

Exploring perceptions on the influences of mentor-mentee relationships on graduate-student learning

by

William Kuchinski

B.S., United States Military Academy, 1984
M.E., Rensselaer Polytechnic Institute, 1995

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Abstract

Academic mentoring relationships are frequently identified in the literature as important components of the learning experience; however, little research investigates how mentor-mentee relationships form and the effects of the relationships on learning. This study builds upon traditional mentoring theory, Cognitive Apprenticeship Theory, and other accepted academic mentoring frameworks to explore graduate students' perceptions of the influences of their mentor-mentee relationships on learning. In addition, the study includes a review of the literature on mentoring, mentoring in academic settings, and mentoring military students.

This study used a qualitative, multi-case design to explore three mentor-mentee dyads at the beginning, middle, and end of the U.S. Army's Master of Military Arts (MMAS) graduate degree program. The mentors were all faculty members who served as MMAS committee chairs for their students. The study used reflective journals, semi-structured interviews, document reviews, field notes, and a conceptual framework based on Cognitive Apprenticeship Theory to explore student perceptions.

Research guidance and feedback emerged as the primary themes aligned with how graduate students perceived they were challenged and supported by their mentors. Similarly, new perspectives, improved communication skills, and greater self-efficacy emerged as themes aligned with how graduate students perceived their relationships with their mentors influenced the acquisition or modification of existing knowledge, skills, and behaviors.

The results of this study provide insights other researchers can use to understand better the importance of mentoring in academic settings, advance mentoring theory and its application in faculty development, and better prepare faculty and students to navigate their graduate-degree journeys.

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Approved by:

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Dedication

To my wife, who compassionately guides our family with her ever-present love, strength, and kindness. Her empathy, selflessness, dedication to teaching, and commitment to helping others continually inspires her students, our family, and me to learn, love, and grow.

Chapter 1 - Introduction

The National Center for Education Statistics (NCES) estimates postbaccalaureate enrollment in the U.S. in 2020 was nearly 3 million and projects postbaccalaureate enrollment will increase to nearly 3.3 million over the next eight years with the projected number of women enrolled in graduate-degree programs to be near twice as many as men by 2030 (National Center for Educational Statistics, 2020a). While enrollments are high, graduate-degree graduation rates are estimated to be less than 50%. Specifically, during the 2016-2017 academic year, the National Center for Education Statistics (NCES) identified approximately 30% of enrolled students earning their master's degrees across all fields, with 59% of the graduates being women (National Center for Educational Statistics, 2020b).

While the numbers are projected to remain about the same, there will be emerging challenges educators will face as they work with graduate students. These challenges include increasing the number of first-generation college students who may require more preparation to succeed in graduate school. In addition, the number of older students is projected to increase as non-traditional students re-enter education to advance their careers (Wendler et al., 2010).

Mentoring and mentorship are frequently mentioned in many professional, vocational, and academic publications as a viable method for supporting first-generation and older student populations in graduate programs (Arora & Rangnekar, 2014; Boylan, 2017; Chen et al., 2016; Hollingsworth & Fassinger, 2002). However, most of this research focuses on the career or long-term benefits of mentoring on the future success of the mentee (Feldon et al., 2015; Thomas & Thomas, 2015). While Brookfield (1995, 2006) and Daloz (1986, 1999) specifically identify mentorship as an important aspect of adult development and learning, there is little empirical

research focused on identifying the specific characteristics of mentorship that influence learning in a graduate degree program.

Mentoring

This study reviews traditional mentoring theory, Cognitive Apprenticeship Theory, and other accepted academic mentoring frameworks to enhance understanding of how mentoring relationships may develop and evolve in academic settings. As this study focuses on graduate students participating in the U.S. Army's Masters of Military Arts and Sciences (MMAS) program at the U.S Army's Command and General Staff College (CGSC), this review will also include an analysis of the literature on academic mentoring, mentoring graduate students, and mentoring military students. The research identifies the importance of formal and informal mentoring programs in postsecondary educational programs (Chen et al., 2016; Crisp, 2009; Crisp & Cruz, 2009; Crisp et al., 2017; Cohen, 2001; Kelleher, 2016). The practice of mentoring frequently appears as an important element in the study of relationships between adult educators and their students (Brookfield, 1995, 2006; Cohen, 1995a, 1995b; Daloz, 1986, 1999). All highlight the importance of establishing authentic and effective relationships between faculty and adults during the learning process.

While mentoring is highlighted as important, no singular theory or definition of mentoring captures the complexity and diversity of mentoring relationships in academic settings (Crisp, 2017; Jacobi, 1991). Mentoring theories vary based on the professions and mentoring environments. For example, in the business community, Dr. Kathy Kram provides a mentoring theory focused on career development and psychosocial support as the mentoring relationship transitions through four phases: initiation, cultivation, separation, and redefinition (Kram, 1988). In academic environments, Cognitive Apprenticeship Theory (CAT) (Collins et al., 1991),

Relational Mentoring Theory (Miller, 1986), and similar academic mentoring frameworks developed by Cohen (1995a), Crisp (2017), and Daloz (1986) help inform how mentoring relationship features help to support and develop students.

Focusing on the academic environment, Daloz (1986, 1999) generally defines mentoring as the relationship between mentor and mentee that provides the necessary support and challenge required for both to grow. Cohen (1995a) and Daloz (1986, 1999) highlight the importance of mentors that help adults successfully navigate their educational journeys. Both identify essential roles faculty must accomplish while simultaneously building mentoring relationships and helping adults learn (Cohen, 1995a; Daloz, 1999).

Daloz (1999) also maintains that adults frequently experience fear as they attempt to make new meanings or "let go" of previous beliefs. To help students overcome their fears, Daloz (1999) identifies building trust through effective listening, assessing where students want to go, enabling students to have a voice, introducing them to challenges, and enabling them to make progress through the educational experience as critical steps in the mentoring process. Daloz (1999) also highlights the importance of the relationship between the mentor and mentee and understanding the impacts of mentoring on both. (Daloz, 1999).

Cohen (1995b) also describes interrelated mentor roles and their importance in building a successful mentor-mentee partnership. These roles include building trusting relationships, gaining knowledge of the mentee, understanding the mentee's needs, and introducing options to help them achieve their goals (Cohen, 1995b). Using these six roles, Cohen (1995b) proposed a six functions model that included the following: relationship (to trust), information (to advise), facilitative (to provide alternatives), confrontive (to challenge), model (to motivate), and vision (to enable initiative) (Cohen, 1995b).

Research by Crisp and Cruz (2009) further clarified the characteristics of mentoring relationships as relationships focused on supporting student growth and development by providing professional, career, and emotional support. A more recent review of the literature identified additional areas of commonality, including a notion that all mentoring relationships implicitly focus on growth and development and may include professional, career, and emotional support. In addition, mentoring relationships are reciprocal relationships where the mentors have more experience and influence within the educational environment (Crisp et al., 2017).

Based on the analysis of their review, Crisp et al. (2017) proposed a conceptual framework of mentoring that accounts for the above commonalities. Their recommended framework sets forth a model intended to aid in a better understanding of the connections between the educational context of the mentoring relationship, the mentee characteristics, the purpose and duration of the relationship, the forms of support, and expected students' experiences and outcomes (Crisp et al., 2017). While the research identifies key components and conceptual frameworks for mentoring, additional research is required to understand how mentoring impacts learning (Crisp et al., 2017).

Problem Statement

The NCES estimates an annual enrollment of over three million students in graduate degree programs each year for the next ten years (National Center for Educational Statistics, 2020a). Many of these graduate students will develop mentoring relationships with faculty as students pursue their academic goals (Anderson & Shannon, 1998; Crisp, 2009; Crisp et al., 2017; Ragins & Cotton, 1999; Rose, 2003). Whereas the research highlights the importance of faculty and students developing mentoring relationships, the focus of the research is on the impact of mentoring relationships on student retention, social justice, and academic research

(Anderson & Shannon, 1998; Crisp, 2009; Crisp et al., 2017; Ragins & Cotton, 1999; Rose, 2003).

A review of the literature identifies the research on the influence of mentoring relationships on learning as "underdeveloped" (Crisp et al., 2017, p.7) and provides only limited insights on how mentoring is related to student learning (Crisp, 2009; Crisp et al., 2017). Moreover, though there is research on the types of support mentors provide to their students (Crisp, 2009; Crisp et al., 2017; Jacobi, 1991; Rose, 2003), there is little research on how mentor support influences learning (Johnson et al., 2010; O'Meara et al., 2013), how mentor-mentee relationships influence student development, and how students change during the mentoring process (Crisp et al., 2017).

Mentoring is an appropriate way to investigate faculty-student relationships (Anderson & Shannon, 1998; Dreher & Ash, 1990; Lightfoot, 2000; Noe, 1988; Pollock, 1995; Ragins & McFarlin, 1990; Rose, 2003; Schockett & Haring-Hidore, 1985). Because of the vital role of faculty during the learning process, explicitly investigating how mentoring relationships between committee chairs and their graduate students may influence learning is important to understand how graduate students may experience change during their academic programs. A literature review describing academic mentoring relationships identifies psychological, emotional, degree, career, and academic subject knowledge support as categories that best describe mentor-mentee relationships in learning environments (Crisp et al., 2017).

Purpose of the Study

This exploratory case study will investigate student perceptions of how mentor-mentee relationships may influence the learning experiences of graduate students in an accelerated graduate degree program. Specifically, this study will explore mentor-mentee relationships

during the MMAS graduate degree program. As there is little research investigating the influence of mentoring on learning, this qualitative study is designed to use scholarly accepted criteria to investigate academic mentoring processes, perceptions, and values while also exploring how mentoring may influence learning as identified by changes in students' knowledge, skills, behaviors, and preferences.

Research Questions

This multi-case study includes one primary and two subordinate research questions.

Primary Research Question: How do graduate students perceive influences on their learning experience within the mentor-mentee relationship?

a. Research Subquestion 1: How do graduate students perceive the influences of challenge and support within the mentor-mentee relationship?

b. Research Subquestion 2: How do graduate students perceive the relationship with the mentors influencing the acquisition or modification of existing knowledge, skills, behaviors, or preferences?

Research Design

This study investigates the perceptions of the potential impacts of mentoring on the learning of graduate students. While multiple instruments are available to assess mentoring and learning independently, nearly all require additional investigation to substantiate their content validity and response reliability. At the time of this research, there was no valid and reliable instrument to measure the effects of mentoring on the learning of adults in accelerated graduate-degree programs.

In the absence of a well-established instrument to support a quantitative approach and to gain greater insight into the nature of mentoring and how mentoring may impact the learning of

graduate students, this exploratory research used a case-study approach to qualitatively investigate the practice of mentoring as seen by the participants in the study (Creswell, 2013, 2014; Stake, 1995; Yin, 2018). Upon review of the other qualitative analysis approaches suggested by Creswell (2013, 2014), Patton (2012), Stake (1995), and Yin (2018), the case-study approach is the most appropriate for investigating an issue in a bounded system over time, using multiple sources of information (Creswell, 2013, 2014).

This exploratory multiple-case study investigated a small group of students and faculty, using multiple sources of information within a bounded system – a resident, accelerated, graduate-degree program (Yin, 2018). This multi-case design was well bounded by time and activity, as described by Creswell (2013, 2014) and Yin (2018). The time this study investigates begins when mentees enter the MMAS program and ends when mentees graduate or withdraw from the MMAS program. This temporal boundary best supports a deeper understanding of the mentor-mentee activities influencing learning during the MMAS program (Creswell, 2013, 2014; Stake, 1995; Yin, 2018).

Yin (2018) identifies temporal and spatial boundaries as essential features of effective case design (Yin, 2018). The MMAS program also includes a well-defined spatial boundary, wherein the program is only available to students enrolled and faculty teaching the MMAS course at one location each year. This research will focus on one location during the academic year 2019-2020.

To investigate mentor-mentee relationships and their influence on learning, this exploratory case study used a variety of data-collection procedures as outlined by Creswell (2007, 2013), Stake (1995), and Yin (2018). Most appropriate to this exploratory case study, this investigation used semi-structured interviews, reflective journals, and acknowledgment

statements of completed MMAS theses to gain a deeper understanding of mentee-mentor relationships and their potential influence on learning (Creswell, 2013, 2014; Stake, 1995; Yin 2018).

Other approaches considered but ultimately rejected included the narrative approach, which was not appropriate, as this study does not intend to investigate the detailed life experiences of an individual or small group. A phenomenological approach was also inappropriate, as this research is not focused on describing a specific phenomenon's "universal essence" by better understanding individual experiences (Creswell, 2013, p. 58). Likewise, the intent of this research was not to develop or generate a new theory; therefore, a grounded theory approach was not suitable. Finally, this study did not intend to identify shared patterns of beliefs, behaviors, or language as described by Creswell (2013) in an ethnographic approach to qualitative research.

Population

The Army Learning Strategy published in 2017 highlighted conflict's evolving complexity and nature as significant educational challenges the Army will likely face over the next ten years. To address these challenges, the strategy identified "intellectual optimization" as a focus area to investigate how Army learning programs develop agile, adaptive, and innovative leaders with the intellectual diversity and capacity required to succeed in the complex environment of the future (Department of the Army, 2017).

The MMAS program at the U.S. Army Command and General Staff College (CGSC) is one Army educational program attempting to enhance intellectual diversity and capacity to meet the Army's educational challenges. Students in the MMAS program select diverse research topics and, with the help of a chairperson, use scholarly research techniques to identify, define, and

recommend solutions to complex problems (CGSC Foundation, 2018). During the research process, MMAS committee chairs are encouraged to establish supportive relationships while helping their students to clarify research interests, establish research milestones, formulate research questions, conduct scholarly research, and analyze results.

While the MMAS program publishes a diverse collection of approved MMAS theses and successfully awards approximately 125 master's degrees each year to students who demonstrate the intellectual capacity to complete a graduate degree program (Baumann, 2019), there is little research on the role of the MMAS committee chair and how the program changes a graduate's intellectual diversity and capacity. While approximately 125 students typically earn their MMAS degrees each year, over half of the students who initially expressed interest in the MMAS program graduate with an MMAS degree (R. F. Bauman, personal communication, 12 November 2019). Exploring the role of the committee chair on potential changes in MMAS students' behavior and ability provides data on how the committee chair and MMAS program may influence graduates' learning.

This case study will explore students' perceptions of how mentoring might influence learning. Exploring the relationships between committee chairs and their graduate students is important to understanding how MMAS students may experience change during the program. In addition, mentoring is frequently highlighted as a way to investigate relationships between students and faculty (Anderson & Shannon, 1998; Raggins & Cotton, 1999; Rose, 2003).

While learning theory and mentoring are important concepts in adult learning, this research provides a unique opportunity to investigate students' perceptions of the influences of one upon the other. Specifically, concepts such as degree, career, and academic subject

knowledge support are frequently mentioned in studies focused on investigating relationships in academic settings (Crisp et al., 2017).

Although there is significant research on mentoring, little research explicitly investigates the influences of mentoring on learning. This research will explore mentor-mentee relationships and how the relationships develop.

Setting

The setting for this research is the U.S. Army's Command and General Staff College (CGSC). The college is centrally located in the Midwest and provides intermediate-level Professional Military Education (PME) to Army officers with eight to ten years of commissioned military service. While the CGSC provides academic governance and oversight to several academic schools and programs, including the U.S. Army's Sergeants Major Course (SMC), The School for Advanced Military Studies (SAMS), and the Defense Language Institute (DLI), this research will focus on students who are participating in the Master of Military Arts and Sciences (MMAS) program while attending the Command and General Staff Officers Course (CGSOC). Approximately 1100 students attend the CGSOC each year, including military students from the U.S. Army, U.S. Navy (USN), U.S. Air Force (USAF), United States Marine Corps (USMC), and U.S. Coast Guard (USCG). In addition, the typical CGSOC class includes approximately 100 international military officers from over 50 nations and up to 20 Department of Defense (DoD) civilians representing other governmental organizations (Command and general staff college foundation, Inc. 2018).

Students attending the CGSOC may voluntarily elect to participate in the MMAS graduate degree program. The MMAS program is an accredited masters-level degree program that requires participants to maintain a grade point average (GPA) of 3.0 or higher, complete

electives in research design, pass a comprehensive exam, write a 50–60-page thesis, and successfully defend the conclusions of their research.

Students who voluntarily enroll in the MMAS program work collaboratively with their CGSC faculty to select an MMAS Committee Chair. Once selected, the MMAS Committee Chair becomes the student's principal research advisor and head of the student's MMAS committee. The MMAS committee is typically composed of two additional members of the CGSC faculty who serve as subject matter experts during the MMAS research process. MMAS students typically meet with their Committee Chairs throughout the ten-month program as students prepare their research prospectuses, draft chapter outlines, prepare for comprehensive exams, and write their theses for submission and defense (CGSC website, 2018).

Significance of the Study

This exploratory research will add to the research on mentor-mentee relationships in academic settings. A better understanding of student perceptions, the characteristics of mentoring relationships, and their potential influences on the learning experiences of adults will increase the body of knowledge available on mentoring in the academic domain and enhance how graduate-degree program administrators and faculty implement academic mentoring programs in graduate education.

This research will also help inform the MMAS program and provide data that will enhance future research on academic mentoring programs at CGSC. Additionally, CGSC will gain additional insights that may inform and enhance the MMAS chair section and faculty preparation. This research will also provide insights that may inform MMAS chairs and students on relationship qualities that enhance or hinder the successful completion of the MMAS

program. Perhaps most importantly, the results of this study may be used to enhance how MMAS chairs and students are paired in the future.

Assumptions

The assumptions of this research design are:

1. Military students, instructors, and former military instructors participating in the MMAS program had previous mentoring education, training, and experience before beginning the MMAS program (AR 600-100; FM 6-22).
2. Participation in this study does not affect the relationship between the student participants and their MMAS committee chairs.

Limitations

The limitations of this study are:

1. The sample size and unique characteristics of the population of military students will limit the transferability of the outcomes of this study to other populations.
2. The military students may have had several mentoring relationships before this experience, so their responses may be influenced by their previous mentoring relationships and expectations.
3. The military students may have limited their responses during the study due to fear of faculty reprisal.
4. Participants may have changed or modified their mentoring approaches while participating in this study.

Delimitations

The delimitations of this study are:

1. The research only investigates students and faculty participating in the MMAS program while attending the Command and General Staff College (CGSC).

2. The research is based on an accelerated graduate degree completed in 10 months.

Definition of Terms

Academic Subject Knowledge Support. The support provided by the mentor to the mentee through the discussion of coursework problems and achievement of academic goals (Crisp, 2009).

Coaching. Supporting people to grow, clarify their purpose, achieve their goals, and achieve their purpose (Whitmore, 2017).

Degree Support. The support provided by the mentor to the mentee through the discussion of educational opportunities and degree choice (Crisp, 2009).

Emotional Support. The support provided by a mentor to a mentee through the discussion of the mentee's problems and personal issues (Crisp, 2009).

Mentee. The lesser experienced student who is in a relationship with a more experienced faculty member with the purpose of helping the student become more successful personally or professionally (Daloz, 1999).

Mentor. The more skilled or experienced faculty member who is in a relationship with a less experienced student to help the student to become more successful personally or professionally (Daloz, 1999).

Mentoring. A process in which a more skilled faculty member, serving as a role model, guides a less experienced student to become more successful personally or professionally (Daloz, 1999).

Mentor-Mentee Pair. A faculty member paired with a specific student to help the student become more personally or professionally successful (Daloz, 1999).

Chapter Summary

This chapter provides an overview of the purpose, significance, and methodology used to explore how students may perceive the influence of mentoring relationships on their learning experiences in a graduate degree program. As there is little information on measuring mentoring and learning, others may be able to use the results of this study to inform future research on academic mentoring relationships and how these relationships may influence the learning experiences of graduate students.

Chapter 2 - Literature Review

This chapter discusses the importance of studying how mentoring relationships between major professors and their graduate students may influence adult learning in graduate-level education. The review first provides an overview of mentoring theory, Cognitive Apprenticeship Theory (CAT), and other accepted academic mentoring frameworks used to study mentoring in academic environments. Next, the review builds upon the accepted theories to better understand the research on mentoring within academic environments. Because this study focuses on faculty-student relationships within a military graduate-degree program, this review also includes an analysis of the literature on academic mentoring, mentoring graduate students, and mentoring military students. Finally, this review describes the development of the conceptual framework used to investigate the influence of mentor-mentee relationships on graduate students' learning.

Mentoring

"My dear Mentor, why did I reject your advice? What greater evil can befall me than a confidence in my own opinion, at an age which can form no judgment of the future, has gained no experience from the past, and knows not how to employ the present?" (Adventures of Telemachus Fénelon, François de Salignac de La Mothe-, 1651-1715, Book 1, p. 158)

Mentoring is hardly a new concept, given that one of the earliest writings on mentoring appeared in 750 B.C.E. in the poem *The Odyssey*. In the poem, Homer described the importance of Athena, the god of wisdom, as a mentor to guide Telemachus along his journey to adulthood. Today, mentoring is frequently cited in the literature as a needed developmental process in many professional domains. The professional fields of business, psychology, military, and education all include many articles highlighting the importance and value of mentoring within their respective fields (Brondyk & Searby, 2013; Chan, 2008; Crisp & Cruz, 2009; Galbraith & Cohen, 1996; Kent et al., 2013; Kram, 1985; 2013; Muir, 2014). All describe the importance of

experienced professionals developing less-experienced members of the profession. To illustrate this point, a search of peer-reviewed articles published between 2017 and 2023, including the term "mentor," returned more than 100,000 publications. While the terms mentor and mentoring frequently appear in a review of the literature, much of the research focuses on developing mentoring techniques, establishing mentoring programs, and highlighting the importance of mentoring new or less-experienced professionals (Anderson, 2013; Arora & Rangnekar, 2014; Clutterbuck, 2008; Cochran et al., 2019; Harris, 2013; Raymond & Kannan, 2014).

The research on measuring the impact of mentoring on learning is limited. While there is research on mentoring in educational settings (Harris, 2013; Koc, 2011), the research points out that more work is needed to develop and validate educational mentoring assessment tools. In addition, many mentoring assessments require further study to confirm their validity and validity reliability. (Chen et al., 2016).

To better understand how to measure mentoring in education, it is important first to review how mentoring is assessed in the business domain. Chen's research identified nine behaviors typically measured: sponsorship, role modeling, exposure and visibility, acceptance and confirmation, coaching, counseling, challenging assignments, friendship, and protection. In addition, assessment tools focused on mentoring in business are frequently defined by two domains: career development and psychological support.

Over time, the business community began to use the results and information gained from the two-domain model to develop a three-domain model that added role modeling as an essential function. Chen et al. (2016) concluded that the shift and consistent use of instruments that measure the domains of career, psychological support, and role modeling indicate the business

community is reaching a consensus on the characteristics that define mentoring in the business community.

Mentoring relationships are also embedded in higher-learning education (Kram, 1985). Mentorship can be delivered in a formal or informal process using face-to-face or virtual modalities. In addition, mentoring may involve coaching, role modeling, and collaboration (Henry-Noel et al., 2018).

Mentoring Theories

The literature includes multiple leadership, business, and educational theories applied to studying mentoring in the workplace and the learning environment. The theories provide a framework for understanding the mentoring process and the factors influencing its effectiveness. Studies on business and leadership mentoring include economic theories, theories related to power, and leadership and management theories. Studies of mentorship in the learning environment included developmental theories, adult learning theories, and coaching theories (Enrich et al., 2001).

The mentoring theories that best inform this study include Kram's Mentoring Theory, Andragogy, and Cognitive Apprenticeship Theory. These three theories highlight the significance of mentoring relationships and provide insights into how graduate students may perceive the influences of their mentor-mentee relationships on their learning experiences.

Kram's Mentoring Theory

Kram's mentoring theory, also known as the mentoring process model, was developed by Kathy E. Kram in the early 1980s. Kram's (1983, 1988) theory emphasizes the dynamic and evolving nature of mentoring relationships and highlights the importance of the mentor's role in facilitating the mentee's development. Kram (1983) describes a process of mentoring that

includes four phases: initiation, cultivation, separation, and redefinition. The initiation phase is characterized by the establishment of the mentor-mentee relationship. During this phase, the mentor and mentee get to know each other, establish expectations, set boundaries, and determine goals for their relationship.

The cultivation phase occurs when the mentor provides guidance and feedback, helping the mentee develop new skills and knowledge. The mentor and the mentee work together to achieve the goals established during the initiation phase, and the mentee takes on more responsibility during the cultivation phase. This phase also typically includes role modeling of tasks and professional behaviors that the mentee may mirror. The cultivation phase usually also includes collaboration emphasizing the partnership formed between the mentor and mentee in which there is a mutual goal of development.

