PAL leadership characteristics score to the mean cognitive operator questionnaire score. The obtained value from all three t-tests indicates a significant statistical relationship between TAL leadership

characteristics, TAL leadership characteristics, PAL leadership characteristics, and cognitive operator competencies.

Research Question 3. Is there a significant relationship between SOOs' senior leader competencies and cognitive operator competencies?

To answer this question, the researcher performed 1 paired two-sample two-tailed t-test. The t-test compared the mean cognitive operator competencies score to the mean senior leader competencies score. The obtained value from the t-test suggests that the relationship between SOOs' cognitive operator competencies and senior leader competencies is significant.

Additional Findings, and Recommendations for Further Research

Aside from the findings related specifically to the research questions, there are several noteworthy findings that became apparent after stratifying data according to participant characteristics and various portions of the questionnaire. The mean TFL leadership characteristics score for all 60 respondents was 3.15, the mean TAL leadership characteristics score for all 60 respondents was 2.32, and the mean PAL leadership characteristics score for all 60 respondents was .78. According to Sabbah, Ibrahim, Khamis, Bakhour, Sabbah, Droubi, and Sabbah's interpretation, SOOs, as a group, are *fairly often* transformational, *sometimes* transactional, and are *not at all* passive avoidant. When stratified by rank, Captains (n=20) are *fairly often* transformational, *fairly often* transactional, and passive avoidant *once in a while*. Majors (n=24) are *fairly often* transformational, *sometimes* transactional, and *not at all* passive avoidant. Lieutenant Colonels (n=16) are *frequently, if not always*, transformational, *sometimes* transactional, and *not at all* passive avoidant. This study indicates that SOOs become more transformational and transactional and less passive avoidant over time. Studies suggest that transformational leadership characteristics increase with rank, and that leadership styles are

moderated by rank and experience (Ivey & Kline, 2010; Cote; 2014). MARSOC should conduct additional research to determine what factors lead to transformational and transactional leadership characteristics emergence in Majors and Lieutenant Colonels. By understanding how Majors and Lieutenant Colonels develop transformational and transactional leadership characteristics, MARSOC can potentially develop and administer an intervention mechanism to Captains and hasten the emergence of their transformational and transactional leadership characteristics. This topic is particularly important because research suggests that passive avoidant leadership qualities are less desired than transformational or transactional leadership qualities (Fosse, Skogstad, Einarsen, & Martinusse, 2019; Bass, Avolio, Jung, & Berson, 2003).

The mean CC score for all 60 respondents was 3.16, the mean TC score for all 60 respondents was 3.15, and the mean IC score for all 60 respondents was 3.17. When stratified by rank, Captains' (n=20) mean CC score was 3.05, their mean TC score was 3.09, and their mean IC score was 3.16. Majors' (n=24) mean CC score was 3.16, their mean TC score was 3.09, and their mean IC score was 3.12. Lieutenant Colonels' (n=16) mean CC score was 3.28, their mean TC score was 3.31, and their mean IC score was 3.06. According to the data, CC and TC scale scores increase as SOOs gain rank. IC scale scores, however, appear to regress from Captain to Lieutenant Colonel. The IC scale is comprised of the following questions:

1. I am capable of influence allies and partners.
2. I am confident in my ability to inform decision makers.
3. I am capable of using reason and logic to build consensus.
4. When my interests are threatened, I am less likely to compromise.
5. I communicate with persuasion with people outside of MARSOC.

6. I am satisfied in my ability to communicate MARSOC's operating concepts to people outside of the organization.

Forty percent of MARSOC's cognitive operator competencies relate to interpersonal communications skills. Studies identify strong relationships between transformational and transactional leadership and interpersonal competencies (Wodak, Kwon, & Clarke, 2011; Ishikawa, 2012; Headquarters Department of the Army, 2019; Waters, 2019; Makhdom & Ghazali, 2013). This study identifies statistically significant relationships between TFL and TAL leadership characteristics and cognitive operator competencies. This study also identifies that Lieutenant Colonels exhibit TFL leadership characteristics more frequently than Captains and Majors. Using Chapter Two's literature and this study's t-test results (see Tables 8 & 9), it can be inferred that Lieutenant Colonels' mean IC scale scores should, at a minimum, be comparable to mean Captains' and Majors' IC scale scores. MARSOC should identify what factors contribute to Lieutenant Colonels' scoring lower on the IC scale than Captains and Majors, making Lieutenant Colonels appear comparatively less confident in their abilities to influence, inform, and build consensus using reason and logic.