The separation phase is characterized by the mentee becoming more independent as the mentor gradually withdraws from the relationship. Finally, redefinition occurs when the mentee takes on a new role, such as becoming a mentor to others, or the relationship between the mentor and mentee evolves into a different type of relationship (Kram, 1983).

Kram (1983) also describes two important mentor functions. The first mentor function is career development, where the mentor helps the mentee advance in the organization or profession. This function includes the mentor sponsoring mentee advancement, providing job coaching, increasing positive exposure and visibility in the organization, offering protection, and giving challenging assignments. The second function mentors perform is to provide psychosocial support, including role modeling, acceptance, confirmation, counseling, and friendship (Kram 1983, 1988).

Andragogy

Malcolm Knowles first developed Andragogy in the 1970s. Knowles proposed that the principles and methods of teaching adults differed from those used to teach children. He argued that adult learners have unique characteristics and needs and that the best way to teach adults is to focus on active participation and self-directed learning. As a result, Andragogy emphasizes self-direction, active participation in the learning process, and the recognition of prior experiences and knowledge (Knowles, 1970; Merriam, 2001).

Mentoring and adult learning theory are closely related. Both involve an experienced or more knowledgeable person providing guidance and support to help an individual develop new skills and knowledge. In adult learning, teaching focuses on the learner, their unique characteristics, needs, and experiences, and how to best facilitate their learning. In mentoring, the focus is on the relationship between the mentor and mentee and how the mentor can guide and support the mentee's personal and professional development (Merriam et al., 1987).

Mentoring can play an important role in adult learning as mentors may provide guidance and support for adult learners to take an active role in the learning process. A mentor can help adult learners to identify learning goals, develop a plan to achieve them, and provide feedback and support throughout the learning process. Additionally, the mentor can provide valuable guidance on how to apply the new knowledge and skills in professional or personal contexts. The mentor may also act as a facilitator, guiding the mentee toward self-discovery, active problem-solving, and decision-making. Finally, the mentor may also become a role model, providing the mentee with a real-life example of how new skills and knowledge can be applied (Kram, 1983; Merriam et al., 1987).

Self-direction and active participation in the learning process are critical components of

adult learning. As such, Andragogy provides an accepted theoretical model to explore the perceptions of graduate students on their learning experiences (Knowles, 1970; Merriam, 2001). Andragogy also informs this study by providing a theoretical framework to explore how academic mentors focus on their learners' unique characteristics, needs, and experiences and how mentor-mentee relationships may facilitate learning.

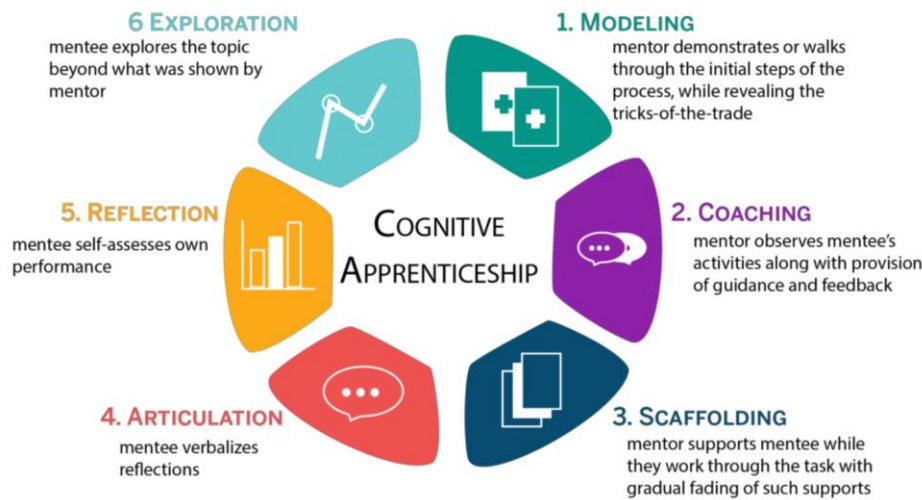
Cognitive Apprenticeship

Dr. Allan Collins and his colleagues developed the cognitive apprenticeship theory (CAT) in the 1980s. His apprenticeship theory emphasizes the role of direct, interactive instruction in the acquisition of cognitive skills. The theory suggests that apprentices can learn the skills and strategies needed to become experts by observing and interacting with experts (Collins et al., 1991).

Because learning focuses on cognitive tasks and not observable skills, Collins et al. (1991) advise instructors to share their implicit knowledge and engage in complimentary sharing of their thought processes with their learners. The goal is to help learners better understand how experts use facts, concepts, and procedures to solve problems or accomplish assigned tasks (Collins et al., 1991). Figure 2.1 shows the six components of CAT: modeling, coaching, scaffolding, coaching, articulation, reflection, and exploration.

Figure 2.1

Components of Cognitive Apprenticeship Theory



Note. Cognitive apprenticeship components diagram from (Collins et al., 1991)

Modeling refers to demonstrating a skill or strategy for the apprentice to observe and imitate. In the educational context, modeling would include faculty performing or describing a task so their students could observe and develop a conceptual model of the process they are observing. In the learning environment, modeling includes the expert describing or showing the cognitive processes required to accomplish a specific task or activity (Collins et al., 1991).

Coaching is the second component of ACT and includes faculty observing students and providing feedback, reminders, and hints to enhance student performance along the way. Coaching may also require the instructor to direct or redirect student actions to accomplish key activities or overlooked steps in the process. Coaching also includes instructors asking guiding questions, providing clarifying guidance, and helping students to clarify their difficulties (Collins et al., 1991).

According to Collins et al. (1991), scaffolding involves providing support and guidance to help students complete a task or solve a problem. The support may include suggestions or help to execute portions of the task the student cannot yet accomplish. Critical to successful

scaffolding is the instructor's ability to diagnose the student's ability level and develop intermediate steps that will enable the student to overcome difficulties and complete the task. Ultimately, the goal of scaffolding is fading where the instructor gradually reduces the level of support they provide, allowing the student to accomplish the task independently.

Articulation facilitates students describing the knowledge, skills, or abilities they use to accomplish the task. Articulation may include instructors asking questions that require students to describe and refine their understanding. Instructors may also ask students to describe their cognitive processes while working through a problem or learning requirement. Some instructors may also encourage students to provide feedback to their peers to help them articulate their ideas to others (Collins et al., 1991).

Reflection allows students to compare their cognitive and problem-solving processes to other students or experts. Reflection may include students maintaining a reflective journal, assessing what they learned during the proves, and thinking about how they may use the new information in the future (Collins et al., 1991).

Finally, CAT describes the importance of exploration. Exploration includes the instructor empowering students to accomplish tasks on their own. Exploration is the normal progression of fading where the instructor provides less support over time and encourages students to analyze and solve problems independently. Collins et al. (1991) explain the importance of instructors teaching students how to explore topics of interest by helping them identify broad goals and allowing them to identify and explore subgoals of interest. Similarly, instructors should look to support learning opportunities where students expand their thinking and develop new or broader goals.

Relational Mentoring

The Relational Mentoring Theory applies relational cultural theory (RCT) concepts to mentoring. Relational Cultural Theory (RCT) describes how people grow and develop through relationships and was developed by Dr. Jean Baker Miller in the 1980s (Andersen & West, 2020). Miller (1986) described five qualities that characterize a growth-fostering relationship: 1) increased vitality, 2) increased empowerment, 3) increased understanding of self, others, and the relationship, 4) increased sense of self-worth, and 5) a desire for additional relationships (Miller, 1976; Jordan & Hartling, 2008).

RCT can be used to understand the dynamics of various relationships, including those between individuals, groups, and communities. The theory also highlights the importance of understanding the power dynamics in relationships and the role of cultural and societal influences on these dynamics (Miller, 1976; Jordan & Hartling, 2008).

Building on the work of Miller (1976), Dr. Jane Tracey and Dr. Karen E. Lunsford (Ragins, 2012) developed the theory of relational mentoring. The theory is a framework that describes the process and dynamics of mentoring relationships. Relational mentoring proposes that mentoring partners hold mentoring schema based on past experiences and relationships that guide mentors' behaviors, expectations, and perceptions (Janssen & Jong, 2021; Ragins, 2012).

The Relational Mentoring Theory also challenges the idea that mentoring is one-sided and that the mentor is the predominant source of power in the relationship. Instead, the relational mentoring theory describes mentoring relationships as those that share influence and support mutual growth and development (Janssen & Jong, 2021). It also emphasizes the importance of the mentor-mentee relationship and the role of trust, power, mutual respect, and open

communication in fostering a successful mentoring experience (Janssen and Jong, 2021; Ragins, 2012).

While the relational mentoring theory is predominantly identified in the literature as a theory for career mentoring, its focus on relationships as shaped by mentor and mentee past experiences, mutual influence, and sharing of power provide important insights on mentoring in academic settings and specifically how graduate students may perceive the influences of mentoring relationships on their learning.

Coaching and Mentoring

Many publications on mentoring identify coaching as an important component of the mentor-mentee relationship (Andersen & West, 2020; Collins et al., 1991; Kram, 1983, 1985; Whitmore, 2019). Coaching in a mentoring relationship may take many forms, including providing feedback, giving guidance, and setting goals. Additionally, coaching can help the mentee to explore different options, evaluate advantages and disadvantages, and make decisions. Finally, coaching helps the mentee to improve their skills and performance as the mentor provides guidance, feedback, and support (Andersen & West, 2020; Collins et al., 1991; Kram, 1983, 1985).

The International Coaching Federation (ICF) provides individual and team coaches with professional certifications. The ICF defines a coach as a partner that assists others with "thought-provoking and critical thinking processes" (International Coaching Federation, 2022). In addition, the ICF describes coaches as individuals who inspire others "...to look internally to maximize their potential in the now" (International Coaching Federation, 2022).

John Whitmore describes coaching as an important component but different from Mentoring. According to Whitmore, coaching is "not dependent upon a more experienced person

passing down knowledge" (Whitmore, 2019, p. 14). Furthermore, Whitmore explains that coaching requires "expertise in coaching and not the subject at hand" (Whitmore, 2019, p. 14). Similarly, J. Whitmore (2017) describes coaches as individuals who help others unlock their potential. Coaching enhances self-awareness and unlocks a person's potential to maximize performance. Fundamentally, it is helping people to learn rather than teaching them how to learn (Whitmore, 2019). Whitmore defines coaching as: "... supporting people to grow themselves and their performance, clarify their purpose and vision, achieve their goals, and reach their potential" (Whitmore, 2019, p. 246). Coaching helps increase awareness and personal responsibility through inquiry, purposeful exploration, and self-realization (Whitmore, 2019). To help guide coaching, Whitmore recommends using questions designed to enhance self-awareness and promote proactive thought and thought (Whitmore, 2019).

While coaching is recognized as an important component of mentoring (Andersen & West, 2020; Collins et al., 1991; Kram, 1983, 1985; Whitmore, 2019), coaching may not be effective when coaches act as subject matter experts, overly control the process, or impose their beliefs and goals upon those they coach. Successful coaching requires a delicate balance of feedback and support to help the individual become more self-aware while ensuring the coach does not overly control the processes (Whitmore, 2019).

Power and Mentoring

The literature also highlights the importance of power dynamics in mentoring relationships (Burk & Eby, 2010; Hobson, 2020; Hund et al., 2018; Kram, 1985; Zehntner & McMahon, 2019). Typically, the mentor has more authority, experience, and resources than the mentee, and the personal nature of mentoring relationships can blur professional and personal boundaries. Mentors may forget that a power hierarchy is inherent in mentoring relationships,

making mentees feel vulnerable (Beres & Dixon, 2016). Power can also inhibit honest two-way feedback between mentors and their mentees, as mentees may not want to reveal their weaknesses or fear reprisal if they express dissatisfaction with their mentors (Hund, 2018).

Trust is a critical component of mentoring relationships. In relationships experiencing a power imbalance, trust can be hard to earn and easy to lose. When trust is established between mentor and mentee, it enables the communication necessary for mentees to provide honest feedback to their mentors without fear. However, the power imbalance can also lead to the mentor dominating the relationship, making decisions for the mentee, or imposing their agenda on the mentee (Beres & Dixon, 2016).

Listening and responding positively to feedback is an effective way by which mentors can develop, improve, and maintain trust with their mentees. Mentors should be watchful for behaviors that may lose the trust of their mentees. Mentors should always maintain ethical and professional behavior when interacting with mentees and should encourage mentees to take the lead in goal setting. Mentors should create a culture of mutual respect, where both the mentor and the mentee are encouraged to share their perspectives and experiences while fostering equitable mentoring relationships (Kram, 1985; Hund, 2018).

Ethical Considerations and Mentoring

Ethical considerations are an important aspect of mentoring relationships, as they can affect the quality and effectiveness of the relationship, as well as the well-being of the mentor and mentee (Hund et al., 2018; Knowles, 1970; Kram, 1985; Merriam, 2000). One of the primary ethical considerations in mentoring is maintaining boundaries. The mentor-mentee relationship is one of trust and intimacy. Therefore, both parties must maintain appropriate boundaries to

protect the mentee's well-being and ensure that the relationship remains professional (Kram, 1985; Exter & Ashby, 2019).

The literature (Collins et al., 1991; Kram, 1985) also highlights confidentiality as another important ethical consideration in mentoring. Mentors and mentees should respect each other's privacy and keep any sensitive or confidential information shared during the relationship confidential. Maintaining and respecting confidentiality can be challenging, especially when the mentee shares personal information. The mentor should clearly understand the limits of their responsibility, and the mentee should know what information can be shared with the mentor (Collins et al., 1991; Kram, 1985).

Additionally, mentors need to avoid conflicts of interest, such as using their position of power to gain personal or professional advantages for themselves or others. Moreover, mentors should not engage in discrimination, sexual harassment, or other behaviors that violate the mentee's rights (Kram, 1985).

Ethical mentoring necessitates that mentors understand and follow their field's or profession's ethical guidelines and have open and honest conversations with their mentees about any ethical issues that may arise during the relationship. Furthermore, organizations should also have training on policies and procedures to support mentors and mentees in understanding and adhering to ethical standards (AuCoin & Wright. 2021).

Mentoring in Online Environments

Online mentoring has unique challenges and benefits that may impact mentor-mentee relationships (Almond et al., 2020; AuCoin & Wright, 2021; Dorner et al., 2021). Significant challenges to online mentoring may include miscommunication, issues with technology, privacy concerns, and difficulties developing relationships (Kumar & Johnson, 2017). Mentors may need

to adapt to new situations, learn new technologies, and explore new modes of communication to overcome challenges and ensure mentoring is effective (Elmore, 2021).

One important online mentoring challenge is the use of technology needed to facilitate online mentoring. Depending on the software, equipment, and experience of both the mentee and mentor, technology may limit nonverbal communication cues such as body language and tone of voice, resulting in misperceptions or miscommunications during the mentoring process (Almond et al., 2020). Miscommunication and misperceptions can undermine trust and hinder the development of mentor-mentee relationships. In addition, mentors may need training to enhance their online social and mentoring competencies (Kumar & Johnson, 2017).

In academic environments, some mentees feel isolated during the research phase of their graduate degree programs. Therefore, mentors need to anticipate their mentee's feelings of isolation, engage in proactive communication, provide timely feedback, and develop creative online strategies to facilitate relationship-building and enhance mentor-mentee engagement (Elmore, 2021).

The benefits of online mentoring include providing opportunities for mentoring to be effective regardless of the physical separation between the mentee and mentor. In addition, collaborative technologies have reduced the distinction between online mentoring and the more traditional face-to-face experience (Elmore, 2021).

Online mentoring may also provide opportunities for mentors and mentees to collaborate in ways not previously possible due to demanding schedules, conflicting requirements, or family responsibilities. Mentors and mentees can be more flexible and use technology to collaborate at mutually acceptable times. The greater flexibility may enhance the relationship by providing more opportunities for mentor-mentee dialogue and feedback when both the mentor and the

mentee can focus on building and enhancing their relationship (Dorner et al., 2021, Elmore, 2021).

Synchronous and asynchronous online technologies provide additional opportunities to enhance mentoring in an academic environment. For example, online academic mentors may use collaborative technologies to facilitate research discussions, discuss feedback on writing, and conduct mock proposal and thesis defense presentations as needed to support their mentees (Kumar & Johnson, 2017).

Academic Mentoring Frameworks

The relationships between adult educators and their students are a critical component of adult education (Brookfield, 1995, 2006; Cohen, 1995a, 1995b, Crisp et al., 2017; Daloz, 1986, 1999). Mentoring frameworks highlight the importance of establishing authentic relationships between faculty and adult learners during the learning process. Cohen (1995a), Daloz (1986, 1999), and Crisp et al. (2017) all specifically highlight the importance of mentors that help adults successfully navigate their educational journeys and identify essential roles faculty need to accomplish while building relationships and helping adults learn (Cohen, 1995a; Daloz, 1999; Crisp et al., 2017).

Cohen's Mentor Functions

Cohen (1995a) describes six interrelated mentor functions and their importance in building a successful mentor-mentee partnership. The first function is Relationship Emphasis. This function focuses on the mentor actively listening to the mentee and empathizing with the mentee's feelings. The goal is to create a climate of trust, allowing the mentee to share their experiences honestly. The second function is Information Emphasis. This function requires the mentor to request specific information from the mentee and to provide the mentee with specific

suggestions on their current plans and progress on goals. This function aims to ensure the mentor's advice is accurate and accounts for their mentee's needs. The third function is Facilitative Focus. This function requires the mentor to guide the mentee as they explore interests, abilities, ideas, and beliefs. The goal is to help the mentee consider alternate options or points of view while making decisions about their personal or professional goals. Finally, the Confrontive Focus ensures the mentor respectfully challenges the mentee's expectations or avoidance decisions. The goal is for the mentor to help the mentee identify and overcome unproductive strategies. The fifth behavior function is Mentor Model. Here Cohen describes how the mentor should share life experiences and feelings as a role model. The purpose of this function is to motivate the mentee to take necessary risks, make decisions, and overcome difficulties. Finally, the sixth function is Mentee Vision. This function requires the mentor to stimulate their mentee's critical thinking, helping them see their future. The goal is to help mentees as they manage personal change, take the initiative, and become independent learners (Cohen, 1995a).

Cohen describes how the six functions occur during four specific developmental phases: early, middle, later, and last. Cohen states that the functions only generally explain the developmental process between mentor and mentee and should not be viewed as a rigid sequence. In the early phase, the emphasis is on establishing relationships between the mentee and mentor. During the middle phase, the focus is on the mentor gaining more information about the mentee and helping the mentee to develop goals. The later phase occurs when the mentor uses the trust and knowledge gained to challenge the mentee to overcome self-limiting behaviors. Finally, during the last phase, the mentor models behaviors that help the mentee overcome

challenges, critically reflect on their goals, and be faithful to their vision to achieve academic goals (Cohen, 1995a).

Daloz's Support and Challenge Framework

Building upon Cohen's description of mentoring, Daloz (1999) provides some of the most focused information about the role of the mentor in adult education. According to Daloz (1999), mentoring helps guide students during perspective change and may help students navigate their learning experiences. Daloz (1986) explains the importance of mentors helping to guide students through the learning process. Their purpose "is to remind us that we can, indeed, survive the terror of the coming journey and undergo the transformation by moving through, not around our fear" (Daloz, 1986, p. 17).

To help understand this process, Daloz (1999) also identifies five critical steps in the mentoring relationship: building trust through effective listening, assessing where students want to go, enabling students to have a voice, introducing students to challenges, and enabling students to make progress through the educational experience. Daloz similarly highlights how many adults experience "progressive transformations" as they attempt to construct new meanings to make sense of new conflicts and deal with the ever-increasing complexity of life. These progressive transformations typically include a shift in student focus from one that is typically narrow and self-centered to a view that is more "inclusive, differentiated, and compassionate" (p. 145).

Daloz (1999) also states that adults frequently experience fear as they attempt to make new meaning or "let go" of previous beliefs. Therefore, adult learners need a guide to help adults along the journey. Mentors can help guide their learners by providing opposing views and assisting students in reassembling their beliefs more completely (Daloz, 1999).

Mentors must accept their students for who they are and not attempt to change students autocratically or without student consent (Daloz, 1999). A central facet of a mentor's assessment of her mentee is understanding the student's needs regarding structure and guidance. Dualistic thinkers, students who view issues as right or wrong with little acceptance of the shades in between, may need more structure and guidance initially. Providing clear expectations and establishing well-defined requirements helps students overcome their anxieties. Mentors can provide less structure and broader guidance as mentees begin to transition to higher levels of thinking. Mentors need to understand their students and create an environment that helps them shift from dualism to relativism and beyond without creating a gap in learning expectations too large to overcome (Daloz, 1999).

Mentors must also establish high standards and hold their students accountable for their performance. Mentors must provide a vision to guide the mentee and model professional practice. Mentoring may end when the mentee no longer needs the challenge or support the mentor provides. Mentors must model the tradition and journey of gaining knowledge. A critical assessment tool a mentor can use to judge the mentee's thinking is the mentee's language fluency regarding the material under study. Dualistic language contains critical phrases such as never, always, and completely. Contextual thinkers use qualifying terms such as it depends and from one point of view. The mentor must work to enhance the mentee's self-awareness regarding their mastery of knowledge (Daloz, 1999).

Mentors may or may not teach classes; however, because they are typically involved in one-on-one relationships with students, mentors are more concerned with their students' goals and individual needs (Daloz, 1999). Good teaching should help students answer questions and

create better ones. Daloz (1986) also describes the response to trigger events as "twin possibilities" that will lead us to wisdom or despair.

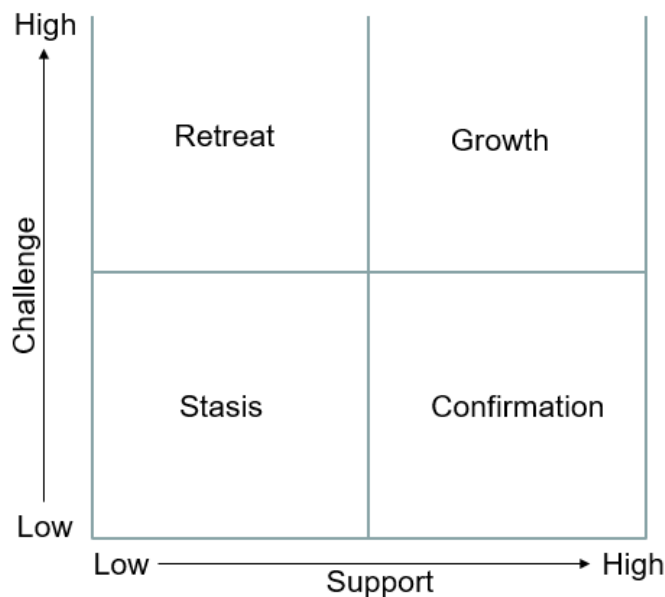
Daloz (1986, 1999) also describes mentoring as the growth of an authoritarian teacher-student relationship to a relationship that is "rooted in mutual reciprocity" (Daloz, 1999, p. 36). In addition, Daloz (1999) highlights the importance of understanding the impacts of mentoring on both the mentor and the mentee. Research by Ensher & Murphy (2011) also identifies the importance of mentoring as a relationship where both the mentor and the mentee value what they obtain from the other.

Because academic settings typically place high demands on students' time, emotions, and energy, the research identifies the relationship's investments and benefits as a critical aspect of mentoring adults in academic environments. For example, research by Eby (2007) highlights these investments. It describes the investment model of mentoring that emphasizes the importance of both mentors and mentees, determining that their investments in the relationship are worth the effort (Eby et al., 2008).

This respectful mentoring relationship is built upon "support, challenge, and vision" (Daloz, 1999, p. 206). Mutual trust is essential to developing a respectful and supportive relationship. Building trust is a fundamental component of the supporting function that helps affirm the validity of the mentee's experiences, enhances the mentee's self-worth, and boosts the mentee's desire and confidence to move forward. Without trust, the mentee will likely experience difficulty accepting the mentor's guidance and advice. On the other hand, too much support may inhibit growth and undermine the mentee's desire to grow (Daloz, 1999). Figure 2.2 shows the relationship between challenge and support and their effects on the mentee as described by Daloz (1999).

Figure 2.2

Daloz's Challenge and Support Diagram



Note. Support and Challenge Diagram from Daloz (1999).

Mentors must build trust as they blend support with challenge when mutual growth is the goal. Mentors challenge mentees to help mentees see gaps in their knowledge or abilities.