Thirty-four point nine percent of respondents strongly disagree or disagree that they are satisfied with their ability to communicate MARSOC's operating concept to people outside of the organization. MARSOC should further investigate whether the root of SOOs' dissatisfaction in their ability to communicate MARSOC's operating concepts is due to a lack of IC attainment or because MARSOC, as an organization, has ill-defined or not easily understood concepts. If the ladder is the case, MARSOC has an opportunity to define better its processes for building inner-organizational shared understanding of their operating concept.

The researcher designed the COCQ's EA scale to assess whether, since becoming a SOO, respondents have received formal training on the cognitive operator competencies listed in *MARSOF* 2030. The researcher designed the COCQ's AC scale to determine whether SOOs are confident in their ability to practically understand and apply cognitive operator competencies listed in *MARSOF 2030*. On average, SOOs scored low on the COCQ EA scale compared to similar questions on the AC scale. Forty-six point six percent of SOOs strongly disagreed or disagreed that they have received formal training on developing an understanding of emerging problems (EA scale question), but only 3.3% of SOOs strongly disagreed or disagreed that they understand how to develop an understanding of emerging problems (AC scale question).

In some instances, SOOs' levels of formal training and practical ability to demonstrate cognitive operator competencies were both low. Fifty-six point six percent of SOOs strongly disagree or disagree that they have received formal training on how to conduct operations within the information domain. Sixty-eight point two percent of SOOs strongly disagree or disagree that their level of proficiency of conducting operations in the information domain is equal to or better than their level of proficiency in the physical domain.

MARSOF 2030 describes the significance of the information environment as an "enduring feature of conflict," an environment in which MARSOF must "combine intelligence, information, and cyber operations to affect opponent decision making" and achieve effects in "the information environment [that] will become increasingly decisive across the conflict continuum." To address the challenges posed in the information environment, MARSOC should build awareness of the information domain through "changing the manning, training, and equipping of the force" (Headquarters, United States Marine Corps, 2018, p. 13). Overall, the EA scale scores suggest that the SOO training continuum may not be evolving quickly enough to

address the operational environment's complexities described in *MARSOF 2030*. MARSOC should analyze current doctrine and policy and review programs of instruction for courses taught by the command to determine whether the current continuum addresses cognitive operator competencies.

SOOs in the ranks of Captain, Major, and Lieutenant Colonel were the focus of this study; however, *MARSOF 2030*'s cognitive operator competencies are not exclusively designed for MARSOC's SOO population. All Raiders are expected to exhibit cognitive operator competencies to succeed in the future operating environment. MARSOC should replicate portions of this study to its CSO population to determine whether they exhibit a preferred leadership style, cognitive operator competencies, and senior leader competencies. The study must account for differences in officer and enlisted training continuums, particularly those that occur before assignment to MARSOC. While enlisted Marines and officers attend MARSOC's assessment and selection and Initial Training Course (ITC), the scope of their duties in MARSOC billets post-ITC and throughout their careers are dissimilar. This study's results are not generalizable to the CSO population, but the researcher can modify this study's survey instrument and administer it to CSOs. Results may provide useable data to compare against existing officer data gathered during this study. The researcher could then compare CSO and SOO survey results to analyze similarities and differences between the two populations.

According to DeMeus, Dai, and Wu, leadership competencies become more important according to skill ratings at difference organizational levels (2011). Mumford, Campion, and Morgenson describe leadership skill requirements as being "layered (strata) and segmented (plex)" and describe them collectively as a "strataplex." Leadership emerges in segmented cognitive, interpersonal, business, and strategic categories (plex), change in importance, and

emerge at different organizational levels (strata) (2007). MARSOC should further develop its cognitive operator innovation pathway and design a cognitive operator competency model that more broadly defines measurable competency requirements by rank and billet for SOOs and CSOs. The model should be based on Mumford, Campion, and Morgenson's strataplex concept. Designers can use Waters' senior leader competencies framework with cognitive, technical, and interpersonal competencies as the model's "plex" and existing MARSOC billet structure to define the model's "strata." Despite the existing PME differences between SOOs and CSOs, there is an expectation that CSOs, at some point in their career, must demonstrate mastery in competencies that more closely approximate those required of senior officers. For example, MARSOC's senior CSO, a Master Gunnery Sergeant assigned as the MARSOC Commander's senior enlisted advisor, requires a mastery of different competencies than a Captain serving their first assignment leading a 14-person Marine Special Operations Team (MSOT) because certain "plex" competencies only emerge at higher levels of the "strata." Conversely, a Lieutenant Colonel working on the Commander's staff requires different "plex" competencies than a CSO sergeant serving in their first assignment as an MSOT element member.