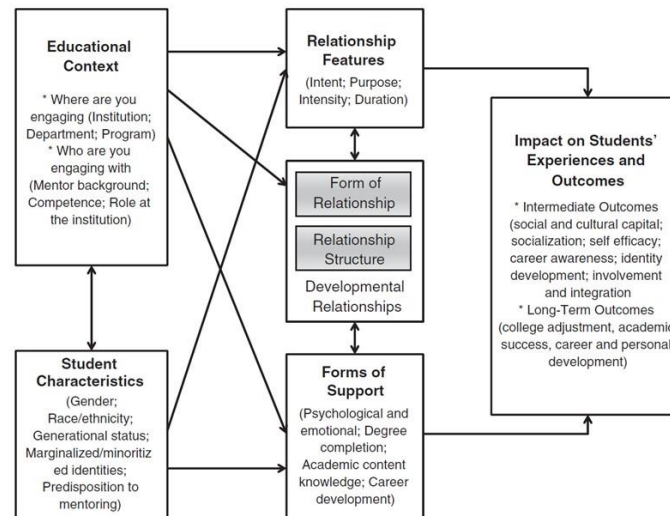
Observing these gaps produces cognitive dissonance or a difference in the mentee's perceptions and expectations. The mentee's desire to reconcile cognitive dissonance is the catalyst that initiates the mentee's growth. Like support, too much challenge may be detrimental to the mentor-mentee relationship, inhibit growth, and cause mentees to lose confidence in their abilities to overcome the gap (Daloz, 1999).

Crisp's Mentoring Framework

Crisp's (2017) mentoring framework is a model that describes the connections between educational context, student characteristics, relationship features, forms of support, and impact on students' experiences and outcomes. Figure 2.3 shows the framework.

Figure 2.3

Crisp's Mentoring Framework



Crisp's (2017) mentoring framework includes the relationships between educational context, student characteristics, relationship features, forms of support, and impact on students' experiences and outcomes. Crisp highlights the importance of the educational context to include the impact of the educational institution, department, and educational role of the mentor. Student characteristics account for the student's unique qualities, including gender, race, ethnicity, and openness to being mentored. Third, Crisp's framework shows how the educational context and student characteristics influence relationship features such as purpose, intensity, duration, and forms of support, including physiological, emotional, and content knowledge. Ultimately, Crisp's framework depicts how relationship features and forms of support impact students' experiences and outcomes. Student experiences and outcomes include both intermediate and long-term effects. Intermediate effects and outcomes may include social and cultural capital, socialization, self-efficacy, career awareness, and identity development. Long-term effects and outcomes may

include college adjustment, academic success, career advancement, and personal development (Crisp 2017).

Mentoring and Army Learning

The military culture and its focus on leadership have unique impacts on the military learning environment. This section focuses on how the Army defines learning, the significance of leadership doctrine on Army learners, and how the Army defines teaching, coaching, and mentoring. Because the Army is a hierarchical organization, this section will also provide information on how rank, power, and rules of deference may influence mentoring relationships in a military learning environment.

Army Learning

Military learning refers to the process of acquiring new knowledge or skill through instruction, study, or experience (Department of the Army, 2017). In the Army, learning occurs in the operational force, institutional schools, and through self-development. Learning is focused on developing the skills and knowledge needed to succeed in a military context and enhance Army readiness (Department of the Army, 2017).

The Army identifies four critical themes needed to enhance military learning. These themes include optimizing individual and collective learning, improving learning infrastructure, developing human capital, and leveraging learning sciences and technologies. The goal is to promote an outcome-based, learner-centric, and continually progressive learning environment required to build and lead cohesive teams in complex and chaotic environments (Department of the Army, 2017). Critical to achieving this goal is "support[ing] the growth of all learners throughout a career-long learning continuum..." (Department of the Army, 2017, p. 19).

Shea and Fishback (2012) also described how military learners attended several schools as part of their Professional Military Education (PME). PME normally requires military students to transition between operational and learning environments throughout their careers. Shea and Fishback (2012) explain how operational experiences may impact Soldiers as they adapt to the academic demands of Army learning environments.

The military learning process is guided by formal curricula designed to ensure students achieve approved course outcomes and can apply their learning to enhance Army readiness. Military learning also includes training in Army values, customs and traditions, ethics, and standards of conduct which are essential for service members to understand the Army culture (Department of the Army, 2017).

Army Learning Concept

The Army Learning Concept (ALC) is a strategy developed by the United States Army that focuses on improving the readiness and effectiveness of the Army by ensuring that soldiers, leaders, and units are continuously learning and adapting to meet the changing demands of the operational environment (Department of the Army, 2017). The ALC describes learning as a continuous process that should occur at all levels of the Army, from the individual soldier to units and organizations. It emphasizes the importance of providing soldiers with the knowledge, skills, and abilities they need to succeed in the current and future operational environment.

The ALC includes several key components: Learning at the speed of need is a component that emphasizes the need for soldiers, leaders, and units to learn quickly and adapt to changing operational environments. Learning in teams emphasizes the importance of learning as a team rather than as individuals to improve the effectiveness of units and organizations. Learning in complex environments focuses on the need for soldiers, leaders, and units to learn

and adapt to the complex and dynamic nature of the operational environment. Finally, the leader development component emphasizes the importance of developing leaders at all levels of the Army and provides guidance on developing the knowledge, skills, and abilities needed to lead in a complex and dynamic environment (Department of the Army, 2017).

The ALC also includes a focus on leveraging technology to support and enhance learning and identifying and implementing best practices in learning and development. It emphasizes the importance of creating a culture of continuous learning and development, which is critical for the readiness and effectiveness of the Army. The ALC is integrated into the training and education programs for soldiers and leaders. It is a framework for developing knowledge, skills, and abilities needed to succeed in the current and future operational environment (Department of the Army, 2017).

Army Leadership Doctrine

Army Leadership Doctrine refers to the set of principles and guidelines that guide the leadership and management of the United States Army. It is a comprehensive document that outlines the Army's approach to leadership and provides guidance for leaders at all levels of the organization. The key leadership manual is *Developing Leaders* (FM 6-22), published in 2022.

The Army Leadership Doctrine is based on the principle that effective leadership is essential for the readiness and effectiveness of the Army. It describes the Army's leadership philosophy and guides how leaders should conduct themselves, interact with subordinates, and lead by example (Department of the Army, 2022).

The doctrine describes several fundamental leadership principles, such as the importance of developing trust, fostering a positive command climate, and building a culture of professionalism. It also includes guidance on how leaders should develop and maintain the

readiness of their units, how they should manage their resources, and communicate effectively (Department of the Army, 2022).

The Army Leadership Doctrine is regularly updated to reflect the changing needs and demands of the Army. It is used as a reference guide for leaders at all levels of the organization and is integrated into the training and education programs for officers and non-commissioned officers. The doctrine provides a framework for the development of leadership skills. In addition, it helps to ensure that leaders are prepared to meet the challenges of leading in a complex and dynamic environment (Department of the Army, 2022).

Mentoring Military Learners

Army leadership doctrine includes mentoring. Mentoring military learners involves providing guidance, feedback, and support to help learners achieve their goals and develop the skills and knowledge needed to succeed academically and in their military careers. The mentor, in this case, is often an experienced service member or a senior officer with the knowledge and experience to guide and support the mentee (Department of the Army, 2022).

The mentor should help the mentee identify their strengths and weaknesses, set their own goals, and develop strategies for achieving them. The mentor should also provide feedback, guidance, and support to help the mentee improve their performance and achieve their goals (Department of the Army, 2022).

The mentor needs to understand the unique challenges and opportunities that military learners face and to provide guidance and support tailored to the mentee's specific needs and goals. Additionally, mentors should be aware of the stresses and challenges that military learners face during deployment and should be able to provide guidance and support to help them cope with these challenges (Department of the Army, 2022).

Military faculty assigned as CGSC faculty are likely to have previous professional mentoring relationships focused on career advancement; however, the same is not likely for academic mentoring. Based on their academic background and previous experiences in PME, the military faculty serving as new MMAS Chairs are likely academically mentoring a graduate student for the first time.

Coaching and Mentoring in Army Education

As the participants in this study are students and faculty at an Army school, it is essential to review the literature on coaching and mentoring in the Army. Army leadership doctrine identifies teaching, coaching, and mentoring as important aspects of Army education. Each plays a unique role in helping service members to develop the skills and knowledge needed to succeed in their military careers (Department of the Army, 2022).

Unlike the literature that identifies coaching as an important mentoring element, Army doctrine differentiates between the two. FM 6-22 defines coaching as "a development technique used for a skill, task, or specific behaviors" (Department of the Army, 2022, p. 2-21). The doctrine describes coaching as an important technique leaders use to get individuals and teams to the "next level" (p. 2-21). The manual describes how coaching helps individuals and teams understand their current level of performance and helps their performance move to a higher level. According to Army doctrine, coaches build rapport, gather, and analyze information, address gaps, set goals, plan development, and set conditions to promote action and accountability. FM 6-22 also highlights the importance of coaches establishing rapport, providing feedback, modeling leadership, and balancing support and challenge depending on the situation and performance level of those being coached (Department of the Army, 2022).

FM 6-22 defines mentoring as a "voluntary developmental relationship" (p. 2-23) best conducted outside the chain of command. It specifically "differentiates between the mentor and leader's roles to develop, counsel, teach, and instruct subordinates" (p.2-23). Leaders develop, counsel, teach, and instruct subordinates; however, to avoid the potential perceptions of favoritism in a hierarchical organization, leaders should look to mentor soldiers outside their chain of command. FM 6-22 states, "supervisors should refrain from appointing mentors or formally matching individuals with mentors" (p. 2-23). The manual recommends informal and voluntary mentoring as the most effective mentoring relationship (Department of the Army, 2022). Table 2.1 shows mentor responsibilities as outlined in FM 6-22.

Table 2.1. *Mentoring Responsibilities*

<i>Role</i>	<i>Responsibility</i>
<i>Provides</i>	Encouragement and motivation. Candid feedback about perceived strengths and developmental needs. Advice on dealing with obstacles. Guidance on setting goals and periodically reviews progress.
<i>Shares</i>	Experiences that contributed to personal success. Understanding the Army, its mission, and formal and informal operating processes.
<i>Encourages</i>	Appropriate training and developmental opportunities. Sense of self-awareness, self-confidence, and adaptability. Efficient and productive performance.
<i>Serves</i>	As a confidant, counselor, guide, and advisor. As an advisor for career development ideas or opportunities. As a resource for enhancing personal and professional attributes.

Note: Table from FM 6-22, Leader Development (2022)

Rank, Power, and Rules of Deference

Military education is structured around hierarchy, rank, power, and rules of deference. As a result, most Army instructors outrank and have more experience than their students. Additionally, the hierarchical culture of the military emphasizes the importance of rank and the chain of command. Both rank and respect for the military culture help to ensure subordinates follow orders, maintain discipline, and respect the chain of command.

The power in military education is centered around the instructor, who is responsible for maintaining discipline within the learning environment, facilitating learning, assessing performance, and imparting knowledge and training to their students. The culture of the Army reinforces the rules of deference dictating that students must show respect to their instructors and the academic chain of command. The culture includes demonstrating appropriate customs and courtesies, showing respect, following instructions, completing assignments, and maintaining a high level of professionalism.

The customs, courtesies, and rules of deference may transcend beyond the military learning environment. It is not uncommon for military students to demonstrate the same level of respect and acknowledge the academic power of civilian faculty in non-military learning environments. For example, customs, courtesies, and rules of deference may be observed when military students call their civilian instructors "sir" or "ma'am," even when asked to be less formal. Some military students may also defer to the power and knowledge of their civilian instructor and become uncomfortable questioning ideas, expressing differing opinions, or developing problem-solving techniques that are not aligned with their instruction.

Authorities and Mentoring

There are two types of authorities in mentoring. First, title or formal authority refers to an individual's formal power or position as a manager, supervisor, teacher, professor, or leader. It is based on the individual's role or title within an organization, and power is attained through the individual's position within the organization. For example, a manager has title authority over their team and can make decisions and give direction within the scope of their position (Department of Army, 2022).

The other form of authority is legitimate or informal authority. This authority comes from an individual's power or influence based on the respect of those around them. This authority is based on the individual's leadership qualities, interpersonal skills, and behaviors. A leader with legitimate authority is respected and trusted by their team regardless of their position within the organization (Department of the Army, 2022).

Formal authority is almost always present within the typically hierarchical academic environments where the faculty mentor has positional authority over the student mentee. This power imbalance can interfere with the relationship as the mentee defers to the guidance and experience of their mentor. A relationship formed with an overreliance on formal authority and the corresponding mentee's adherence to rules of deference poses significant challenges to balancing mentor and mentee expectations. Janssen's study (2021) showed that many mentees expected their mentors to take the lead because of the mentor's formal position and research experience. Deference can impede the mentor's ability to help the mentee take ownership of their research. Additionally, mentors who develop overly authoritarian power dynamics can negatively impact their mentees' well-being and eventually make their students withdraw from the program (Pollard, 2021).

The Impact of Mentoring on Learning

The same is not valid in education. For example, Cohen (1995b) proposed a six-function model that included the following: relationship (to trust), information (to advice), facilitative (to provide alternatives), confrontive (to challenge), model (to motivate), and vision (to enable initiative). While similar to the functions identified in the professional community, Cohen's functions were not validated during a 2000 study investigating mentoring college students

(Lightfoot, 2000) and did not accurately represent the findings of a 2003 study of mentoring medical students (Rose, 2003).

Kumi-Yeboah's (2014) investigation of learning in graduate students revealed that over 85% of the students studied experienced changes in their skills, knowledge, or self-confidence while learning new perspectives and becoming more accepting of diverse viewpoints. Furthermore, of those students who experienced the above changes in academic settings, 90% said they did so with the help of a mentor. However, while Kumi-Yeboah's study investigates many factors that affect learning in academic settings, its focus on mentoring is limited to a brief qualitative discussion of the importance of faculty providing psychological and emotional support to help graduate students (Kumi-Yeboah, 2014).

Anderson and Shannon (1998) identified a function-based model for mentoring in education. Their model contained five critical mentoring functions: teaching, sponsoring, encouraging, counseling, and befriending. Subsequent research by Rose (2003), while developing the Ideal Mentor Scale (IMS), failed to confirm Anderson and Shannon's five functions.

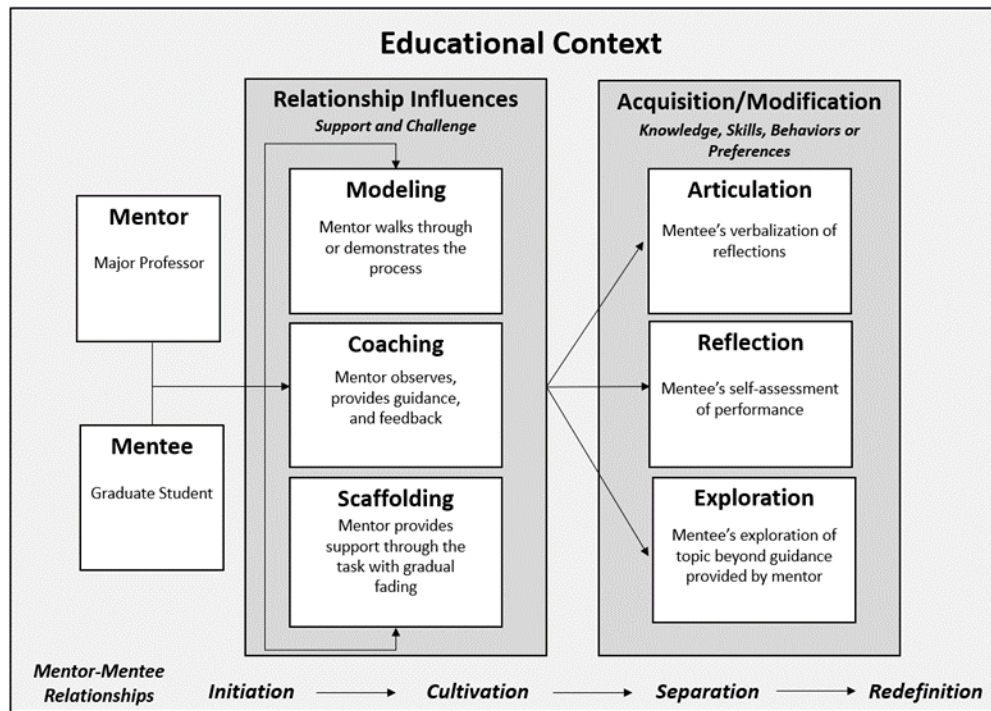
Rose (2003) built upon the research conducted by Cohen (1995b) and Anderson and Shannon (1998) to develop an instrument to assist doctoral students when seeking a mentor in education. Rose's study on identifying the ideal qualities Ph.D. students want in a mentor identified integrity, guidance, and relationship as the three critical dimensions. While Rose's IMS used three primary qualities, Crisp's (2009) research indicated that the IMS might not capture all the qualities necessary to study mentoring. Crisp recommended a new four-factor framework that included mentor support in the following areas: psychological, emotional, degree and career, and academic subject knowledge support.

Conceptual Framework

Figure 2.4 depicts the conceptual framework developed for this study integrating key elements of mentoring theory (Cohen, 1995a; Crist, 2017; Daloz, 1999; Kram, 1983, 1988) and Cognitive Apprenticeship Theory (CAT) as described by Collins et al. (1991). The conceptual framework integrates the key components from the literature review and provides a structure to enhance understanding of mentoring relationships' influences on graduate student learning.

Figure 2.4

Conceptual Framework



The framework includes Kram's (1983, 1988) emphasis on the dynamic and evolving nature of mentoring relationships and highlights the importance of the mentor's role in facilitating the mentee's development. The framework also incorporates Kram's ideas about the role of the mentor during the initiation, cultivation, separation, and redefinition phases (Kram, 1983, 1988).

The conceptual framework adds the elements of the Cognitive Apprenticeship Theory (CAT) described by Collins et al. (1991). It aligns the components of CAT with their corresponding relationship influences (support and challenge) or the outcomes observed through acquiring or modifying mentees' knowledge, skills, behaviors, or preferences. CAT also informs the conceptual framework by aligning modeling, coaching, and scaffolding as ways mentors provide support and challenge to their mentees. Finally, it identifies articulation, reflection, and exploration as ways mentees may indicate their acquisition or modification of knowledge, skills, behaviors, or preferences.

The conceptual framework also includes important elements from Cohen's Mentor Functions (Cohen, 1995a), Daloz's (1999) ideas on mentor support and challenge, and Crisp's (2017) Mentoring Framework and its appreciation for the educational context, relationship features, and forms of support. Each contributes to an enhanced understanding of the influences of mentoring relationships in academic environments.

Cohen's first mentor function, Relationship Emphasis, is incorporated into the conceptual framework by appreciating mentor-mentee relationships and the importance of trust. The framework also highlights the importance of challenge and support, as outlined by Cohen in his Confrontive Focus function. Similarly, the framework accounts for the Mentor Model function and the importance of mentors modeling decision-making and overcoming difficulties (Cohen, 1995a).

Daloz's (1999) insights on support and challenge and respectful mentoring relationships are also incorporated into the conceptual framework for this study. The framework aligns key components of mentoring (modeling, coaching, and scaffolding) within the context of

relationship influences and how mentors may balance support and challenge to help their mentees grow.

Finally, key elements of Crisp's Mentoring Framework (Crisp, 2017) are added to the conceptual framework to highlight the importance of the educational context, forms of support, relationship features, and impact on students' expectations and outcomes. The framework focuses on the mentor-mentee relationships within the educational context of the MMAS program and the relationship features and forms of support. Additionally, the impact of mentoring on students' expectations and outcomes is incorporated into the acquisition or modification of mentees' knowledge, skills, abilities, or preferences as influenced by their mentor-mentee relationships.

Chapter Summary

This chapter provides a review of the literature on mentoring and mentoring relationships. The literature highlights psychological, emotional, degree, career, and academic subject knowledge support as common factors identified while investigating mentoring relationships (Cohen, 1995a, 1995b; Chen et al., 2016; Crisp, 2009; Kram, 1985; Collins et al., 1988; Rose, 2003). The literature also describes the many categories frequently identified when examining mentoring. Depending on the research context, categories include trust, counseling, relationships, knowledge, protection, support, and challenge (Cohen, 1995a, 1995b, Crisp, 2009; 2010; Ragins & Cotton, 1990; Rose, 2003). Specifically related to mentoring relationships, the research identifies psychological and emotional, degree, career, and academic subject knowledge support as factors identified while investigating mentoring (Cohen, 1995a, 1995b; Chen et al., 2016; Crisp, 2009, 2010; Rose, 2003). Finally, this chapter presents a conceptual framework based on accepted mentoring theories and frameworks. The framework highlights potential relationship influences, including mentor support and challenge. It provides a lens to view how

mentor-mentee relationships may influence the acquisition or modification of graduate students' knowledge, skills, behaviors, or preferences.

Chapter 3 - Methodology

Introduction

This exploratory case study investigated how mentoring relationships might influence graduate student learning during the Master of Military Arts and Sciences (MMAS) graduate-degree program at the CGSC. The case-study approach investigated a small group of students and faculty using multiple sources of information in a bounded system – an accelerated graduate-degree program at CGSC. This chapter explains the case-study approach to include research questions, population, sample selection, data collection, and analysis to explore mentoring during an accelerated, graduate-degree program.

Research Questions

This multi-case study includes one primary and two subordinate research questions.

Primary Research Question: How do graduate students perceive influences on their learning experience within the mentor-mentee relationship?

a. Research Subquestion 1: How do graduate students perceive the influences of challenge and support within the mentor-mentee relationship?

b. Research Subquestion 2: How do graduate students perceive the relationship with the mentors influencing the acquisition or modification of existing knowledge, skills, behaviors, or preferences?

COVID-19

Unanticipated during the design of this study were the impacts of the COVID-19 Pandemic. The Center for Disease Control (CDC) reported that the first Corona virus case appeared in Wuhan, China, in December 2019 (Center for Disease Control and Prevention, 2022). Over the next 24 months, the COVID-19 virus spread to nearly every country globally,

infecting more than four hundred million and killing nearly 6 million people worldwide (Johns Hopkins University of Medicine, 2022).

Due to the nature of the virus and the lack of medications initially available to treat those infected, the United States and other nations worldwide imposed travel and social-distancing restrictions intended to help prevent the spread of COVID-19 (Johns Hopkins University of Medicine, 2022). Similarly, in response to the continued spread of the virus and guidance from the CDC and the World Health Organization, the Department of Defense (DoD) imposed travel and social distancing restrictions on all DoD personnel beginning in March 2020 (Department of Defense, 2020).

The effects of COVID-19, including travel restrictions, social distancing, and other limitations, presented unique challenges to this study. Like many academic institutions within the United States, the CGSC rapidly transitioned to social distancing and remote teaching modalities to reduce the spread of COVID-19 among its students, faculty, and academic staff.

Case Study Research

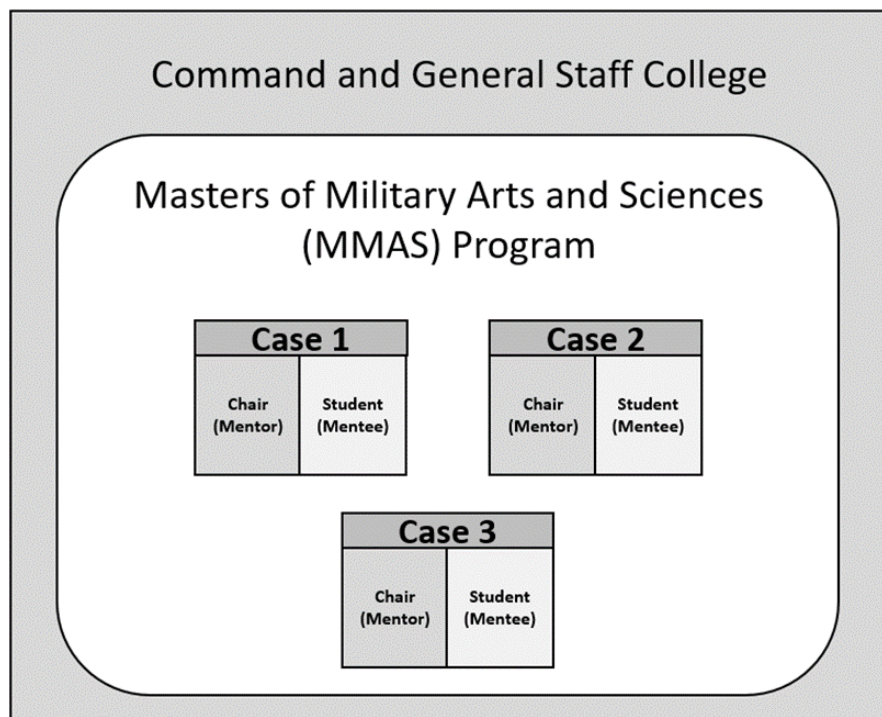
The study used a qualitative case-study methodology to explore how mentoring relationships may influence learning. The case-study methodology was best suited for in-depth inquiry that explores a specific program or event (2013; Creswell, 2014; Stake, 1995; Yin, 2018). Specifically, Yin (2018) identifies behavioral research focused on a recent event where the researcher has little control as best suited for a case-study approach. Yin identified two critical elements when defining a case study. The first is that the researcher will investigate "contemporary phenomena" in-depth and within its real-world context" (Yin, 2018). The second element is that "the boundaries between the phenomenon and context may not be clearly evident"

(Yin, 2018). The investigation of CGSC students enrolled in the MMAS graduate degree program met both criteria.