Conclusion

After reviewing the results of the seven t-tests and descriptive statistics, it is evident that SOOs exhibit a preferred leadership style. They are, on average, more transformational than transactional. The relationship between SOOs' mean TFL leadership characteristics score and mean SLCQ score was not statistically significant; however, the relationship between mean TAL and PAL leadership characteristics scores and mean SLCQ scores were statistically significant. The relationship between SOOs' mean TFL, TAL, and PAL leadership characteristics score and mean COCQ scores were statistically significant and the mean COCQ scores and SLCQ scores

were statistically significant. When combined with further analysis of the study's descriptive statistics stratified according to respondent characteristics and the EA, AC, CC, TC, and IC scales, it became apparent that some of the results warrant further investigation. The researcher further recommends modifying this survey and administering the survey to MARSOC's CSO population and developing a comprehensive cognitive operator competency model that addresses the complexities of the operating environment.

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APPENDIX A: IRB APPROVAL

MARSHALL UNIVERSITY
www.marshall.edu

Office of Research Integrity
Institutional Review Board
One John Marshall Drive
Huntington, WV 25755

FWA 00002704

IRB1 #00002205
IRB2 #00003206

January 24, 2022

Dennis Anderson, EdD
Marshall University COEPD

RE: IRBNet ID# 1843814-1
At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Anderson:

Protocol Title:	[1843814-1] Timothy Scott - Leadership Studies EdD Dissertation	
Site Location:	MUGC	
Submission Type:	New Project	APPROVED
Review Type:	Exempt Review	

In accordance with 45CFR46.104(d)(2), the above study was granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Designee. No further submission (or closure) is required for an Exempt study **unless** there is an amendment to the study. All amendments must be submitted and approved by the IRB Chair/Designee.

This study is for student Timothy Scott.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/Behavioral) Coordinator Lindsey Taylor at (304) 696-6322 or l.taylor@marshall.edu. Please include your study title and reference number in all correspondence with this office.

Sincerely,

Bruce F. Day, ThD, CIP
Director, Office of Research Integrity

APPENDIX B: MARSOC APPROVAL LETTER

UNITED STATES MARINE CORPS
MARINE FORCES SPECIAL OPERATIONS COMMAND
PSC BOX 20116
CAMP LEJEUNE NC 28542-0116

3000
G-7

From: Deputy Commander, Marine Forces Special Operations Command
To: Lieutenant Colonel Timothy J. Scott

Subj: DATABASE ACCESS AND SURVEY DISTRIBUTION AUTHORIZATION

1. I hereby authorize Lieutenant Colonel Timothy Scott to obtain an Excel spreadsheet from the MARSOC G-1 that lists the rank, last name, first name, middle initial, and electronic mail address of all Marine Special Operations Officers currently assigned to MARSOC.

2. I further authorize him to use the information contained in the spreadsheet to build an electronic mail distribution group and distribute a survey for use in his doctoral dissertation titled: *Preferred leadership style, senior leader competencies, and cognitive operator competencies exhibited by United States Marine Corps special operations officers: a quantitative non-experimental study.*

3. The point of contact at this command regarding this matter is Lieutenant Colonel Timothy Scott, Marine Forces Special Operations Command Assistant Chief of Staff, G-7, (910) 440-0553 or via email at timothy.scott@socom.mil

J. J. LYNCH II

APPENDIX C: SURVEY INSTRUMENT

SOO Leadership style, cognitive operator competencies, and senior leader competencies survey

---

Start of Block: Demographic Data

What is your current rank?

- ☐ Captain
- ☐ Major
- ☐ Lieutenant Colonel

How many years have you been a Special Operations Officer?

- ○ 0-4 years
- ○ 5-8 years
- ○ 9-12 years
- ○ 13-16 years

How many times have you deployed as a Special Operations Officer?

- ○ Zero
- ○ 1-2
- ○ 3-4
- ○ 5+

What is the highest level of Professional Military Education you have attained?

- ○ Company Level PME (EWS or Captain's Career Course)
- ○ Intermediate Level PME (Command and Staff)
- ○ Advanced Intermediate PME (SAW, SAMS, SAAS, MAWS)
- ○ Naval Postgraduate School (any program)
- ○ Top Level School (any program)
- ○ I have not completed any level of professional military education

End of Block: Demographic Data

Start of Block: Multifactor Leadership Questionnaire

MLQ Questions are removed per Mind Garden, Inc reproduction restrictions.