This study used a multi-case approach to investigate mentoring relationships and learning in a real-world academic context. Yin (2018) identified defining and bounding the case as critical to the overall framework for multi-case design (Yin, 2018). Therefore, this research focused on the case as defined by the interactions between the MMAS student (Mentee) and their MMAS Chair (Mentor). The multi-case design initially included four cases; however, one student voluntarily disenrolled from the program before the first interview. The study continued using three cases, each composed of a mentor-mentee dyad. Figure 3.1 depicts the multiple-case approach used in this study.

Figure 3.1

Multi-Case Design Diagram

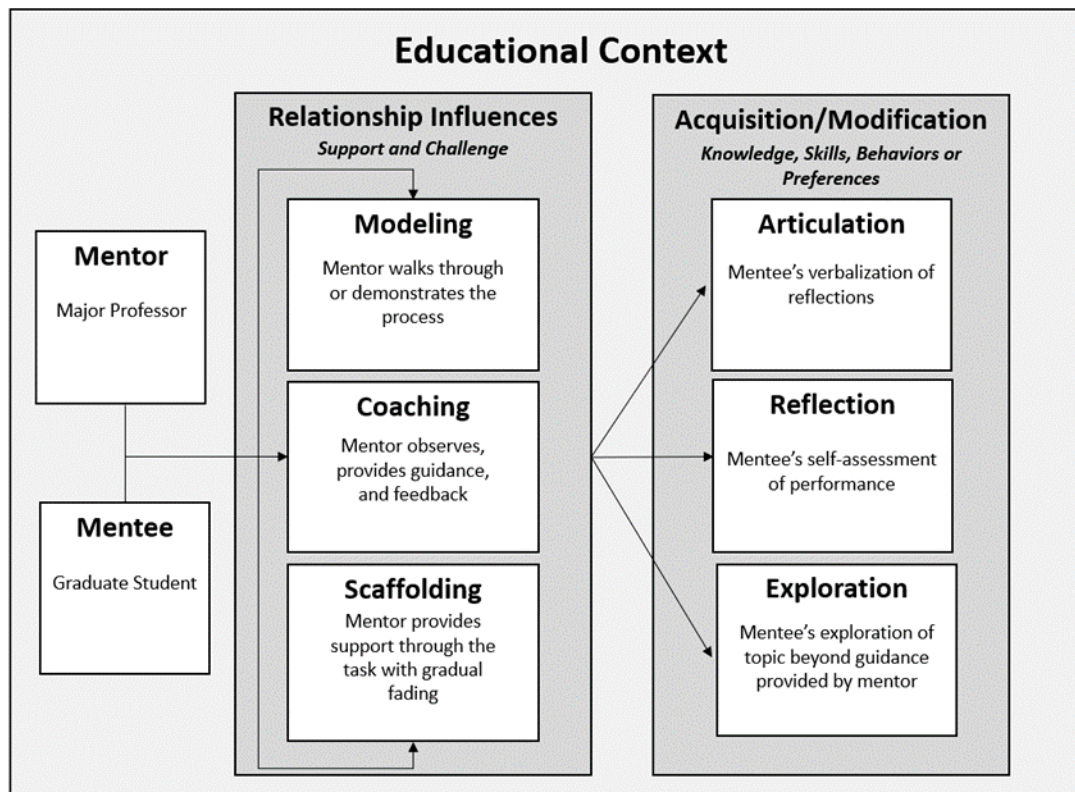


The conceptual framework shown in Figure 3-2 accounts for the learning context and includes key components of Kram's theory (Kram, 1988), CAT (Collins et al., 1999), and the

significance of mentor support and challenge as outlined in the literature, including psychological, emotional, subject knowledge, and degree support (Crisp et al., 2017). This research investigated the influence of mentoring relationships as observed by the acquisition or modification of knowledge, skills, behaviors, and preferences. Specifically, this case study seeks to enhance understanding of how mentor-mentee relationships may affect students' learning experiences during the MMAS program.

Figure 3.2.

Conceptual Framework



Population

The population for this study was graduate students and their faculty participating in the MMAS degree while attending the Command and General Staff Officers Course (CGSOC) at Fort Leavenworth, KS. The number of students attending resident CGSOC at Fort Leavenworth

is usually about 1,000 graduate-level students per academic year. Students attend the CGSOC fully funded while earning their salaries and benefits commensurate with their rank and position within their service or department (Registrar, Command and General Staff College, 2017).

Class 2021 was composed of 1088 students, including 906 U.S. Army officers, 130 officers from other U.S. services (Airforce, Navy, Marine Corps, and Cost Guard), 45 International Military Students, and seven other governmental agencies. The average age of the students was 36, with the majority of the U.S. officers in their tenth year of military service. Not including the international students, the class included 85 (8%) women and 933 (92%) men (T. W. Bruner, personal communication, October 17, 2022). Table 3.1 contains the service data for CGSC Class of 2021 (T. W. Bruner, personal communication, October 17, 2022).

Table 3.1

CGSC Class of 2021 Student Data by Service

Service	Total	Percentage
Air Force	78	7.2%
Army	828	76.1%
Coast Guard	1	0.1%
Interagency Civilians	7	0.6%
International Military Officers	45	4.1%
Marines	27	2.5%
National Guard	40	3.7%
Navy	24	2.2%
Reserve	38	3.5%
Total	1088	100.0%

All students attending CGSOC must have, as a minimum, a bachelor's degree, and many simultaneously pursue graduate degrees from other civilian universities within the local area. Table 3-2 contains the educational data for students attending CGSOC for 2021 (T. W. Bruner, personal communication, October 17, 2022).

Table 3.2*CGSC Class of 2021 Education Levels*

Degree	Total	Percentage of Students
Bachelor	1188	100.0%
Master	427	35.9%
Doctor	7	0.6%

CGSOC aims to prepare mid-career officers and civilians to lead leaders at the organizational level. CGSOC comprises five teaching departments that provide instruction to over 1,000 resident students attending the CGSOC annually. Students may voluntarily enroll in the MMAS program while attending the ten-month CGOSC. While students are encouraged to earn a master's degree in the MMAS program or other programs with other universities while attending CGSC, earning a master's degree is not a CGSC graduation requirement. In the last five years (2013-2018), the average enrollment in the MMAS program was approximately 200 students, with an average graduation rate of approximately 75% (R. F. Baumann, personal communication, November 26, 2019).

Unfortunately, the impacts of COVID-19 and other academic opportunities may have reduced the number of students who participated in the MMAS program during Class 2021. The effects of the shift to online classes, virtual advising, and remote committee meetings in response to COVID-19 may have affected MMAS enrollment. Additionally, CGSOC implemented another graduate degree program that did not require a thesis. The overall effects of these changes may have contributed to only 58 students participating in the MMAS program in Class 2021, with 57 students successfully earning their master's degrees. (D.S. Spurlin, personal communication, October 26, 2022).

Sample

The selection criteria used to choose participants for this study included U.S. students participating in the MMAS program with Class 2021 who volunteered to participate in the research and their corresponding MMAS Chairs. To identify potential study participants, the researcher provided MMAS students and faculty with an overview of the purpose of the study and requested volunteers to participate in the research. Due to COVID-19 restrictions, the researcher received permission from the Director of the MMAS program to conduct three virtual overviews for students enrolled in the Introduction to Research Class, A221. Overviews were conducted over three MMAS classes using Blackboard in October and November 2020. MMAS students voluntarily contacted the researcher after the overview, requesting more information about the study.

The researcher used purposive sampling (Creswell, 2013, 2014) to identify faculty who were also Committee Chairs for the student volunteers. The researcher individually contacted each Committee Chair to describe the study and request their voluntary participation during the academic year 2020-2021. All of the faculty contacted agreed to participate in the study. As a result of the presentations to the students and the follow-on, one-on-one dialogue with their corresponding MMAS Committee Chairs, the researcher identified four student-faculty dyads for the study, each representing a case in the multi-case design (Creswell, 2014; Stake, 1995; Yin, 2018). Unexpectedly, one MMAS student volunteer elected to no longer participate in the MMAS program. The timing of the participant's loss, the impacts of COVID, the low number of MMAS students in the Class of 2021, and the small number of student volunteers made obtaining a fourth dyad unfeasible. Therefore, the study continued with three cases.

The researcher used temporal and spatial boundaries to define the case study. First, the cases only include CGSC mentors and mentees participating in the MMAS program during the 2020-2021 academic year. This ensured that the case study was sufficiently bounded by time and activity described by Creswell (2013).

Second, this study's time or temporal boundary began when mentees entered the MMAS program and ended when MMAS students graduated, withdrew, or were removed from the MMAS program. This temporal boundary best supported achieving a deeper understanding of the mentor-mentee activities that may have influenced learning during the MMAS program.

The researcher also used a well-defined spatial boundary to define the case. This was easily accomplished as the MMAS program is only available through the CGSC. Therefore, the spatial boundary for this study will be enrollment in the CGSC program. Unanticipated in the initial design of this study was the use of virtual learning technologies to support the MMAS program. Therefore, the spatial boundaries of this research were expanded to include virtual participation in the MMAS program due to COVID-19 restrictions.

Research Design

The following steps outline the actions of the researcher and design of this exploratory case study:

1. Submitted Kansas State University IRB application for approval.
2. Submitted the Command and General Staff College (CGSC) IRB application for approval.
3. Requested the Director, MMAS Graduate Degree Program, CGSC, grant permission for the researcher to talk with students participating in the MMAS program.

4. With CGSC's permission, provided MMAS students with an overview of the research and requested student volunteers to contact the researcher via email.
5. After students volunteered, the researcher contacted the appropriate MMAS Chairs (those that align with the student volunteers), reviewed the information about the research, time commitment, and requested faculty volunteers.
6. Selected faculty-student pairs who both agreed to participate in the study.
7. Contacted selected participants individually (mentor separate from mentee) to review the research process and discuss informed consent.
8. Conducted all interviews using password-protected Zoom.
9. Met (Zoom) with participants individually to obtain informed consent (see Appendix A).
10. Requested participants complete reflective journals before each interview (see Appendix B).
11. Conducted initial interview via Zoom only once the interviewee accepted consent; digitally recorded responses during interviews (see Appendices C, D, and E for interview protocol and questions). The audio recordings were retained for transcription, and the video files were deleted immediately. The audio and Zoom transcription were stored on a password-protected laptop and external hard drive. Printed copies were stored in a secure fire-proof, locked filing cabinet.
12. Transcribed the digital recordings.
13. Collected volunteers' journal entries.
14. Provided interview transcriptions to interviewees for member checking and made corrections, as necessary.

15. Conducted qualitative analysis of journaling, interview data, and field notes.
16. All volunteers repeated the interview, transcription, and member-checking process following each interview.
17. Review the acknowledgment statements on volunteers' MMAS theses.

Human Rights Protection

This researcher received approval to conduct this human-subject research from the Command and General Staff College and the Committee for Research Involving Human Subjects (IRB) at Kansas State University. Specific importance was placed on protecting the anonymity of the participants by collecting only limited personally identifiable information. All participants in the study were volunteers who signed an informed consent form before participation (see Appendix A). This researcher used alphanumerical coding to identify participants in this study and maintain a record of mentor-mentee pairs. The alpha-numeric codes ensured confidentiality. Maintaining and safeguarding the confidentiality of all information collected during this research was critically important to this researcher.

Pilot Study

A pilot study provides the opportunity to use a formative approach to the design of data collection and analysis procedures before beginning the study (Stake, 1995; Yin, 2018). This researcher used a pilot study to gain insights into the case design, question formulation, and data collection. The researcher selected an experienced MMAS faculty volunteer with previous experience as an MMAS Chair to review the materials and participate in the interview. The intent of using an MMAS faculty volunteer was to capture the mentor's point of view and feedback on the interview methodology and question format.

The researcher first provided an overview of the study to review the informed consent, the case study's conceptual framework, the research questions, and the data collection plan. Following the overview, the researcher and volunteer reviewed the draft journal questions for understanding and conducted the pilot interview using the intended interview protocol. The researcher took notes during the interview to record the volunteer's answers to the questions and capture adjustments needed to enhance the effectiveness of the interview.

The second pilot interview was conducted with an MMAS graduate via telephone to capture the mentee's point of view and feedback on the interview methodology and question format. The researcher again took notes during the interview to record the volunteer's answers to the questions and capture adjustments needed to enhance the effectiveness of the interview. The results of both pilot interviews were consistent. The faculty volunteer recommended one change to an interview question to enhance clarity. Based on the pilot faculty interview, the researcher changed the perfect MMAS student to the ideal MMAS student in the set of initial interview questions. The former student volunteer also agreed "ideal" mentor was more understandable than the "perfect" mentor. Otherwise, the interview questions remained unchanged.

After each pilot interview, the discussion with the volunteers identified improvements needed to enhance the researcher's interviewing techniques. Both volunteers stated that the interviews should be more conversational and not overly structured to avoid restricting the discussion. Feedback from both volunteers also recommended that the researcher provide more time for the participants to reflect and formulate their responses during the interview process.

Most importantly, based on a review of the pilot interview notes, the researcher identified the need to refine the interview questions further to explore the mentor-mentee relationship during the MMAS program. As a result, the lessons learned and recommended improvements

obtained during the pilot interviews were fully incorporated into this study's revised journal and semi-structured interview questions.

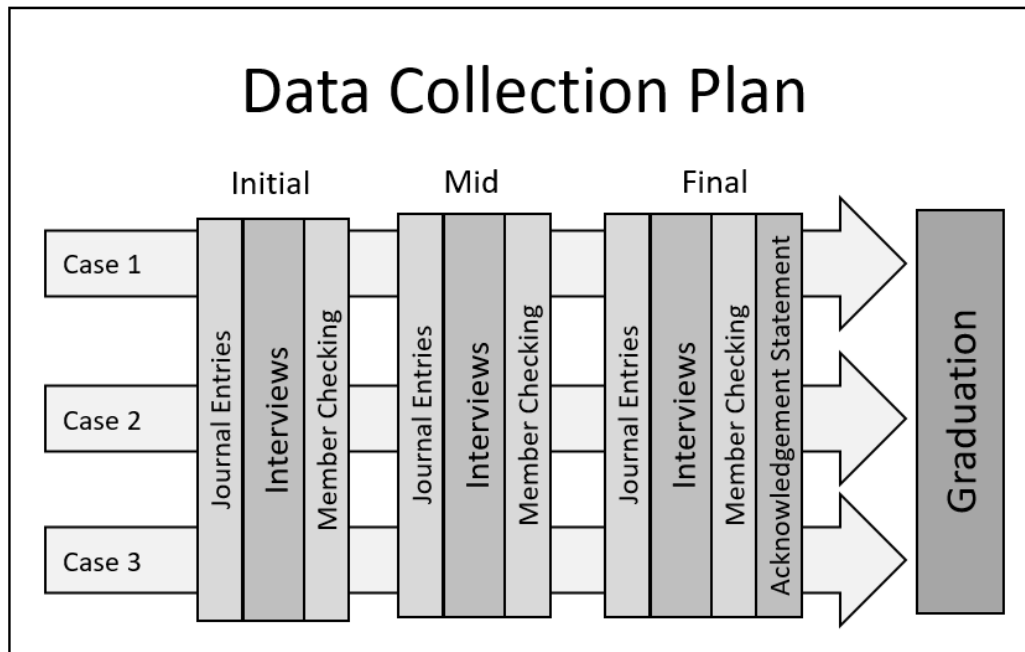
Data Collection Methods

Data collection included reflective journals, semi-structured interviews, acknowledgment statements of completed MMAS theses, and field notes. While Creswell (2013, 2014), Stake (1995), and Yin (2018) identify the importance of direct observation, the presence of an observer during meetings between the mentor and mentee may distort the personal nature of the mentor-mentee relationship and were not used in this study. The selection of data collection techniques was intended to provide multiple sources of evidence supporting data-source triangulation of potential findings (Creswell, 2013, 2014; Stake, 1995; Yin, 2018).

The collection plan corresponded to critical events in the MMAS program to understand mentor-mentee relationships within the educational context and investigate how they may have evolved during the MMAS program. Figure 3-3 shows the collection plan aligned with the MMAS program.

Figure 3.3

Data Collection Plan



Reflective Journals

This study included mentors and mentees submitting a reflective journal to capture their thoughts and ideas during the study. The researcher reviewed the journal entries before conducting the interviews. The purpose of collecting journal data was to capture participants' reflections on the influence of their mentor-mentee relationships on learning (Creswell, 2014). Participants voluntarily submitted their journal entries via email before the interview to the researcher.

MMAS Chairs and their students responded to four journal questions describing their perspectives on mentor-mentee relationships (see Appendix B). The first two journal questions explore the mentor-mentee relationship, and the types of support mentors may provide to their students. Specifically, the first two journal questions explore the prevalence of support and challenge within the mentor-mentee relationship. The third and fourth journal questions explore

how MMAS students might acquire or modify existing knowledge, skills, behaviors, or preferences.

Semi-Structured Interviews

This exploratory multi-case study used three semi-structured interviews to understand better how mentor-mentee relationships may influence graduate-student learning. Semi-structured interviews effectively capture the "how and why" of events during a qualitative, exploratory case study (Creswell, 2014; Stake, 1995, Yin, 2018). The researcher used an approved protocol (see Appendix C) while conducting all semi-structured interviews.

The semi-structured interviews explored how mentor-mentee relationships might influence learning. Again, building upon the reflective-journal entries, the interviews investigated how students may have experienced changes to their knowledge, skills, behaviors, or preferences that their mentor-mentee relationships may influence.

The sequence and timing of the interviews were designed to capture participants' observations, feelings, and insights at the start of the study, at the midpoint, and at the end of the MMAS program. The first interviews began as soon as practicable following approval of the research, selection of volunteers, and receipt of their informed consent. The first interviews occurred in November 2020. The second set of interviews occurred in March and April of 2021, approximately at the study's midpoint. The third and final interview took place in June and July 2021 upon the student's completion of the MMAS program but before the CGSC graduation.

It is important to note that the volunteers used in Case 3 joined the study after the first round of interviews. Therefore, to align all three cases and capture Case 3 responses to all questions, initial and mid-interview questions were asked during the first meeting with Case 3 participants.

The semi-structured interviews were conducted via Zoom with only the participant and the researcher present. All participants were assigned an alpha-numeric code to protect their anonymity. The researcher used a semi-structured approach to investigate mentor-mentee relationships and their influence on knowledge, skills, behaviors, or preferences (see Appendices D & E). The researcher digitally recorded all interviews on Zoom while taking field notes to capture the researcher's observations and feelings during the interview. Upon completing each interview, the researcher transcribed the digital recordings and returned a copy of the transcribed data to the participants for member checking. Upon return, the researcher updated the transcribed data to ensure transcripts accurately reflected the results of the interviews and corrections made while member-checking.

MMAS Theses

Documents frequently provide insights into activities the researcher could not observe (Creswell, 2013, 2014; Stake, 1995; Yin, 2018). Therefore, this study included a review of participating students' MMAS theses acknowledgment and dedication statements. Specifically, this exploratory case study reviewed the student's acknowledgment and dedication statements for qualitative data that may provide information on the nature of the MMAS students' relationships with their MMAS chairs as well as data that may indicate how students acquired or modified existing knowledge, skills, or behaviors during the MMAS program. The researcher collected a copy of the MMAS thesis from the MMAS chair when the MMAS chair and committee approved the thesis for submission to CGSC.

Field Notes

Field notes provide a record of the researcher's observations, thoughts, insights, and analysis during a case study (Creswell, 2009, 2013; Stake, 1995; Yin, 2018). Well-constructed

field notes may also help record data needed to develop a more complete and rich description of each case (Bhattacharya, 2017). During this study, the researcher captured field notes intended to record observations, thoughts, insights, and analysis while reviewing journal entries, conducting semi-structured interviews, and reviewing student documents. Data from the researcher's field notes were added to the data obtained from journal entries, semi-structured interviews, and document reviews to enhance the study's trustworthiness.

Data Organization and Management

Ensuring the accuracy of the data collected is a critical requirement while conducting qualitative research. The use of multiple data collection and review techniques enhance the overall accuracy of the data (Creswell, 2009, 2013; Stake, 1995; Yin, 2018). This researcher used multiple techniques to ensure that the qualitative data collected accurately represented the information provided by the participants. Interviews were digitally recorded with the permission of the participants. The interviews were transcribed from the recorded audio to provide a written record of the information. The recorded audio was compared to the transcripts for accuracy. Member checking was used to ensure all interviewees reviewed their respective transcripts for accuracy. While human error is always possible, this process used multiple techniques to ensure the data collected and recorded were accurate depictions of the information provided by the participants during this study.

In this research, the data elements included mentor interviews and journal entries, mentee interviews and journal entries, the MMAS thesis acknowledgments, and the researcher's field notes (Table 3-3). These techniques provided over fifty data points for three mentors and three mentees participating in this study. All research records, including digital and paper files, will be stored securely for at least five years from the completion of this study

Table 3.3.

Data Sources

Data	Frequency
Mentor Interviews	8
Mentee Interviews	8
Mentor Journals	8
Mentee Journals	8
MMAS Theses	3
Field Notes	16
Total	51

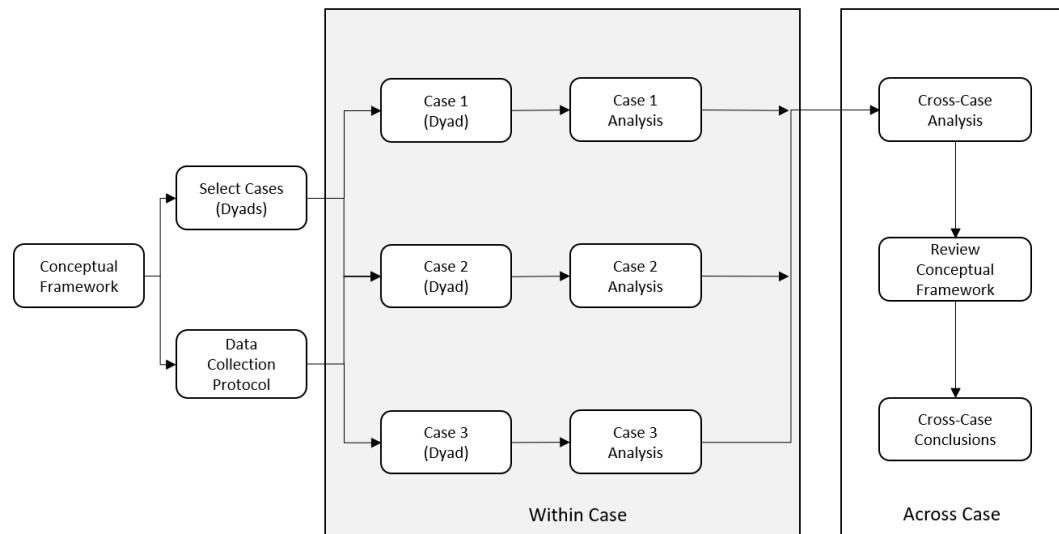
The researcher used computer-assisted qualitative data analysis software (NVIVO) to help code and categorize the data collected from more than fifty artifacts (interviews, reflective-journal entries, and documents). NVIVO enabled this researcher to iteratively recode, regroup, reorder, and reevaluate the data. In addition, NVIVO enabled the researcher to reorganize and realign the data to provide opportunities for additional or contrasting themes to emerge, as Yin (2018) recommended.

Data Analysis

This exploratory multi-case study used an iterative, inductive, qualitative approach to collect data, develop codes, identify themes, and compare results across multiple cases (Bhattacharya, 2017; Creswell, 2013, 2014; Merriam, 1998; Stake, 1995; Yin, 2018). The researcher used a cross-case analysis approach described by Yin (2018) and shown in Figure 3-4.

Figure 3.4

Multiple-Case Study Diagram



Note. Image adapted from Multi-Case Study Procedure (Yin, 2018, p.58).

The analysis included using a research journal to capture the researcher's reasoning for defining initial codes, insights on subsequent recoding, decisions on emerging themes, and linkages to the original research design (Yin, 2018). In addition, the researcher used a journal to record thoughts, decisions, and interpretations of results (Bhattacharya, 2017).

Coding

Yin (2018) identifies searching data for patterns and insights as a critical first coding step. The researcher ensured that coding accounted for individual case descriptions and context (Bhattacharya, 2017; Creswell, 2013, 2014; Merriam, 1998; Stake, 1995). Coding for this research included an inductive method first to identify instances and emerging patterns within the data that generally correspond to the educational context, mentor-mentee relationship factors, and possible indicators for changes in knowledge, skills, behaviors, and preferences outlined in the conceptual framework. Table 3-4 shows the descriptions for the initial codes.

Table 3.4.

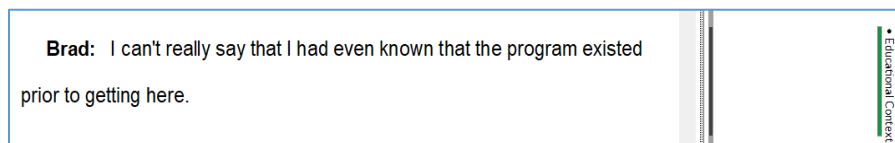
Code Descriptions

Conceptual Framework	Code	Description
Educational Context	Ed Context	Data related to the educational setting and its impacts on mentors, mentees, or their relationships.
Relationship Features	Support	Data describing how mentors provided support to their mentees or how mentees perceived support they were receiving from their mentors.
	Challenge	Data describing how mentors challenged their mentees or how mentees perceived being challenged by their mentors.
Acquisition or Modification	Knowledge	Data describing how mentees acquired or modified their knowledge as a result of working with their mentors.
	Skills	Data describing how mentees acquired or modified their skills as a result of working with their mentors.
	Behaviors	Data describing how mentees acquired or modified their behaviors as a result of working with their mentors.
	Preferences	Data describing how mentees acquired or modified their preferences as a result of working with their mentors.

Using the initial codes shown in Table 3-4, NVIVO was used to review each file and mark data for future analysis. Figure 3-6 provided an example of one data entry in NVIVO.

Figure 3.5

Example Coded Data Entry from NVIVO



Once all files were reviewed, NVIVO was used to tabulate all data points. Figure 3-6 shows the resulting information from NVIVO.

Figure 3.6

Example Coded Files and References from NVIVO

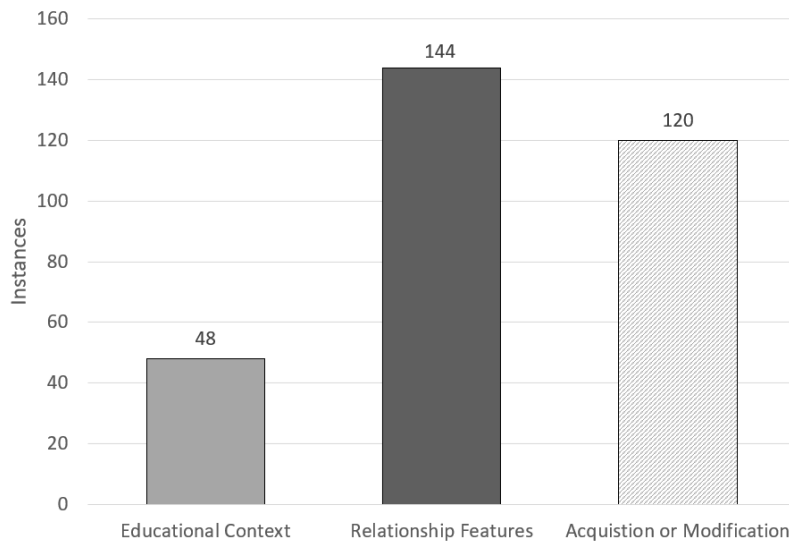
Codes		Search Project	
⊕	Name	Files	References
⊕	○ Support and Challenge	25	144
⊕	○ Acquisition or Modification	17	120
⊕	○ Educational Context	12	48

Thematic Analysis

The inductive analysis included an examination of identified instances and patterns within the data that will help develop an in-depth understanding of each case while renaming focused on the purpose of the study (Bhattacharya, 2017; Yin, 2018). Identified data patterns were compared to the conceptual framework for alignment with mentor-mentee relationship support criteria or knowledge, skills, behaviors, and preferences. The inductive approach to thematic analysis was informed by the main categories of mentor-mentee relationships and knowledge, skills, behaviors, and preferences described by the conceptual framework; however, the researcher remained attentive for potential themes not contained in the framework that may have provided a greater understanding of mentor-mentee relationships. The thematic analysis also included using NVIVO software to sort the data in multiple ways, as previously described (Yin, 2018). Again, the researcher took care not to lose the holistic understanding of each case while thematically grouping data from all cases (Yin, 2018). Results of the first review of the codes that generally aligned with the conceptual framework appear in Figure 3-7.

Figure 3.7

Codes Aligned with Conceptual Framework from NVIVO



The next pass of the data included analysis of the codes that generally aligned with acquiring or modifying knowledge, skills, behaviors, and preferences. Figure 3-9 depicts the relative density of coded items within each area.

Figure 3.8

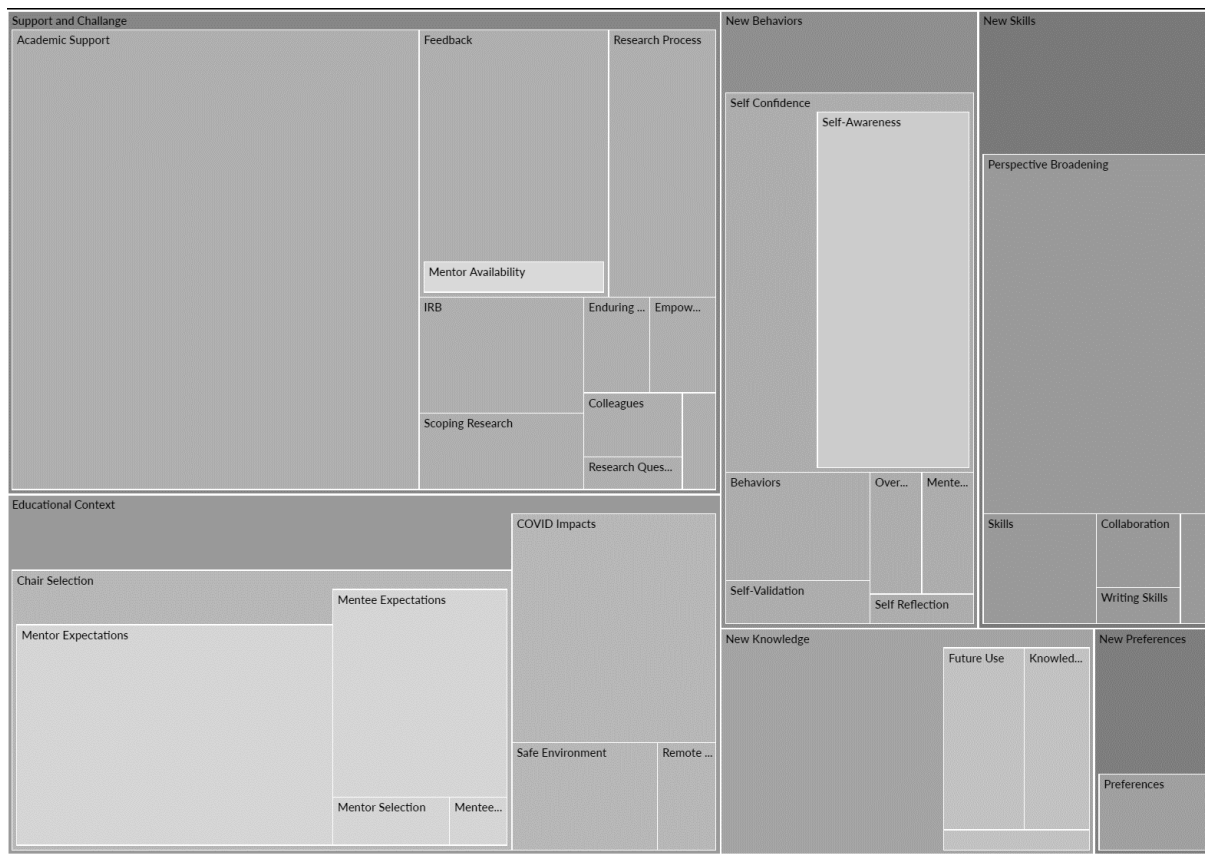
Density Map of Themes Aligned with Conceptual Framework from NVIVO



NVIVO was then used to develop a hierarchical plot of initial coding to better visualize the alignment of codes into potential more prominent themes. The results of the inductive thematic analysis are shown in Figure 3-10.

Figure 3.9

Initial Code Hierarchy from NVIVO



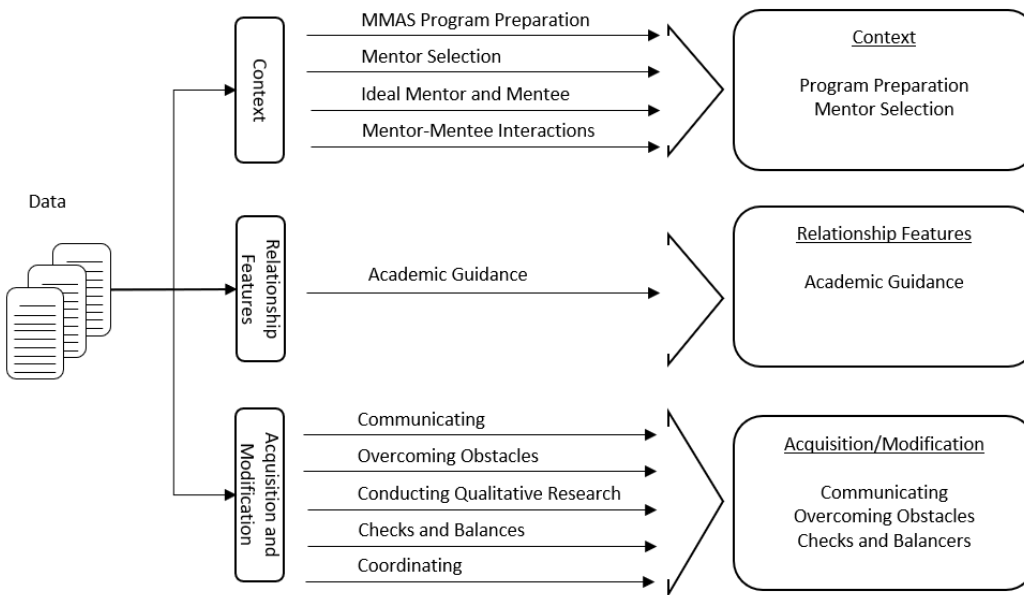
Within Case Analysis

The within-case analysis included analyzing the data for each dyad separately using the conceptual framework to generally organize possible trends aligned with the educational context, relationship factors, and acquisition or modification of knowledge, skills, behaviors, or preferences. Once identified and sorted, the identified trends were grouped to describe each

case's overall themes. Figure 3-11 shows the inductive approach to the within-case analysis used for each case.

Figure 3.10

Within Case Analysis Diagram

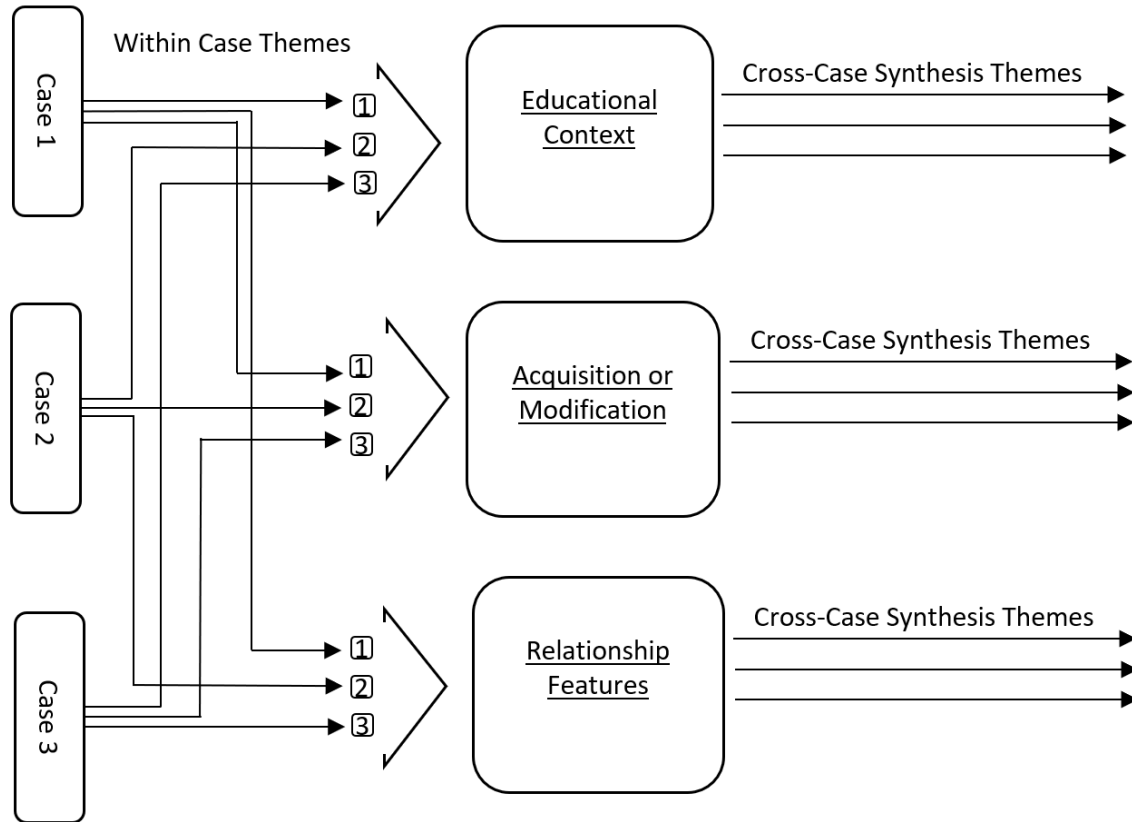


Comparative Analysis

This research included a cross-case comparative analysis to synthesize within-case patterns across all three cases (Yin, 2018). Merriam (1998), Bhattacharya (2017), and Yin (2018) identify comparative analysis as an effective technique for analyzing data across multiple cases. This technique compared data sets to identify similarities and differences within each case and then compared data across all cases to help develop conclusions. The researcher grouped similar data within each case to develop categories; identified categories were further investigated to identify patterns within each case and across multiple cases (Merriam, 1998). Figure 3-12 depicts the cross-case analysis approach used in this study.

Figure 3.11

Cross-Case Synthesis Diagram



Yin (2018) and Bhattacharya (2017) both highlight the importance of comparative analysis; however, both caution the researcher not to dismiss the significance of analyzing cases holistically when identifying categories and variables (Bhattacharya, 2017; Yin, 2018). Specifically, Yin's (2018) cross-case synthesis highlights the importance of retaining the "integrity of the entire case" when attempting to develop conclusions (Yin, 2018, p. 196). Likewise, Creswell (2009), Merriam (1998), and Stake (1995) all highlight the importance of collecting data needed to understand each case thoroughly.

This study included a description of each case and a thorough study of data collected during each event, as suggested by Bhattacharya (2017), Creswell (2013, 2014), Merriam (1998),

Stake (1995), and Yin (2018). Poor case comparability and contaminating issues may hinder comparative analysis (Creswell, 2013, 2014; Merriam, 1998; Stake, 1995; Yin, 2018). Therefore, this study sought to enhance case comparability and minimize contaminating differences by investigating cases at the same location, during the same academic year, within the same program of study.

Trustworthiness

The trustworthiness of qualitative research is intended to increase the results' truthfulness, applicability, consistency, and neutrality. This multi-case study was designed to improve the trustworthiness of the research by enhancing the credibility, transferability, dependability, and confirmability of the results, as outlined by Lincoln & Guba (1985).

Credibility

Prolonged engagement, persistent observation, data triangulation, peer debriefing, and member checking are techniques researchers may use to enhance the truthfulness of their results (Lincoln & Guba, 1985). This research design included prolonged engagement and persistent observation as the researcher routinely met with participants, collected data, and recorded observations over seven months. This exploratory design also included collecting, analyzing, and comparing multiple data sets to enhance triangulation, including semi-structured interviews, reflective journals, field notes, and MMAS theses. Most importantly, as Lincoln and Guba (1985) outlined, the study included member checking to ensure the data collected accurately reflects the participant's responses (Creswell, 2009, 2013; Lincoln & Guba, 1985; Stake, 1995; Yin, 2018).

Transferability

Lincoln and Guba (1985) also recommend developing detailed and rich descriptions of the data to enable other researchers to determine if the results of one investigation apply to other studies (Lincoln & Guba, 1985). To help develop a rich description of each case, this investigation also included collecting data about the interview locations and atmosphere, electronically recording the interviews, observing the participants' reactions, and capturing the researcher's feelings while conducting the interviews.

Dependability

Dependability or providing evidence that the findings of the study are consistent and may be repeated is enhanced in a study when the researcher provides an audit trail capturing when, where, why, and how the researcher developed insights and made decisions during the qualitative research (Lincoln & Guba, 1985). During this study, the researcher maintained a journal to develop an audit trail by capturing all key events, participants involved, protocols used and reviewed documents.

Confirmability

Confirmability is the degree to which the investigation results are seen as neutral and not shaped by the researcher's self-interest or bias (Lincoln & Guba, 1985). To improve the overall confirmability of this research, the design included triangulation and journaling to reduce the influence of researcher biases (Creswell, 2009, 2013; Lincoln & Guba, 1985; Stake, 1995; Yin, 2018).

Trustworthiness

A key concern for qualitative analysis is that the researcher may have “shaped findings to his or her predispositions and biases” (Patton, 2015, p. 653). To mitigate the potential impacts of

the researcher's biases, this study included an analysis of the evidence supporting alternate conclusions and negative case analysis to identify instances or cases that do not fit within the patterns identified. The intent of both is to enhance the study's rigor and the research's overall credibility (Creswell, 2009, 2013; Lincoln & Guba, 1985; Patton, 2015; Stake, 1995; Yin, 2018).

Researcher Background

This researcher has over 20 years of military experience in the U.S. Army, including teaching assignments at the United States Military Academy (USMA), the U.S. Army Command and General Staff College (CGSC), and Lehigh University. Following retirement, he entered civil service as a Department of Defense (DoD) civilian returning to teach at CGSC. Over the past 12 years as a DoD civilian, he led a team of twelve instructors responsible for educating 64 CGSC students each year. While teaching at CGSC, he also performed duties as an MMAS committee chair or committee member for more than twenty students working on their MMAS degrees.

While working with MMAS students, he questioned the impact of mentoring relationships on the student's ability to earn an MMAS degree. While the college encouraged students to pursue MMAS degrees, there was little information for students or training available for faculty to help form MMAS committees. Additionally, while instructors were invited to participate in the MMAS program, there was little formal education to help faculty successfully guide their students through the demanding, ten-month advanced-degree program. Living the MMAS experience motivated the researcher to investigate mentoring relationships formed during the MMAS program and their impacts on students and faculty.

Chapter Summary

This exploratory case study investigated how mentoring relationships might influence graduate-student learning. The case study methodology used multiple data sources to identify themes and patterns. Data collection methods included interviews, reflective journals, and MMAS theses acknowledge statements. Participants were allowed to express their opinions and points of view multiple times throughout the process. Data collection was synchronized with critical events in the MMAS process to understand how the cases evolved and identify potential emerging concepts or trends as relationships progressed through the graduate program at CGSC.

Chapter 4 - Findings

Introduction

This chapter provides the findings of the qualitative research. This study used a qualitative case-study methodology to explore how mentoring relationships may influence learning. The research focused on cases defined by the interactions between the MMAS student (Mentee) and their MMAS Chair (Mentor). Unanticipated at the start of this research was the impact of the COVID-19 pandemic on the learning environment during the MMAS program. Throughout this study, participants mentioned the effects of COVID-19 on their mentor-mentee relationships and the MMAS learning environment.

Research Questions

This study investigated the relationships between MMAS students and their respective MMAS chairs to explore how do graduate students perceive influences on their learning experience within the mentor-mentee relationship. The researcher developed two subquestions to help guide the investigation.

- a. Research Subquestion 1: How do graduate students perceive the influences of challenge and support within the mentor-mentee relationship?
- b. Research Subquestion 2: How do graduate students perceive the relationship with the mentors influencing the acquisition or modification of existing knowledge, skills, behaviors, or preferences?

Participants

The participants included CGSOC faculty and students grouped into three dyads. Each dyad included an MMAS student and their respective MMAS chair. Case 1 included Dr. Andrews and his MMAS student Brad. Case 2 was Dr. Clark and Danielle. Case 3 included Dr.

Edwards and Francesca. The findings from each within-case analysis are presented separately and chronologically using interview data, journal entries, and MMAS thesis acknowledgment statements. The results for each within-case analysis are then used to complete a cross-case analysis to identify themes from all three cases to explore better how mentor-mentee relationships might influence the learning experiences of graduate students.

Case One

Dr. Andrews (Mentor 1)

Dr. Andrews was the MMAS Chair for Brad during this study. Dr. Andrews was an experienced MMAS instructor, between the age of 50 and 60, with more than ten years of experience teaching for the Command and General Staff College. He had previous experience as a member of more than 20 MMAS committees and chaired more than ten MMAS students before participating in this study.

Brad (Mentee 1)

Brad was a male MMAS student, between the age of 30 and 40, with more than ten years of experience in the U.S. Army. He completed the core curriculum online for the Command and General Staff Officers Course (CGSOC). Brad reported to Fort Leavenworth, KS., in March 2021 to complete the remaining portion of CGSOC as a resident student. He graduated with the CGSOC Class of 2021.

First Interview

After listening to the researcher's presentation to Brad's MMAS research class, Brad volunteered to participate in this study. Brad agreed to allow the researcher to contact his MMAS Chair. Upon telephonic contact, Dr. Andrews also agreed to volunteer to participate in the research. Field notes from the interviews described Brad as open and frank in his assessment

of his abilities. He seemed comfortable with his overall research topic but appeared somewhat apprehensive about how to collect data. Notes from Dr. Andrews's first interview described him as experienced, comfortable using technology, and happy to help guide Brad through the MMAS process.

Qualitative analysis of the data collected from Brad and Dr. Andrews' responses to their journal and interview questions identified the following themes: program preparation, mentor-mentee expectations, mentor-mentee selection process, and mentor-mentee relationships. The analysis of each theme is presented in the following sections.

MMAS Program Preparation

Brad stated that he had some previous experience with his research topic during his assignment before CGSC, and he was motivated to study the topic "... because it's one of those kind[s] of things. It's a way to give back to the Army and a way to help them out based on my experiences." During the first interview, Brad explained that he had little knowledge of the MMAS program before entering CGSOC. "I can't say that I had even known the program existed prior to getting here."

Dr. Andrews had a significant experience that helped prepare him to be Brad's mentor. According to Dr. Andrews, he had been an MMAS chair for "about 15" students, and most "...have been good students, kind of right in the middle." When asked to describe how he prepared for the responsibilities as the MMAS Chair, his response was, "I almost did nothing." He further described how he reached out to others to prepare for the role. "I probably talked to a few other faculty who did it before..." to try and get information on the process. Dr. Andrews explained that he researched important CGSC policies and relied on his experiences as an

educator. “I just ended up doing what I thought was right, based on my experiences. I did read all of the CGSC instructions and all of that kind of stuff.”

Mentor Selection

Brad’s reflective journal provided some initial insights into how Brad selected his MMAS Chair. Brad wrote, “... the spreadsheet shared with the MMAS candidates with credentials and areas of interest from the CGSOC staff. This is how I was able to find my chair.”

During the interview, Brad also stated that he used the list of qualified MMAS faculty to select his mentor with the primary focus on having a doctorate. “I don't know that [my mentor] has either of those [topic background or experience] - aside from having a doctorate.”