Start of Block: Cognitive Operator Competency Questionnaire

Cognitive Operator Competency Questionnaire

	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
37. Since becoming a SOO, I have received formal training on influencing allies and partners.	○	○	○	○
38. I am capable of influencing allies and partners.	○	○	○	○
39. Since becoming a SOO, I have received formal training on developing and understanding of emerging problems.	○	○	○	○
40. I understand how to develop an understanding of emerging problems.	○	○	○	○
41. Since becoming a SOO, I have received formal training on how to inform decision makers.	○	○	○	○
42. I am confident in my ability to inform decision makers.	○	○	○	○

43. Since becoming a SOO, I have received formal training on applying national, theater, and interagency capabilities to problems.	○	○	○	○
44. I am capable of applying national, theater, and interagency capabilities to problems.	○	○	○	○
45. Since becoming a SOO, I have received formal training on how to conduct operations within the information domain.	○	○	○	○
46. My level of proficiency of conducting operations in the information domain is equal to or better than my level of proficiency in the physical domain.	○	○	○	○

End of Block: Cognitive Operator Competency Questionnaire

Start of Block: Senior Leader Competency Questionnaire

Senior Leader Competency Questionnaire

	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
47. I am intent focused.	○	○	○	○
48. I assess issues using an enterprise-wide, integrated perspective.	○	○	○	○
49. I understand the broader social systems within which MARSOC operates.	○	○	○	○
50. To understand problems, I consider second and third order effects.	○	○	○	○
51. I understand the concept of systems thinking.	○	○	○	○
52. I am capable of using reason and logic to build consensus.	○	○	○	○
53. When my interests are threatened, I am less likely to compromise.	○	○	○	○
54. I communicate with persuasion to people outside of MARSOC.	○	○	○	○

55. I am satisfied in my ability to communicate MARSOC's operating concepts to people outside of the organization.	○	○	○	○
56. I see issues and events through a political lens to better understand an individual's motivations and rationale.	○	○	○	○
57. I am future oriented.	○	○	○	○

End of Block: Senior Leader Competency Questionnaire

APPENDIX D: MIND GARDEN LICENSE

www.mindgarden.com

To Whom It May Concern,

The above-named person has made a license purchase from Mind Garden, Inc. and has permission to administer the following copyrighted instrument up to that quantity purchased:

Multifactor Leadership Questionnaire

The three sample items only from this instrument as specified below may be included in your thesis or dissertation. Any other use must receive prior written permission from Mind Garden. The entire instrument may not be included or reproduced at any time in any other published material. Please understand that disclosing more than we have authorized will compromise the integrity and value of the test.

Citation of the instrument must include the applicable copyright statement listed below.
Sample Items:

As a leader ... .

I talk optimistically about the future.
I spend time teaching and coaching.
I avoid making decisions.

The person I am rating... .

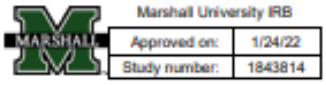
Talks optimistically about the future.
Spends time teaching and coaching.
Avoids making decisions

Sincerely,

Robert Most
Mind Garden, Inc.
www.mindgarden.com

APPENDIX E: ANONYMOUS SURVEY CONSENT

Anonymous Survey Consent



You are invited to participate in a research project entitled **"Preferred Leadership Style, Senior Leader Competencies, and Cognitive Operator Competencies Exhibited by United States Marine Corps Special Operations Officers: A Quantitative Non-experimental Study"**

The study is designed to determine whether SOOs exhibit a preferred leadership style or specific senior leader competencies compatible with the cognitive operator competencies defined in MARSOF 2030. This research supports MARSOC's ongoing efforts to develop their cognitive Raider innovation pathway as it relates to the leadership training continuum of SOOs.

The study is being conducted by Dr. Dennis Anderson from Marshall University and has been approved by the Marshall University Institutional Review Board (IRB). This research is being conducted as part of the dissertation for Timothy Scott.

This survey is comprised of 61 questions and takes approximately 11 minutes to complete.

Your replies will be anonymous, so do not type your name anywhere on the form.

There are no known risks involved with this study.

Participation is completely voluntary and there will be no penalty or loss of benefits if you choose to not participate in this research study or to withdraw.

If you choose not to participate you can leave the survey site.

You may choose to not answer any question by simply leaving it blank.

Once you complete the survey you can delete your browsing history for added security.

Completing the on-line survey indicates your consent for use of the answers you supply.

If you have any questions about the study you may contact Dr. Dennis Anderson at (304) 746-8989, Timothy Scott at (910) 440-0553.

If you have any questions concerning your rights as a research participant you may contact the Marshall University Office of Research Integrity at (304) 696-4303.

By completing this survey, you are also confirming that you are **18** years of age or older.

Please print this page for your records.

If you choose to participate in the study you will find the survey at

https://marshall.az1.qualtrics.com/jfe/form/SV_8d07nh5YZExQHUG