Specifically, Brad said the Director of the MMAS program,

... shared with the MMAS [students] a list of candidates with credentials and areas of interest from the CGSOC staff. This is how I was able to find my chair; he had the credentials and listed areas of interest that aligned with my research.

Interestingly, Brad commented that he felt fortunate to have his mentor agree to be his MMAS Chair. Brad said, “... luckily, he [Dr. Andrews] agreed to be the chair.”

Dr. Andrews focused on the students and topics he considers when selecting a mentee. “I actually pretty much take all kinds of students and topics.” Dr. Andrews also highlighted using the MMAS spreadsheet when explicitly asked about selecting mentees. He stated, “...there is a spreadsheet that they [MMAS students] have and the person's background and what my topics of interest are. I would say maybe half come from that, if not maybe less than half.”

Dr. Andrews said his role as a CGSC faculty member and having a Ph.D. is an important consideration. Some mentors are found through email requests. But, he stated, “...others

[students] come from just people sending emails saying, hey, I need a Ph.D.” In his opinion, this is due to CGSC policy and a limited number of Ph.D. faculty. Dr. Andrews commented, “... a minimum of one Ph.D. is required [on the MMAS committee]. So, we're a little bit more of a rarity.”

Ideal Mentor and Mentee

Brad said that his expectation for his ideal mentor changed over time. When he first began to think about selecting his MMAS Chair, he wanted to ensure his mentor had a terminal degree and could provide good feedback. Brad said, “I was just thinking somebody with a doctorate would probably give great feedback.” As Brad continued to work through his selection, he also thought he would like to have a mentor with previous experience with his topic. “Ideally, I would have somebody who has a background in [my topic].”

Dr. Andrews identified two essential qualities he looks for in his mentees – motivation, and writing skills. When asked about his ideal mentee, Dr. Andrews responded: “It comes down to motivation, and they have to have the ability for written communication.” While he lighted both qualities, he emphasized the importance of motivation. “So my ideal student really is just somebody who's motivated.” He caveated his comments on writing skills by stating, “They don't need to be perfect writers, but they need to have enough in-depth experience so that when I read their first draft, I can understand where they're going and what they're trying to say.”

Mentee-Mentor Interactions

Another theme that emerged during the first set of interviews with Brad and Dr. Andrews was their interactions. This theme included Brad’s and Dr. Andrews’ initial descriptions of their relationship development. Brad highlighted professionalism, flexibility, and insightful guidance as important interactions. Dr. Andrews provided comments about the impact of COVID on the

frequency of their interactions, working through the power differential to empower Brad to make decisions and develop solutions as a student. The chair's interactions with the MMAS committee are important to support the student during the process.

Brad wrote in his journal that he felt the relationship with his mentor was a "professional one" and that Dr. Andrews was "... going to assist in making my research, the paper, and the process better. Brad also commented on Dr. Andrews's support during the first interview. He stated, "...the support I am getting from my MMAS chair is excellent; he has some extremely insightful comments that I believe are going to assist in making my research, the paper, and the process better." Brad also highlighted his appreciation for Dr. Andrews' flexibility and availability. Brad explained,

...there's been a couple of times when he'll [Dr. Andrews] shoot me a text, say, hey, call me when you get a moment. And he's really flexible in that regard. "He's [Dr. Andrews] always made a point to support me in that regard.

Brad also highlighted the importance of Dr. Andrews' checking to see if Brad is getting the support he needs. Brad specifically stated that Dr. Andrews frequently asks Brad, "...are you comfortable with how I'm supporting you as your Chair?"

Dr. Andrews's reflective journal provided insights into his relationship with Brad and how he supports Brad as an MMAS Chair. Dr. Andrews wrote, "He [Brad] is very good and seems to be motivated. I just provide advice and suggestions when I can." During the interview, Dr. Andrews highlighted the potential impact of COVID-19 on his relationship with Brad. "I probably don't know if it is a COVID thing, but I've probably spoken to him less than most of my other MMAS students." "I had, you know, four or five [virtual] conversations with him." Dr. Andrews also highlighted the importance of building a relationship that allows his MMAS

students to make decisions. “I always tell him whenever I ask you to do something, it’s kind of advisory. You tell me whether you think you should make the change or not.”

Dr. Andrews also highlighted the power differential between MMAS students and faculty as impacting the relationship. Dr. Andrews indicated that he tries to build a collaborative relationship with his students; however, he sees the impact of power on the student-faculty relationship. “I try and coach them up to be collaborative. I think he gets that. But once again, he’s an Army Major, and I’m a Ph.D. advisor, so it’s tough to get that kind of give and take just yet.” Dr. Andrews was optimistic when he explained that just before the interview, Brad had been more self-assured during the discussion. Dr. Andrews stated, “I did get a little pushback on an issue... I was like, Okay, that’s good that he did push back...”

Building the initial mentor-mentee relationship by helping the mentee identify solutions and allowing the mentee to discover the best way ahead was another important topic during the first interview with Dr. Andrews.

When he calls me, I say, hey, read your research question, and he reads it. You go, okay, tell me why the data that you’re collecting will answer that question. Is that really the question you’re trying to get at? And then they have to think about it. And generally, you can get them to come around, and that’s exactly what happens - they kind of walk through it. ... so, it’s really my job to coach them and make sure that he’s connecting the dots.

Dr. Andrews also highlighted the importance of properly managing Brad’s MMAS committee on his relationship with Brad. Brad had multiple committee members, each with specific expertise and focus areas related to Brad’s research topic. Dr. Andrew’s highlighted the importance of keeping the group functional. “You know, so you hear stories about people with a dysfunctional group [committee], and it’s like, I’m not going to have that.”

Second Interview

The middle set of interviews occurred approximately three months after the first interviews. Field notes from the second set of interviews described Brad as optimistic, open to discussing his relationship with Dr. Andrews, and happy with the support he was receiving. In addition, notes from Dr. Andrews's second interview remained consistent with the first. Dr. Andrews was again open about discussing his relationship with Brad and was satisfied with the progress Brad had made in the program to date.

The second interview aimed to explore how the relationship between Dr. Andrews and Brad had developed since they started working together in the MMAS program. Specifically, the middle set of interviews explored the emerging mentor-mentee relationships, emphasizing the potential influences of support and challenge on the relationships.

Qualitative analysis of the data collected from Brad and Dr. Andrews' responses during their second interviews identified the following themes: academic support, mentor accessibility, viewpoint broadening, and improved self-awareness. The analysis of each theme is presented in the following sections.

Academic Guidance

Brad highlighted research support as an important element of his relationship with Dr. Andrews. Brad stated, "... he asked me some very pointed questions about some of the information in my paper, which has turned out to be a good thing." Dr. Andrews' questions caused Brad to look for additional research information resulting in Brad finding an important article that he incorporated into his literature review. "I ended up finding an article written by a gentleman out of the [U.S. Army] War College. The article helped Brad identify potential challenges with data collection. Brad commented on the article's importance as he considered

the challenges he was having with the validity of his research data. Brad said he realized some participants may be lying "... wow, you guys [the participants] clearly don't know how long it takes to... and just threw some numbers on a piece of paper." By providing the article, Dr. Andrews helped Brad to understand that some of Brad's participants may not have provided truthful data. Brad said, "So that's [the article] actually incorporated in my paper now." When asked if Brad had previously read the article, Brad responded, "No, this was my first time reading it."

Another important aspect of academic support Brad mentioned was the availability of Dr. Andrews. Brad identified the importance of quickly getting help from his MMAS Chair. Brad said, "He makes himself available - I feel like 24/7". "...if I shoot him a text. Hey - can you talk? He gets back to me pretty quickly."

Toward the end of the second interview, Brad discussed how working with Dr. Andrews helped Brad to manage a sizeable academic project better. Brad said, "... this process, and then the fact that I'm just a little more mature, has helped solidify my ability to break up work and do it over a period of time to get a better quality of work." At the end of the interview, Brad highlighted his appreciation for Dr. Andrews for allowing Brad to run the research process while still ensuring Brad's research was valuable. Brad said, "... he's [Dr. Andrews] given me the autonomy to go out and kind of run this process the way I see fit. He kind of, you know, like watching a little kid bowl, he puts the little guardrails up, so I don't go off in the gutter and like destroy the paper."

Dr. Andrews's reflective journal provided insights into the guidance he provides to Brad. Dr. Andres wrote, "I just provide advice and suggestions when I can." Dr. Andrews also wrote, "We have talked overall [MMAS] strategy and how to approach it, so it is a good piece of

work.” In his reflective journal, Dr. Andres also described his role as “more as a process coach than a product quality assurance individual.” During the interview, Dr. Andrews also discussed his role in providing academic advice to Brad. He intended to help Brad through the process. He said, “I’m working with him [Brad] to make sure all the pieces fit together and that he's meeting all of his timelines and stuff like that.” “... [I] just kept him from going down the wrong path and wasting his time.”

One of the specific support areas Dr. Andrews highlighted during the interview was helping Brad to scope his research. During the second interview, Dr. Andrews mentioned that the scope of Brad’s initial research was beyond what Brad could accomplish in the ten-month program. Dr. Andrews recalled telling Brad how to rescope the project. “He [Brad] was running into some issues with his research, and I just said, you know, if you just do your MMAS on the topic of..., that would be good enough.” Dr. Andrews said, “Basically, letting him know that he [Brad] really didn't need to do Ph.D. level, original research.”

Another important support area was challenging Brad’s assumptions. Dr. Andrews said, “I challenged him on a couple of assumptions that he made. I would ask, how do you know that this is true?” Dr. Andrews further described Brad’s response to his challenges. Dr. Andrews said Brad’s response was, “... you know, your comments on such and such were not what I was thinking, but I see your point, and I'm going to make a couple of minor changes.”

Dr. Andrews also recalled helping to guide Brad through the problem of low participation in the study. Dr. Andrews remembered a call from Brad, concerned about the few participants' impact on his data. Dr. Andrews stated, “... he [Brad] called because he didn't get the number of participants in his study.” Dr. Andrews asked Brad, “...what's your [statistical] power?” Dr. Andrews said, “... he [Brad] had no idea what statistical power was.”

Viewpoint Broadening

Brad stated that working with Dr. Andrews helped him view his research more broadly. Brad said, “I was hyper-focused on the ... aspect of it. But taking a step back and looking at how the Army, as a whole, handles this stuff was, I think, important.” Brad also said he wanted to improve his future research because of working with Dr. Andrews. Brad stated, “I want to improve my ability to successfully conduct research that's meaningful in the future.” Brad also stated his viewpoint on meaningful research needed to expand to include organizational capabilities. He stated, “... [approach] has changed now because I need to look at what the organization is capable of.” Working with Dr. Andrews during the MMAS program also helped Brad become more aware of the challenges of collecting meaningful data. Brad said, “So there are a lot more, I think, hurdles that I'm aware of now in order to be able to get the data that's going to be meaningful in the future.” When asked how Brad had changed or acquired new knowledge so far in the program, Brad said the following:

I'm going to keep saying it because it's probably the biggest takeaway for me from this process and from him. When you're looking at research early on, don't forget to really take a big step back and look at the whole picture, second, [and] third-order effects, not just your little slice of the pie.

Dr. Andrews also provided comments during the second interview relating to Brad's expanded viewpoint. Specifically, Dr. Andrews stated he had observed Brad develop the organizational skills needed to accomplish all of the tasks required to complete the MMAS. Dr. Andrews stated, “I think he's [Brad] maybe matured a little bit because he's really had to fight a lot of bureaucracy.” “I find that sometimes people will just get frustrated.” “But he seems to have a very mature approach to any hurdles that are coming up.” Dr. Andrews went on to say

that he has seen Brad grow in this area. He stated, “I kind of sense that he was more like getting more frustrated early on. Whereas now, the last couple of hurdles, he seems to have been a little bit more, I guess, flexible.”

Dr. Andrews commented that Brad’s written communication and critical thinking skills improved. Dr. Andrews stated, “His [Brad’s] emails seem to be a little bit more precise.... I think he's more anticipatory of questions that might be asked. He realizes that he needs to provide his explanation upfront rather than just telling folks to take a look at his work.”

Self-Awareness Improvement

Brad commented, “My chair has said he feels like I write fairly well. Actually, I was a tiny bit surprised because, you know, writing has not been something that I've really ever felt came naturally to me.”

Dr. Andrew’s perception was that Brad was becoming more aware of his abilities to conduct research. During the interview, Dr. Andres stated the following about Brad. “We had some discussions about turning this [MMAS research] into Ph.D. research at some point. So, I think he's got that kind of bug. Yeah, he seems very motivated to stick to his plan, get it done, collect the data, and try out his program.”

Final Interview

The last interviews for Brad and Dr. Andrews occurred following the completion of Brad’s MMAS defense and submission of his MMAS thesis but before Brad graduated from CGSC. The field notes from this interview describe both Brad and Dr. Edwards as optimistic about the MMAS program and happy to share information about their relationship during the MMAS program. Brad appeared excited to have the opportunity to continue his research after graduation, and Dr. Andrews was satisfied with Brad’s overall performance during the program.

The final interview intended to explore further how their mentor-mentee relationship might influence Brad's learning experiences during the MMAS program. The previous two interviews identified trends focused on the challenge and support provided by Dr. Andrews and how Brad may have gained or changed his knowledge, skills, behaviors, or preferences during the MMAS program.

The results presented in this section focus on the themes that emerged during the last interview, including overcoming obstacles, understanding quantitative research, using checks and balances, and coordinating and communicating effectively. The analysis of each theme is presented in the following sections.

Overcoming Obstacles

In Brad's MMAS thesis acknowledgment statement, Brad thanked his committee for helping him overcome obstacles and complete his research. During the interview, Brad also highlighted the importance of the support he received from Dr. Andrews in helping Brad to overcome obstacles during the research process. Brad explained how Dr. Andrews supported Brad when Brad was compiling his data. When asked about the experience, Brad said, "... he [Dr. Andrews] was very supportive when helping me work through all of the little hiccups that came along while I was trying to compile all the data." Brad specifically identified a lack of statistical significance as an obstacle he needed to overcome and how Dr. Andrews helped resolve the issue. Brad said, "... my case ended up not having enough data... He [Dr. Andrews] walked me through it." Brad went on to say, "He told me that's okay. You'll just call it an exploratory study. You'll just make it better for future researchers who may do additional research in this area." Brad said, "That was really helpful." Brad said, "Throughout the entire

thing [MMAS process], every time there was a challenge, he [Dr. Andrews] was very helpful trying to make sure that we still had something that was worthwhile at the end.”

Working with Dr. Andrews during the MMAS program also helped Brad become more aware of the challenges he may have to overcome while conducting research. Brad said, “So there are a lot more, I think, hurdles that I'm aware of now in order to be able to get the data that's going to be meaningful in the future.”

Dr. Andrews also recalled helping Brad to overcome obstacles. Dr. Andrews remembered a call from Brad, concerned about the few participants' impact on his data. Dr. Andrews stated, “... he [Brad] called because he didn't get the number of participants in his study.” Dr. Andrews remembered asking Brad, “...what's your [statistical] power?” Dr. Andrews said, “... he [Brad] had no idea what statistical power was.”

Dr. Andrews discussed how Brad responded to the obstacles he faced. “I think he responded very well. You know, he was very adaptable. I think he learned quite a bit from all the challenges he faced.” Dr. Andrews also stated that the other faculty on Brad’s committee also observed Brad’s growth. Dr. Andrews said, “...we talked about that as faculty members when he was outside the room after his final presentation. He [Brad] probably learned more than somebody who didn't come up against a lot of obstacles.”

Conducting Quantitative Research

Another theme that emerged was Brad’s improved understanding of quantitative research. When Brad was asked what he learned while working with his MMAS chair, Brad said, I would say I learned research is a little bit more difficult to actually cobble together than I had anticipated. I had done some qualitative stuff in the past, but this was my first attempt at doing a quantitative study.

Brad went on to highlight data collection challenges during his quantitative research. Brad said, "... having all these other variables, where I wasn't doing the data collection myself, ended up being a friction point that led to a lack of statistical significance of my research. In the end, Brad said he had a better appreciation for the time required to collect data. He said, "So I think I have a new appreciation for why sometimes science and research are slow."

When specifically asked about his mentor's role in Brad's understanding of quantitative research, Brad said, "... so it's also been helpful having some conversations [with Dr. Andrews] about research and how that process works and how we can also get buy-in from outside individuals and agencies."

Brad also said he wanted to improve his future research because of working with Dr. Andrews. Brad stated, "I want to improve my ability to successfully conduct research that's meaningful in the future." Brad also stated that his viewpoint on meaningful research expanded to include organizational capabilities. Brad stated, "... [my approach] has changed now because I need to look at what the organization is capable of."

Notably, Brad said he could better look at research and understand it after completing his study. Brad said, "Before I had surface-level understanding [of research]. I feel like I'm able to quickly get to the heart of the study or research now that I have tried to put one [a study] together myself."

Brad's research preferences appeared to have changed. Brad said, "I would say I definitely enjoy the process of doing quantitative analysis more than qualitative. It's not to say one's better than the other, but I definitely enjoyed the quantitative approach much more now."

Dr. Andrew's perception was that Brad was more aware of his abilities to conduct quantitative research. During the interview, Dr. Andrews said, "We had some discussions about

turning this [quantitative research] into Ph.D. research at some point. So, I think he's got that kind of bug.”

Checks and Balances

Brad also identified the importance of implementing control measures during a process as an important knowledge he gained while working with Dr. Andrews. When asked how he may have changed during the MMAS process, Brad said, “... I think some of the potential change I’m looking at is my ability as a leader to coordinate things and to be able to put some additional measures in place as checks and balances along the way.” Brad also highlighted how he might use the MMAS experience to improve his abilities in his next job. Brad said, “You know, even if it’s something like receiving an order from a higher headquarters, not just coping and pasting some stuff and pushing it down to the subordinate level.”

Coordinating

Brad also identified coordination and collaboration as important skills he improved from working with Dr. Andrews. Brad said the following about Dr. Andrews, “I feel like because he really allowed me to coordinate with the different committee members, it improved my ability to coordinate with others, especially across multiple time zones.”

Dr. Andrews also identified coordination and collaboration as important skills that Brad had improved during the MMAS process. When asked if he thought Brad had acquired new knowledge, Dr. Andrews responded, “being able to work collaboratively with others and try to get them to achieve or to help you achieve your objectives when they have no stake in it.” Dr. Andrews also said he felt Brad had a deeper appreciation for the coordination required when working with others outside your organization. Dr. Andrews said, “[Brad knows] that you will generally do a lot more coordination when it’s [the research] not within your organization.

Communicating

Brad highlighted how he thinks differently about communicating research due to his MMAS experience. Brad explained how he better understands the importance of communicating his research in a way others can understand.

I definitely think I think differently. In my mind, even just doing the research and coming up with something that is statistically significant is still only half the battle.

Then you have to not just get it published but also get people to actually understand what you're saying. So just doing the research is not enough. You have to go out and educate others.

Brad said, "I think more about how you over-communicate information - sell it so that everyone is on the same page and truly understands the task."

Dr. Andrews also commented that Brad's communication skills improved. Dr. Andrews stated, "His [Brad's] emails seem to be a little bit more precise... I think he's more anticipatory of questions that might be asked. He realizes that he needs to provide his explanation upfront rather than just telling folks to take a look at his work."

Dr. Andrews said, "[Brad's] writing and presentation skills are probably the more tangible ones." Dr. Andrews explained, "Because he [Brad] turned in drafts, they were marked up." Dr. Andrews explained how Brad's committee members provided guidance but that Brad was responsible for writing his theses. Dr. Andrews explained, "They [committee members] just provided notes [to Brad] like this doesn't translate well, or you need to present this in a better manner..." Dr. Andrews said, "So, I think that he probably learned some about the technical aspects of writing."

Case One Summary

Data collected from this case provided insights into how mentor-mentee relationships might influence the learning experiences of graduate students. The data collected from Brad and Dr. Andrews focused on exploring their mentor-mentee relationship and qualitatively identified themes that provide information necessary to explore both research subquestions. Research Subquestion 1: How do graduate students perceive the influences of challenge and support within the mentor-mentee relationship? The themes that emerged while investigating the challenges Brad experienced during his relationship with Dr. Andrews included program preparation, mentor-mentee expectations, and mentor selection. The themes that emerged while exploring how Brad might have experienced support from Dr. Andrews included academic guidance, viewpoint broadening, and self-awareness improvement.

Specific to the conceptual framework, both gave examples of how Dr. Andrews provided modeling, coaching, and scaffolding as outlined in CAT. Modeling, coaching, and scaffolding help to provide insights into the support and challenge components of their mentor-mentee relationship. The following are examples of each category.

In the area of modeling, Dr. Andrews and Brad described how Dr. Andrews provided academic guidance helping Brad to find additional articles, recognize potential data-validity issues, and help Brad to overcome challenges collecting his data. Brad said, "... he [Dr. Andrews] was very supportive when helping me work through all of the little hiccups that came along while I was trying to compile all the data." Brad also said, "So there are a lot more, I think, hurdles that I'm aware of now in order to be able to get the data that's going to be meaningful in the future."

For the area of coaching, Dr. Andrews and Brad described the significance of Dr. Andrew's feedback and guidance in helping Brad to overcome obstacles and improve his communication and coordination skills. Dr. Andrews stated, "I'm working with him [Brad] to make sure all the pieces fit together and that he's meeting all of his timelines."

In the area of scaffolding, data collected during this case also demonstrated how Dr. Andrews helped Brad to manage the research process by separating the research process into manageable parts, encouraging Brad to take ownership of his qualitative research, and helping Brad to see the importance of checks and balances and organizational capabilities when working on other projects in the future. Brad stated, "... [my approach] has changed now because I need to look at what the organization is capable of."

Findings from Case 1 also provided information to answer Research Subquestion 2: How do graduate students perceive the relationship with the mentors influencing the acquisition or modification of existing knowledge, skills, behaviors, or preferences? The data from this case also provided insights into how Brad may have acquired or modified his existing knowledge, skills, behaviors, or preferences. The themes that best aligned with how Brad might have acquired or modified his existing knowledge included overcoming obstacles, conducting qualitative research, using checks and balances, coordinating, and communicating.

Through articulation, reflection, and exploration, Brad also described his acquisition or modification of specific knowledge, skills, and behaviors as influenced by his relationship with Dr. Andrews. Articulation, reflection, and exploration provide insights into Brad's acquisition or modification of knowledge, skills, behaviors, or preferences. The following are examples of each category.

During the interviews, several comments aligned with the theme of articulation. Brad verbalized how working with Dr. Andrews helped him become a better qualitative researcher, enhanced his coordination skills, and successfully overcame his challenges. Brad said, “I feel like because he [Dr. Andrews] really allowed me to coordinate with the different committee members; it improved my ability to coordinate with others.” Brad also said, “Throughout the entire thing [MMAS process], every time there was a challenge, he [Dr. Andrews] was very helpful...”

Brad also made comments which demonstrated reflection. Brad shared his self-assessments and reflected on how his skills changed while in the MMAS program. One example of Brad’s self-assessments during the last interview included Brad saying, “... I definitely think I think differently...”. Brad also explained how after working with Dr. Edwards, he had a better appreciation for helping others to understand your results. Brad said, “So just doing the research is not enough. You have to go out and educate others.”

Brad also provided insights on how he may explore the topic beyond his experiences with Dr. Andrews. Brad highlighted his communication, coordination, and quantitative research skills as areas he may expand beyond the MMAS programs and enhance his performance as an organizational leader. Brad said, “I think more about how you over-communicate information and sell it so that everyone is on the same page and truly understands the task.”

Case Two

Dr. Clark (Mentor 2)

Dr. Clark was the MMAS Chair for Danielle during this study. Dr. Clark was an experienced MMAS instructor, between the age of 40 and 50, with more than three years of

experience teaching at Fort Leavenworth. In addition, they had previous experience as a member of two MMAS committees and chaired one previous MMAS student prior to participating in this study.

Danielle (Mentee 2)

Danielle was an MMAS student, between the age of 30 and 40, with more than ten years of experience in the U.S. Army. They attended the resident Command and General Staff Officers Course (CGSOC) at Fort Leavenworth, KS., and graduated with the CGSOC Class of 2021.

First Interview

Danielle also volunteered to participate in this study after listing to the researcher's presentation to the MMAS research class. In addition, Danielle agreed to allow the researcher to contact Dr. Clark, and Dr. Clark also agreed to participate in the study. Field notes from the first interview outlined some initial scheduling and technology issues using remote technology to conduct the meetings. Once resolved, the initial interview with Danielle was very positive and informative. Similarly, field notes for the interview with Dr. Clark described her as extremely positive, open, and committed to the success of her MMAS student.

Qualitative analysis of the data collected from Danielle's and Dr. Clark's responses to their journal and interview questions identified the following themes: mentor-mentee section, remote learning environment, feedback, and responsiveness. The analysis of each theme is presented in the following sections.

Mentor-Mentee Selection

During the first interview, Danielle highlighted her challenges in selecting an academic Chair for her MMAS committee. She commented on sending "cold call" emails saying, "hey,

this is me. Here's the thing I'm interested in; can you help me out?" She explained this was "nerve-wracking" when, not knowing any of the faculty, she picked faculty names from a list of names and interests provided by the MMAS program. However, she understood the importance of the Chair and expressed some initial concerns about her selection: "...what if I picked the wrong person?" During the interview, Danielle stated she felt like she got lucky and picked the right person when she selected Dr. Clark. Danielle said, "So, luckily, I did a cold email to Dr. Clark, and it just worked out."

Danielle's selection of an MMAS Chair depended heavily on having someone with a terminal degree that aligned well with her topic area. Danielle stated, "I picked her [Dr. Clark] off the list based on her listed areas of research interest and things that she had been wanting to look at moving forward." "... and I knew that one member on the committee had to have a PhD., and she did."

Danielle also mentioned that she did not have a research topic before she arrived at CGSC and had little knowledge of the MMAS program. She said, "I had no pre-planned [topic] prior to arriving here." Danielle also said it was challenging to select an MMAS Chair because she lacked understanding of the organization of the Command and General Staff School. Danielle stated, "...not understand the structure of the schoolhouse and the departments... and the letters behind people's department names. They were basically meaningless to me at that point."

Dr. Clark also commented on how MMAS Chairs and their students were paired in the MMAS program. Dr. Clark had experience teaching some of the research classes MMAS students took during the program and was familiar with how students typically select their Chairs. Dr. Clark discussed the list of MMAS faculty, their degrees, and their research interests.

“So, you know, we all have our biography, what we like to do, and the type of research that we've done, and what we feel like we could help a student with.” Using that information, Dr. Clark said, “...it's the students that come to us and request if we will be on their committee.”

Dr. Clark explained that once a student contacts her, she usually sets up a time to interview the student. The purpose of the interview is to see if the student's research interests and methodology are well aligned with Dr. Clark's abilities. When describing her first meeting with Danielle, Dr. Clark said,

So, we almost had like a pre-interview. I was asking her [Danielle] what do you want to do. What direction do you want to go? Do you know what type of research you see yourself doing? What's your objective?

Dr. Clark stated she thought the questions and discussion helped her and Danielle find out if there were “compatible.”

Dr. Clark also characterized her relationship with Danielle in her reflective journal. Dr. Clark wrote the following about being selected as Danielle's mentor, “From the start, it was obvious that we were a good match. We have similar degrees, and we hit the ground running.”

Remote Learning Environment

The initial interviews with Danielle and Dr. Clark also identified remote learning as a theme. Due to the impacts of COVID-19, Danielle's interaction with Dr. Clark had been only via email or zoom. Danielle said the experience was positive, “It's been really, really good for being remote. I don't feel like I'm missing out by not being able to sit in the same room as her [Chair] - so that's nice.” Danielle also said, “... but it'll be nice to eventually be able to - you know - look her [Dr. Clark] in the eye and say, hey, this is me. She's been so wonderful.”

During the first interview, Dr. Clark highlighted the effectiveness and potential to expand the virtual learning environment to help others improve their research abilities. Dr. Clark said, "... I definitely think, and this is something even to consider for the future, is to build a virtual class. And, whether it be synchronous or asynchronous, is having that information there for the students."

Feedback

A third major theme that emerged during the first interview was feedback. Danielle and Dr. Clark identified feedback as an important characteristic they observed in each other early in their relationship.

Danielle specifically highlighted the feedback she received from Dr. Clark via email. Due to COVID, Danielle stated that most of the correspondence between her and Dr. Clark was through email. Danielle said this about their email exchanges: "and so just kicking ideas back and forth has been really helpful." Danielle went on to say the following about the written feedback she received from Dr. Clark:

When she provides written feedback, it's not just I think you really need to think about this line or look at this paragraph, or this minor paragraph right here doesn't flow or something. She really gives me feedback and says, well, perhaps you should say this instead, or is this what you mean?

Danielle also identified how Dr. Clark's feedback helped guide Danielle through the research process. During the interview, Danielle recalled Dr. Clark saying, "I'm not going to tell you what to think. I'm just going to teach you how to think." Danielle said, "Her feedback is so helpful." "There's not a lot of ambiguity, which I really appreciate."

Dr. Clark wrote about feedback in her reflective journal. Dr. Clark wrote that Danielle was "... very open and willing to accept feedback. During the interview, Dr. Clark expanded on her journal comments and described how she provides feedback to Danielle. Dr. Clark is aware of all the demands of CGSC and the unique nature of the ten-month MMAS program. Dr. Clark said, "We [the committee] know that you've [Danielle] got other stuff going on." "We know you're studying for X100 [exam]." Dr. Clark explained that she told Danielle, "...when you feel like you need us, you know you can reach out to all of us."

Dr. Clark explained her goals for providing feedback to her students. She explained the importance of developing a relationship with her students where she "...could give them feedback, and they would take that structured feedback, and they would put it into their work, or their paper, or their research."

Responsiveness

Another theme that emerged during the first interview was responsiveness. Danielle highlighted the responsiveness of Dr. Clark as something she appreciated early in the relationship. Danielle said, "Her [Dr. Clark's] responsiveness is, to me, insane. How quickly she gets back to me." Danielle went on to say that was particularly important because they could not meet in person due to COVID-19. Danielle said, "... so everything has been back and forth via email."

Dr. Clark also commented on how she remains responsive while helping Danielle. Dr. Clark explained that she told Danielle, "...when you feel like you need us, you know you can reach out to all of us." "We will be sure to get you what you need. Because we don't want to bother you." Dr. Clark highlighted her goal to support Danielle when she needs support. Dr.

Clark said, “it's really kind of supporting her [Danielle's] needs as to when she needs each one of us [on the committee].

Second Interview

The second set of interviews took place approximately three months after the first. The intent of the second set of interviews was to explore how the relationship between Danielle and Dr. Clark was developing since they started working together in the MMAS program. Field notes from the second interview highlighted Danielle's overall positive nature and demeanor during the interview. She was open to answering all questions and appeared happy to share how well her relationship was developing with her MMAS Chair. Likewise, notes from the interview with Dr. Clark highlighted her optimism and focused on providing her MMAS student with affirmation and positive feedback.

Specifically, the middle set of interviews explored the emerging mentor-mentee relationships with emphasis on the potential influences of support and challenge on their relationship. Both Danielle and Dr. Clark explained how their relationship had continued to evolve since they started working together. Important trends that emerged when exploring the impacts of support and challenge on their relationship included building a personnel connection, receiving positive feedback, guiding the research process, providing a safe learning environment, and validating student performance. The analysis of each theme is presented in the following sections.

Personal Connection

During the interview, Danielle highlighted the importance of meeting with Dr. Clark rather than just exchanging emails when establishing a personal connection. Danielle said, “Because we've met face to face, it's different than being online and just sending emails back

and forth.” Danielle said, “... I think that's what has helped me see her [Dr. Clark] more like a colleague and see her as a mentor instead of like a faculty member I don't know.” Danielle also mentioned she felt more comfortable working with Dr. Clark after meeting with her, learning more about her personality, and observing some of Dr. Clark’s mannerisms. Danielle said, “I think that we've seen each other in person, and your personality can come out. Yeah, there are definitely mannerisms, and I feel more comfortable now than I did prior to meeting her in person or face to face.”

Positive Feedback

Danielle also highlighted the importance of affirmation and positive feedback she received from Dr. Clark. Danielle said, “Every time I send [Dr. Clark] a document or a draft, I always get some good kudos back. I don't write for the kudos, but it's super helpful to know at least I'm on the right path.” Danielle went on to say. “The support that she does provide is kind of subtle. It's not in my face. It's more like a note in the margin saying like oh, hey, that's a really great thought.” Danielle went on to explain the value of positive feedback during the MMAS program compared to struggles with other topics at CGSC.

So, I think the reason why I've enjoyed doing this [MMAS] and having this experience with her particularly is because I'm not a maneuver officer in this program [CGSC]. Every day I felt like I didn't know what I was doing, and I didn't understand the language. I'm doing the MMAS on a topic that I'm not familiar with, but I am familiar with doing good research. So, it's been nice to be validated on the thing [the] Army has sent me to learn how to do. I actually do pretty well. So, she's [Dr. Clark] been a big part of that validation piece.

Dr. Clark also highlighted the importance of positive feedback and validation during her interview. Dr. Clark said this during the second interview, “... I do find she reaches out when

she wants validation. I have two other great members on the team, so it's very helpful that they are very responsive to her.” Dr. Clark explained how she and the other committee members try to provide positive feedback and not just provide feedback that is “... red marks, you know this is wrong, and that's wrong.” Dr. Clark said the following about how her team provides positive feedback to Danielle:

My two team members provide great feedback. Like you know, in this area, you need to beef this up for your triangulation; here's how you do it, and they put that in the comments. And so you know the feedback from them has been very, very good too. And that's the same thing that I tend to do too, and we all do this. You [Danielle] are the researcher, so these are up for your consideration. You know it's not our paper, but you know we're here to help you, and you know, I think that's what's really made things so cohesive.

Guiding the Research Process

Danielle’s MMAS acknowledgment statement highlighted the importance and her appreciation for the research guidance provided by Dr. Clark during the MMAS program. During the interview, Danielle reinforced the importance of Dr. Clark’s ability to guide Danielle through the MMAS process without telling Danielle specifically what to do or think. When asked about what she has learned so far working with Dr. Clark, Danielle said,

I think that there is a way to coach and mentor the process of writing a thesis that is supportive without one either just straight up telling you what to do to make the process faster, but also with enough finesse that I feel like I also still had to think for myself. That has been something that she taught me.

Dr. Clark’s reflective journal also highlighted the importance of guiding Danielle through the research process. Dr. Clark said her collaboration with Danielle “... helped her [Danielle]

gain insight into the process of qualitative analysis.” Dr. Clark went on to explain how she helped guide Danielle. Dr. Clark said, “So we reviewed the types [of qualitative research], and I sent her a whole bunch of information on case studies - as opposed to what she was looking at doing.” Dr. Clark described how she explained and provided multiple examples of the different types of qualitative research. She said, “There are four major types, and I said, look at them, and read through them.” Dr. Clark provided the following assessment of helping Danielle’s research abilities: “I definitely think that she [Danielle] has learned how to do qualitative research to a much higher level now.

Safe Learning Environment

Danielle also discussed the importance of learning in a safe environment. She highlighted the impact of being in an academic environment where she has a “safety net of the faculty...” Danielle explained further that although she was being graded, she felt she could conduct her research without fear of making a mistake. She said, “... if perhaps it [my research] wasn't the best study or my codes weren't 100% correct, it would not impact me.” “... it would not affect my professional life.” “I'm still a student, and I think that knowing that has been helpful.

Danielle went on to describe the impact of the learning environment that supports personal and professional growth within the MMAS program. She said, “We talked about, you know, a learning culture. Like supporting personal and professional growth, but we don't see it all the time. It's rare. I had to seek it out by doing the MMAS.”

Validation

Danielle commented on the importance of validation during the MMAS program at CGSC when you are not knowledgeable of the military topics discussed during class. Danielle

commented on gaining more confidence while working with Dr. Clark and participating in the MMAS program. Danielle said,

So, I think the reason why I've enjoyed doing this [MMAS] and having this experience with her [Dr. Clark] particularly because I'm not a maneuver officer in this program [CGSC]. Every day I felt like I didn't know what I was doing, and I didn't understand the language.

Danielle described how working with Dr. Clark during the MMAS program made her feel validated. She said, "... I am familiar with doing good research. So, it's been nice to be validated that the thing Army has sent me to learn how to do [research], I actually do pretty well." Danielle identified Dr. Clark as an important part of the process. She said, "So she's [Dr. Clark's] been a big part of that validation piece."

Dr. Clark also said she felt Danielle's confidence was growing. When asked how Danielle may have changed since the last interview, Dr. Clark stated, "I think she's more confident in herself. I think she's more confident in asking for mentorship." Dr. Clark also described the confidence she saw emerging in Danielle since the first interview. When Dr. Clark was asked if she had observed any new or changed behaviors in Danielle, Dr. Clark said the following:

I think she's definitely ready to take things by the reins. I honestly think that she could probably come back and give feedback and teach this [research methods] now. She would be a good mentor for research because she does talk about how much she learned from this...

Final Interview

The last interviews for Danielle and Dr. Clark occurred following the completion of Danielle's MMAS defense and submission of her MMAS thesis but before Danielle graduated from The Command and General Staff School. Field notes from this interview described Danielle as happy to be complete with the program and excited to be graduating from CGSC. She remained extremely positive about her relationship with Dr. Clark and seemed excited that her research may help the Army. Notes on the interview with Dr. Clark described her as proud of her student's success and optimistic about Danielle's abilities to make significant contributions to the Army in the future.

The final interview intended to explore further how their mentor-mentee relationship might influence Danielle's learning experiences during the MMAS program. The results presented in this section focus on the themes that emerged during the final interview, including managing the thesis defense, empowering the learner, modeling leadership, building self-confidence, managing time, developing self-confidence, and overcoming biases. The analysis of each theme is presented in the following sections.

Managing Thesis Defense

During the interview, Danielle highlighted the importance of Dr. Clark's help before and during Danielle's MMAS thesis defense. Danielle explained how Dr. Clark led the meeting. Danielle said, "So she [Dr. Clark] really let everyone know kind of what her expectation was for the defense." Danielle also highlighted the value of Dr. Clark's help when preparing for the defense. Danielle said, "... she [Dr. Clark] let everybody else speak first, which was kind of nice because I already had an idea of the things that she was probably going to ask me." Danielle said, "... she [Dr. Clark] did give me a few questions ahead of time that she said, you know, if

these don't come up, I'm probably going to ask them.” Danielle appreciated having the topics in advance to help prepare for the meeting. Danielle said, “... so I appreciated just having something to think about beforehand...”

Danielle also explained the importance of Dr. Clark keeping the committee on schedule to ensure Danielle could complete her defense on time. Danielle said Dr. Clark was “kind of corralling everybody and making sure that they finish reading and give me feedback which...” Danielle explained, “she [Dr. Clark] hasn't had to do [this] up until this point, but we're coming up against that deadline here, so she's trying to rally the troops one last time.”

Danielle also expressed her appreciation for the learning environment Dr. Clark established during the defense. Danielle said, “I asked her [Dr. Clark] if she wanted me to stand in the front of the room and present, or am I going to sit and discuss with the group? Danielle explained Dr. Clark’s response, “She's like – you'll just sit, and you can flip your slides.” Danielle explained, “It was much more of a relaxed atmosphere.” Danielle explained that Dr. Clark wanted the MMAS to be a positive experience. Danielle said the following about the defense, “She [Dr. Clark] said she liked teaching and creating this positive experience. Now I know she's not kidding.” Danielle also said, “She's [Dr. Clark] an extremely positive [person], so I think that's a nice piece I will take away.”

Dr. Clark mentioned her techniques to help prepare Danielle for her thesis defense during Dr. Clark’s second interview. These included asking students questions in advance and conducting practice or mock defense meetings.

Empowering the Learner

Another theme during the last interview was Dr. Clark’s ability to empower the learner. When the researcher asked Danielle what she had learned from Dr. Clark, Danielle said, “I

learned that there's a way to let somebody come to you with a thought that might not be fully formed – just listen.” Danielle said she learned from Dr. Clark how to listen and guide students through the process rather than telling students what to do. Danielle said, “So she [Dr. Clark] does that [listens] and is really good at drawing out [ideas].” Danielle said,

You may not know the exact question you want to ask, but she's really good at helping you get to whatever it is that was tripping you up without taking over. I never felt like she was telling me what to do.

Dr. Clark discussed techniques she used to help empower Danielle during the MMAS process. Dr. Clark specifically highlighted her question techniques when working with Danielle. Dr. Clark said, “It was really using the Socratic method of pulling out creative thinking. Even asking her what you think you can add to this or is there anything else that would help develop this?”

Dr. Clark also described how she empowered Danielle to make her own decisions during the research process. Dr. Clark said, “I challenged her, and the whole team really challenged her to make her own decisions and think about the amount of information she had and the data.” Dr. Clark went on to describe how she empowered Danielle to develop her approach to the analysis of data. Dr. Clark said, “Do not just follow what one book says that you have to do and how you have to analyze things.” Finally, Dr. Clark recalled the impact of empowering Danielle. Dr. Clark said, “... she [Danielle] created her own definition... and her own triad of looking at triangulation for her methodology.”

Providing Danielle with options and allowing her to make decisions was another important element of empowerment. Dr. Clark described how she and the other committee members provided empowering feedback. Dr. Clark described the feedback, “Okay, we

understand where you're coming from. Here are some other alternatives. Please consider those. And you know, whatever you come up with is fine.”

Modeling Leadership

Danielle explained that she had a better appreciation for Dr. Clark’s approach to leading a committee in the male-dominated environment of CGSOC. When asked if Danielle thought she was thinking in a new way as a result of her relationship with Dr. Clark, she said,

Yes - a little bit. I think I'm always a little bit extra aware, especially in this environment here [CGSOC]. It's the dynamics between men and women because there are so many more men in this environment than there are women, and so I have appreciated she's a strong woman. She's just a strong woman. She's got a strong personality. She's got a strong way of speaking - which I think for some - can probably come across as harsh, but I don't think that anybody that was on the committee or in the room with us feels that way about her. So, it was really interesting to watch the collegial dynamic between the committee members...

Danielle went on to say,

I think that their [committee members] respect for her, you know, as a scientist and as a member of the Army University community. It was nice to see that because there are not a lot of opportunities to watch a strong female mentor interact in a way that was positive.

Basically, I haven't had any female faculty except for her - so she's really been my only exposure to female leadership since I've been here.

While Dr. Clark generally described her interactions with other members of Daniel’s committee as collaborative, she did not specifically identify the importance of effective modeling leadership while working with Danielle during the MMAS program.

Perhaps directly related to modeling leadership were Dr. Clark's comments on mentoring during the second interview. When the researcher asked Dr. Clark what she believed were the overall effects of her relationship with Danielle, Dr. Clark said,

My goal is that when I mentor somebody, it's a positive experience. So that when they go on to be the mentor, they have something to think back on and say, you know, it didn't have to be so grueling, negative, and stressful. You know, it can be a really good collaboration. So, I'm hoping that's what she's taking away from it.

Also related to modeling leadership, Dr. Clark said the following about the growth she had observed in Danielle, "You know- she wants to be the pilot of the ship, so to speak. I think she likes being a mentor for other people."

Developing Self-Confidence

Danielle specifically highlighted how her self-confidence improved after working with Dr. Clark during the MMAS program. When the researcher asked Danielle how she had changed, Danielle said, "I think the biggest change, for me, is just some confidence. A big part of that is from her [Dr. Clark]." Danielle explained how – as a novice researcher – Dr. Clark helped Danielle have more confidence in her research abilities. Danielle said, "... knowing that you know my methods are sound, I'll produce a product that is pretty good. So that was just a confidence boost." Danielle attributed Dr. Clark's support to increasing Danielle's confidence. Danielle said, "Because she [Dr. Clark] was always extremely supportive - I just felt like you know you're doing good."

Danielle explained how conducting research helped her gain confidence when struggling with some of the subjects during CGSOC. Daniel said, "I didn't understand a lot of what was

happening at CGSC – like tactics - and I'd get frustrated.” She went on to say, “The thesis was the thing I went to for security.”

When asked about the impact of her relationship with Dr. Clark, Danielle said the following about self-confidence, “I think the relationship gave me a little bit more confidence to speak to other academics and some feelings of being more confident.” Danielle went on to explain how Dr. Clark helped her. Danielle said, “... because she [Dr. Clark] was behind me and having her be so receptive.”

Later in the interview, Danielle had the following to say about self-confidence and her need for affirmation, “I still needed, you know, every now and then, a little affirmation. Am I doing this right? Am I thinking the right way?” Danielle went on to explain how Dr. Clark would typically respond. Danielle said, “... and she'd be like, yep, totally.”

Dr. Clark also explained the growth she observed in Danielle’s self-confidence during the relationship. Dr. Clark said about Danelle, “She is so much more confident in herself. I mean, like to the point where she would be a fantastic educator on research...”

Dr. Clark also provided an example of Danielle’s improved self-confidence as she described Danelle’s preparation for an important presentation to a senior leader. Dr. Clark said, “I reminded her that ... wanted this meeting because he doesn't know what you know. You're the expert now.” Dr. Clark described how well Danielle presented the information.

When she [Danielle] talked to him, she was just amazing. You would have thought that she was a top researcher in the Army. She was very confident in who she was, very confident in her topic, and pretty fearless while talking about her research.

Managing Time

Danielle also heightened her time management as a skill she improved from working with Dr. Clark. Danielle mentioned how she improved her time management skills while completing all of her CGSOC assignments and still making time to conduct research. Danielle stated the following when asked about new skills she may have developed as a result of working with Dr. Clark, "... time management - hundred percent time management because I had to figure out how to fit it [research] in with all the other things, instead of thesis just being my sole purpose."

Danielle went on to explain the importance of being self-motivated when managing her time during the MMAS program. Danielle said,

Really time management and self-motivation because there were quite a few days when I didn't want to do it [MMAS thesis] at all. I didn't want to open the document. I didn't want to touch the data. I just didn't want to, but I had to find ways to motivate myself in

During the final interview, Dr. Clark did not specifically identify time management or self-motivation as important themes.

Overcoming Biases

Although not explicitly identified by Danielle, Dr. Clark explained how Danielle overcame research biases due to self-reflection during the MMAS program. In addition, Dr. Clark explained the growth she observed in Danielle.

One other thing I saw her grow in was self-reflection. You know, at the beginning, she had a very concrete idea. The expectation of what the outcome was going to be of her research, and I said, well, remember, qualitative is all about finding out about the story. Don't put the cart before the horse.

Dr. Clark explained how, during the MMAS process, Danielle realized her expected outcome was likely biased. Dr. Clark said,

... as she [Danielle] went through the process of interviewing, she would say, oh my God. I just had another interview, and it's just amazing what I learned. Even at the end, she said, you know I didn't like my expected outcome. She's like, I would have never believed that.

Furthermore, Dr. Clark said, "She [Danielle] probably didn't know she had that bias at first. So, I think that was really good, too, because people often can't [see their biases]."

Danielle did not explicitly identify overcoming biases as a theme during her final interview; however, she described how she reflected on her data and determined she needed to change her research question. Danielle said, "... we changed the question because I was basically asking the wrong question..."

Case Two Summary

Data collected from this case provided insights into how mentor-mentee relationships might influence the learning experiences of graduate students. The data collected from Danielle and Dr. Clark focused on exploring their mentor-mentee relationship and qualitatively identified themes that provide information necessary to explore both research subquestions.

Research Subquestion 1: How do graduate students perceive the influences of challenge and support within the mentor-mentee relationship? The themes that emerged while investigating the challenges Danielle experienced during her relationship with Dr. Clark included mentor selection, remote learning, and guiding the research process. The themes that emerged while exploring how Danielle might have experienced support from Dr. Clark included

developing personal connections, providing positive feedback, guiding the research process, providing a safe learning environment, and validating student performance.

Dr. Clark and Danielle also provided examples of modeling, coaching, and scaffolding as outlined in CAT. Their examples highlighted how modeling, coaching, and scaffolding helped to support and challenge Danielle during the MMAS process. The following are examples of each category.

Examples of modeling included Dr. Clark describing how she walked Danielle through different qualitative research methodologies. Dr. Clark said, "... we reviewed the types [of qualitative research], and I sent her a whole bunch of information on case studies - as opposed to what she was looking at doing." Danielle also explained how her mentor modeled leadership while guiding her through the writing process. Danielle said, "I think that there is a way to coach and mentor the process of writing a thesis that is supportive without one either just straight up telling you what to do."

In the area of coaching, both described how Dr. Clark provided guidance and feedback to Danielle. Dr. Clark described how she focused on providing positive and constructive feedback, ensuring her comments were meaningful and not just "... red marks, you know - this is wrong, and that's wrong." Danielle said Dr. Clark's feedback was always positive and unassuming. Danielle said Dr. Clark's feedback was "... kind of subtle. It's not in my face. It's more like a note in the margin saying like oh, hey, that's a really great thought."

In the area of scaffolding, Dr. Clark described how she provided support throughout the process while gradually fading or allowing Danielle to become more independent in accomplishing the task over time. Dr. Clark said, "I challenged her [Danielle] to make her own decisions and think about the amount of information she had..." Danielle said, "I learned that

there's a way to let somebody come to you with a thought that might not be fully formed – just listen.” Danielle said she learned from Dr. Clark how to listen and lead students through the process rather than telling students what to do. Dr. Clark also highlighted Danielle’s reflection. She said, “One other thing I saw her [Danielle] grow in was self-reflection.”

Research Subquestion 2: How do graduate students perceive the relationship with the mentors influencing the acquisition or modification of existing knowledge, skills, behaviors, or preferences? The data from this case also provided insights into how Danelle may have acquired or modified her existing knowledge, skills, behaviors, or preferences. The themes that emerged during the final interview included managing the thesis defense, empowering the learner, modeling leadership, building self-confidence, managing time, developing self-confidence, and overcoming biases.

Through articulation, reflection, and exploration, Danielle also described her acquisition or modification of specific knowledge, skills, and behaviors as influenced by her relationship with Dr. Clark. The following are examples of each category.

During the interviews, several comments aligned with the theme of articulation as the mentee described her experiences during the MMAS process. Danielle highlighted the importance of working with Dr. Clark as one of the few women faculty in CGSC and verbalized her thoughts about learning from one of the few women teaching. Danielle said, “It's the dynamics between men and women because there are so many more men in this environment than there are women, and so I have appreciated that she’s [Dr. Clark] a strong woman.”

Dr. Clark specifically highlighted reflection in her journal comments. Dr. Clark wrote, “I also noted that she [Danielle] was very reflective...” Danielle reinforced Dr. Clark’s journal comments during the interview. When Danielle was asked to self-assess how she may have

changed, Danielle said, “I think the biggest change for me is just some confidence. A big part of that is from her [Dr. Clark].” Danielle also reflected on her motivation to write her thesis. She said, “I didn’t want to open the document. I didn’t want to touch the data. I just didn’t want to, but I had to find ways to motivate myself.” Danielle also described how her self-confidence improved working with Dr. Clark. Danielle said, “... knowing that my [research] methods are sound, I’ll produce a product that is pretty good. So that was just a confidence boost.”

Danielle also provided insights aligned with exploration and on how she may use her new knowledge, skills, or behaviors beyond the experiences she had with her mentor during the MMAS program. For example, Danielle said time management is one of the skills she will use in the future. Danielle said, “... time management - hundred percent time management because I had to figure [it] out.” Danielle also commented on maintaining a positive outlook in the future based on her experiences with Dr. Clark. Danielle said, “She’s [Dr. Clark] an extremely positive [person], so I think that’s a nice piece I will take away.”

Case Three

Unlike the previous two cases, this case only includes two sets of interviews. Dr. Edwards and Felicia volunteered to participate in this study after the first interviews were already complete for the other two cases.

Dr. Edwards (Mentor 3)

Dr. Edwards was the MMAS Chair for Felicia during this study. Dr. Clark was an experienced male MMAS instructor, between the age of 50 and 70, with more than ten years of experience teaching at CGSC. He had chaired more than 20 MMAS students prior to participating in this study.

Felicia (Mentee 3)

Felicia was an MMAS student, between the age of 30 and 40, with more than ten years of experience in the U.S. Army. She attended the resident Command and General Staff Officers Course (CGSOC) at Fort Leavenworth, KS., and graduated with the CGSOC Class of 2021.

First Interview

Felicia volunteered to participate in the study following the researcher's third presentation to the MMAS class requesting student volunteers. With Felicia's permission, the researcher contacted Dr. Edwards, who also agreed to participate in the study. Due to the delayed entry into this study, the researcher asked the first and second sets of interview questions during their first meeting. Field notes from these interviews described Felicia as somewhat uncertain, apprehensive, and frustrated with the MMAS process. Dr. Edwards appeared enthusiastic to share his MMAS experiences and optimistic that Felicia was doing well in the program.

Qualitative analysis of the data collected from Felicia's and Dr. Edwards' responses to their journal and interview questions identified the following themes: MMAS program preparation, mentor-mentee section, remote learning environment, mentor expectations, research process, feedback, developing self-confidence and overcoming biases. The analysis of each theme is presented in the following sections.

MMAS Program Preparation

During the first interview, Felicia mentioned that she had little knowledge of the MMAS program before attending CGSOC. She said, "... I didn't know about the MMAS before coming to the CGSC." She went on to say, "I wish that I would have known more." She explained how she thought some other students may have had more knowledge of the program. She said, "... I

don't know if that [knowledge] was from other folks who had come through the [MMAS] program.” She also explained, “... some others [peers] had topics over the summer, and they had been working on it.”

Dr. Edwards described how he sought out the advice of experienced MMAS instructors and reflected on his own research experiences to prepare to become an MMAS Chair. He said, “I spent a fair amount of time with [MMAS faculty] talking about the process.” He said, “... I found the more I talked with them, the more it kind of also helped me...”

Mentor-Mentee Selection

Felicia mentioned that she was confused by the process of selecting a mentor. She mentioned that she was unsure how to select her MMAS chair and described that her selection of Dr. Edwards was somewhat unintentional. Felicia said,

I didn't have a mentor or a committee Chair yet. I was still just figuring out whether or not I wanted to continue [in] the program. So, I was actually wandering around and trying to figure out ... [what] I was supposed to do and who we were supposed to meet with. Anyway, on my way to Dr. Edwards's office to find out the information and when was our next meeting, and he asked me what my topic was about, and we started a relationship there.

Felicia went on to say, “I was fortunate enough to find someone while the rest of my peers were still having trouble trying to find someone [to chair].” She also said, “Dr. Edwards kind of fell into my lap.”

Dr. Edwards described how students elect him to chair their MMAS committees. He said, “

A lot of what [topics] I get is through word of mouth. I also turn down probably twice as many. Students request me just because of word of mouth. You know, people say I did mine with this guy; you might want to ask him. So, I end up turning away a lot now because I just don't have time to do my job.

Dr. Edwards also described the students he likes to select students who are responsible, committed to the research process, and passionate about the subject. He said,

I also want someone who also is responsible. Most of my students are like the ones this year. I have their phone numbers in my iPhone. We call and talk, and I like people who don't mind coming in to see me at six in the morning or talking to me on Sunday evening if needed. Because of my schedule, our conversations sometimes have to be at different times. So, I'm looking for somebody who's really committed and someone who really has a passion for the subject.

Remote Learning Environment

Another theme that emerged during the first interview was the impact of COVID-19 and remote learning while participating in the MMAS program. Felicia expressed her concern for the health of her faculty and classmates. Felicia said, “I think because of Covid, you know, there were times where I wanted to be supportive of [the committee’s] health, so I didn't meet a lot in person...” Felicia went on to explain how the COVID-19 environment and the busy schedules of the faculty required the committee to meet using collaborative technologies. She said, “... that also meant me not reaching out as much during Blackboard check-ins. She said,

I know he [Dr. Edwards] is very busy..., so I think if it were a different environment where I [could] get everyone on board to meet, I would. I'm more of an in-person person. That's what I work better with.

Felicia went on to say, "... and I think the environment with [my committee] working from home, it's very hard." And, she continued, "I still have yet to get everyone together."

Dr. Edwards did not specifically mention the remote learning environment during the interview.

Mentor Expectations

Felicia also explained the impact of Dr. Edwards' expectations of his MMAS students. Felicia said,

So, I think the struggle for me, and I think it wasn't until I met with Dr. Edwards before my application was due, was to really understand the methodology that he [Dr. Edwards] wanted me to use, and how he wanted me to set up my paper.

She continued the interview by explaining Dr. Edwards's influence on her thesis. She said,

I think there is a lot that can be said about the influence the committee chair has on your thesis. Dr. Edwards defiantly knows what he wants, and he will make your paper - you know - to be able to publish a respectable paper that people will read...

Felicia said that once she understood Dr. Edwards' expectations and the methodology he wanted her to use, she was able to begin her program. She said, "... I think me sitting down and understanding what he [Dr. Edwards] wanted with the methodology, helped me to find a good stride."

Later in the interview, Felicia expressed frustration as new information she found while researching her topic made her consider collecting data from other sources. She realized how the change would impact her study. She said, "... but then I have to change my methodology if I want to use any of that [new data]." Felicia said, "So, it was a little hard for me to say – Okay, let me go with Dr. Edwards's approach, and I know he knows what's best."

Felicia rewrote Chapter Four. She said the following about the process, "... some of the parts of the process that maybe I would say was frustrating. It was just a little bit hard for me to be able to rework or produce this [Chapter Four]."

Research Process

Felicia explained her frustrations with the research process and how Dr. Edwards helped her overcome her challenges. She said,

I was a little bit frustrated with the program itself and what it taught. How it [MMAS Class] met once a week and how it was organized. So we were talking about organization and methodology pretty much at the end of the semester but were supposed to have turned in our prospectus by early November.

She also described how Dr. Edwards helped her during the research process. She said, "So luckily, I felt fortunate that I had Dr. Edwards. He made the organization part of it so much easier. I'm not sure my peers in the MMAS program had that, but it defiantly helped me."

She also highlighted the challenges she experienced while developing her research methodology. "I felt a little bit defeated because I didn't have the opportunity - maybe it was my own fault - to sit down when I did question myself and talk to Dr. Edwards about my methodology."

She also explained how she and Dr. Edwards would meet every couple of weeks to discuss her methodology; however, she still was challenged to understand the process. She said,

We met a couple of times to walk through the methodologies, but I think he does it so often - every year, it just comes naturally. But for me, I'm like, I don't understand it. I didn't understand the approaches.

Dr. Edwards described how he provided Felicia with guidance on the research process. For example, he said, "... [I] provide some examples of what benchmarking looks like for evaluation criteria..." Dr. Edwards also explained how he structured her literature review and methodology.

I think I also helped her when defining what a literature review should look like. You know, I'm pretty directive on how I want students to do their literature reviews." I want a summary of the literature review as step one in the methodology – Chapter Three. This helps ensure there is a connection between the literature review, the methodology, and their primary and secondary questions.

Dr. Edwards explained how he gave his students a presentation at the start of their research explaining his process. He said, "I have a PowerPoint show I give them that describes this process. I think once they see it, it kind of clicks. Ultimately, I want them to remember this throughout the whole process."

Dr. Edwards also commented on Felicia's ability to apply the research process in the future. He said,

I think she could take that same topic or a related topic and do it in half the time now. I think she knows it's not about writing; it's about thinking. She knows how to use the model of writing a dissertation or thesis and applying that model. I think she has a much better understanding of why you have a literature review, what needs to be in a literature review, and what needs to go in Chapter Four. So, you know, she's learned a great deal, and I think it's going to be a big advantage to her when she writes a staff paper as a staff officer.

Feedback

Felicia highlighted the importance of feedback from Dr. Edwards. She said, "... I feel like the time I do have with Dr. Edwards is so helpful, and he gives great feedback on what I'm writing, and so it helps..." Felicia also accepted responsibility for producing research products and asking for feedback. She said, "I feel like I may not produce or communicate with him enough. I feel he is definitely someone who wants the student to reach out more, maybe, and that's just because of his schedule." She also said, "... he's [Dr. Edwards] willing to help. I think there's just so much of his day job that may hinder some of our communication." At the time of the first interview, she said she had not yet received feedback from Dr. Edwards on Chapter Four. "So, I finished with my Chapter Four. It is with Dr. Edwards right now, and so hopefully..." She went on to say, "... he is really busy..." and, "... we'll see what he has to say." Felicia also described the impact Dr. Edwards had on the feedback she received from her other committee members. She said,

... [my committee members] really respect Dr. Edwards, and they normally wait to see what he says first. They'll say, I'll just give you my perspective of what this means to me and what it's going to mean to the force. They're not trying to get into the ins and outs of what is on [the] paper. And so, that's great as well.

One challenge she identified for MAAS students related to feedback was asking questions. She said, "I think there is that problem for officers, especially high achieving officers who want to get it right the first time. You don't ask questions. Even if you're concerned, you'll seek out the answers yourself."

Felicia also commented on the value of peer feedback. She explained how her faculty grouped graduate students to provide peer feedback to one another on their research. Felicia said, "So we have a peer review group... I'm actually paired with two [peers]... She explained

how the peer feedback was sometimes not aligned with the guidance she received from Dr. Edwards. She said,

We [peer group] had our first meeting a few weeks ago, and they were like, you know, I recommend you make x, y, or z. And I'm like, well, those are actually points my Chair has directed me to do.

She went on to say, “but it's great to get info back from them [peers] too.”

Dr. Edwards also highlighted feedback during the interview. He described how Felicia responded to his feedback.

I would give her feedback, and she would squint her eyes and think about it, and then she would get back to me in about a week with exactly what we talked about. You know, she was very good about listening to guidance and following through with it. She took copious notes - that made it very easy.

Personal Connection

During the interview, Felicia assessed her relationship with her MMAS Chair as not close. She said, “I think he's [Dr. Edwards] there if I need him, but I also don't feel like I have that close of a relationship.”

Dr. Edwards stated one of the reasons he participates in the MMAS program is his personal connections with students. He said, “I enjoyed the intellectual inquiry and working with the students closely... It's fun to get to know a student reasonably well, at least intellectually.” He also described that his current relationships are not as close as others in the past. He said, “And so I don't have as close of a relationship with some of the students now that I used to...” Dr. Edwards said about his specific relationship with Felicia, “ So I'm not as close

with Felicia as I have done in the past, but you know, I still meet with her five or six times throughout the year.”

Developing Self-Confidence

Felicia described the impact of affirmation on her self-confidence. She said, “part of me is somewhat like a people pleaser at times because I want someone to accept my work and to praise me.” At the time of the second interview, Felicia stated the lack of positive feedback from Dr. Edwards impacted her self-confidence. Felicia said, “He doesn't give a lot of praising, and so, sometimes, I question myself.” She also commented on the impact of watching some of her peers interacting with their MMAS Chairs. Felicia said, “So they're [MMAS student and their chair] always talking, and I'm a little jealous that I don't have that.”

Dr. Edwards described his assessment of how Felicia's self-confidence changed. He said,

One thing that's probably helped her a lot and was one of her biggest changes I didn't mention is that she has overcome some imposter syndrome. I think she felt like she was not worthy of being in the [program]. I think today she realizes she does.

Dr. Edwards also described the impact of Felicia's improved self-confidence on her and the program. He said, “I think she enhanced the whole program, and now, I think she realizes that she's good enough, she belongs, and she could join other high-performing programs.” His overall assessment was, “She lacked some confidence, and I believe she has greater confidence because she's achieved a pretty high standard.”

Overcoming Biases

Dr. Edwards described how he felt the MMAS process helped Felicia to overcome

biases. He said, “She came in knowing the answer. As she went through this process, I think she realized it's much more complex than she thought.” Dr. Edwards went on to say,

And I think she also just has a greater understanding of second and third-order effects.

She's really grown. She has more questions than answers today, which I believe is an essential part of the growth process.”

Dr. Edwards also said that he thought Felicia understood better how to deal with her biases.

When asked if Dr. Edwards thought Felicia had changed throughout the MMAS process, Dr.

Edwards said, “Yes - she's less reactive. She's less likely to latch on to her preconceived notions.”

Final Interview

The last interviews for Felicia and Dr. Edwards occurred following the completion of Felicia’s MMAS defense but before Felicia graduated from CGSOC. Field notes from these interviews described Felicia as more confident, happy with the MMAS program, and appreciative of the support she received from Dr. Edwards. Likewise, notes from the interview with Dr. Edwards showed that he remained open and enthusiastic about sharing his experiences with Felicia as well as his experiences working with other MMAS students.

Analysis of the data collected at the end of this case revealed the following themes broadening perspective, overcoming self-doubt, meeting mentor expectations, networking with people, considering academically focused assignments, thinking critically and creatively, writing effectively, and trusting the mentor. The analysis of each theme is presented in the following sections.

New Outlook

During the last interview, Felicia described how Dr. Edwards helped her see her topic differently. Felicia said, “I can still think about it [topic] through a different lens...” She said, “... and how I can start looking at things differently now that I've done this research, and now that I've had this experience...”

Dr. Edwards also commented on Felicia becoming more open-minded during the MMAS program. He said, “She was a little bit hesitant at first because she knew the answers, and I think in the end, she was kind of glad that I've made her be a bit more open-minded.” Dr. Edwards explained this was particularly important when Felicia began her research, thinking she already knew the answers to her research questions. Dr. Edwards said, “Probably the hardest thing for her to do was not get invested in the answer.”

Dr. Edwards further comments on how he thought Felicia’s outlook changed during the MMAS process. He said,

I think she became more of a member of the profession. I feel like she felt like she was no longer a young Captain that's in the Army to see if it will be a career. I think she became a professional and field-grade officer making this her career. I think her outlook changed from a company grade to a field grade, and she became a leader that needed to set examples.

Overcoming Self-Doubt

Felicia also described how working with Dr. Edwards helped her overcome self-doubt. Working with Dr. Edwards, Felicia said, helped her realize she had more knowledge on the topic than she thought. She said, “... seeing that you can do it, and you know more than what you think you know.” She further described how she no longer doubted her ability to respond to challenges. She said,

People are going to continue to challenge you, and it may surprise you when they do, but you have the tools available to be able to meet that challenge. I think, most importantly, to continue to challenge yourself that I know more than I think I know. I think, initially, I may have had some imposter syndrome, but it was satisfying in the end when Dr. Edwards nominated my thesis for [an award].

Dr. Edwards also commented on Felicia's self-doubt. He said, "I think her confidence level was low at first." He went on to say, "She had a bit of an imposter syndrome. She had this feeling she didn't belong [in the program] ..." Dr. Edwards commented on seeing Felicia overcome her self-doubt. He said,

And then, I think after she got some good feedback, and I think she held her own during discussions in class. You know, I think she realized I can keep up with these guys. I think that made a big difference.

In the end, Dr. Edwards stated, "I think now that she has gone through the process and realizes that she did very well, her grades were super, and she got nominated for an award.

One of the most significant changes Dr. Edwards identified about Felicia during the final interview was the absence of self-doubt. He said the following about Felicia at graduation,

Her resolve was stronger, and she stood up taller. When people asked her questions, she looked them in the eye much more. You know, I do think she gained confidence and the ability to go toe to toe with people. That's the biggest behavioral change. You know, when she first came into the office, I saw somebody who was not quite sure what you want to do, and not really sure about coming into my office, not really sure if she wanted it. Maybe I don't put my name in for [an academic program]. You know, I probably won't

get accepted. At graduation, I thought she was more confident, and it was a huge change.

It was neat to see.

Meeting Mentor Expectations

Felicia also described how Dr. Edwards challenged her to meet his expectations while in the MMAS program. She described how Dr. Edwards challenged her to do as well or better than a previous student. She said the following about a conversation with Dr. Edwards at the start of the MMAS program. She recalled Dr. Edwards telling her, "... [former student] went to [university], and you [Felicia] went to [a different university], so she may be better. But your thesis topic is better, so we'll see." Felicia described how that motivated her to meet Dr. Edwards' expectations. She said, "So, I thought that was funny, but it definitely encouraged me along the way to want to continue, not only do better but also not to let him [Dr. Edwards]

Networking with People

Felicia also described the importance of working with Dr. Edwards to find people to talk to about her topic. She explained that traditional resources were hard to find and how Dr. Edwards helped her talk with experts who could provide the information Felicia needed. Felicia said, "I couldn't find what I needed going to a library and looking." When she discussed the issue with Dr. Edwards, she recalled him saying, "... have you thought about talking to this person?" She went on to describe the effects of Dr. Edwards' assistance. She said, "... it turned into an ability to connect and network with people..." Felicia also described how she overcame her nervousness when talking with experts and how the experts helped her expand her network. She said,

... at first, I would have been nervous to talk to. You know, I was working with the Army [senior leader], and that was scary. But knowing who to talk to, and that all of

these people are willing to help, and that they share [information], and say, well, I think you should talk to this person. So, there's just this network that I was able to gain...

Considering Academically Focused Career Options

During the final interview, Felicia described how her thinking changed about operational versus academically focused assignments due to working with Dr. Edwards. Felicia said the following when asked how she changed:

I think that's the biggest thing that changed in me. I was very operationally minded as a young [officer], and when you see you can succeed and have that validation [academic], then this is the route I need to go. It takes mentors or other people to encourage you to maybe try another route.

She described how her exposure to academic writing and other academically focused career opportunities enabled her to consider options she would not have considered previously. She said,

Just thinking about it [Advanced Military Studies Strategic Planning and Policy Program] before, it would've been too daunting for me. I'm still a bit worried about how much I would have to write, but at the same time, you see, other people have done it, and you know that you can do it. I think that has been the most encouraging piece about the MMAS program.

Dr. Edwards also commented on Felicia's potential to continue academically. He said,

I think now she realized that if she wanted to get a Ph.D. and I wanted to crack down, she could do it. She has the capability of consuming data, writing to that level, and assimilating all that information together. I think that's huge for her.

Thinking Critically and Creatively

Felicia also identified thinking critically and creatively as a new skill she obtained while working with Dr. Edwards. When asked if she had any new skills, she said, “Yes. I think the ability to think critically, as well as being creative.” She described how she overcame research challenges during the MMAS program using critical thinking to review prior research on different topics that may also be relevant to her thesis. She said,

... looking at your lit [literature] review and seeing prior research helped. Before that, I thought to myself, oh, there's not much on [my topic] here, but there's actually [a lot]. While it's not the same topic, people are looking at it from a different lens through different experiences.

She explained, “But I think that [research] can still apply... Just having that ability to think about it critically and then being able to find [the information].” She also explained how she used critical thinking to deconstruct ideas. She said, “The other skill I think I learned was just knowing how to research and how to deconstruct [ideas].” She described the critical thinking questions she learned,

... through my own experience, how can I look at this [my topic] from a different perspective? How can I deconstruct this argument better? From the research perspective, that was really good. I think I can take it forward.

Felicia also explained how she worked with Dr. Edwards to expand her creative thinking abilities. She said, “I can be more creative in how I express what I want other people to take in. It was important, and Dr. Edwards told me to share my own story.”

Dr. Edwards also highlighted her creativity and her ability to write in a personal way. He said, “She also developed the ability to write in a personal way and then to make a shift and write dispassionately about her research. Making that shift was a skill that she didn't really have before.”

Writing Effectively

Felica described changes in the writing process she developed as a result of the MMAS program. She explained how she had to overcome procrastination to meet MMAS milestones. She said, “I would say I'm a procrastinator, and I really couldn't do that. So, I think being disciplined enough to take the time to actually schedule a time to sit down and write was important.” She went on to say,

I was not very good at that in undergrad or Grad school - I definitely waited until the last minute. So, I think just having that structure and being more disciplined. Now, I can get done with things, and I'm not as stressed.

She specifically identified Dr. Edwards' role in overcoming procrastination. She said, “In the end, I think that ties back to Dr. Edwards keeping me on track and wanting to see my drafts along the way.”

She also described how she changed her behavior to avoid being a perfectionist when writing. She said she learned, “you don't have to be perfect on that first draft.” She also said, “if you're stuck, just like bracket it and come back. You can move on and get all your thoughts and your ideas out there.”

Alicia also highlighted how she thinks differently about the writing process. She said the following about her writing process:

I'm thinking about who I'm writing for, who's my audience, and so what. I look at where I need to research and what priorities. I think about how I want to make the argument and who I want to write for.

As a result of her improved writing, Felicia also said she is now interested in writing for publication. She said,

I have not published before because I was always discouraged by thinking I was not a great writer and no one wanted to hear what I have to say. So, I think I want to write for publication and write for a magazine.

Dr. Edwards described Felicia as a good writer who learned to start the writing process better and organize her information into digestible parts. Dr. Edwards said, “She was a good writer.” “... but I think it was through the process where she probably learned the most.” Dr. Edwards said the following about the writing process:

It was coming up with ideas. Where do I put the pen down first? Where do I start, and then how do I manage this and break it into bite-sized chunks? And then, how do I go back and look at it and see if it makes sense to me?

Dr. Edwards also described how Felicia’s confidence increased as her writing improved. He said, “I think the other thing is just having the confidence that she could do that and produce something worthwhile for somebody to read.”

Dr. Edwards also explained how as a result of the MMAS program, he felt Felicia could write an equally long research paper in about half of the time. “I think she's changed, where she knows she can do that [write a research paper].” Dr. Edwards also explained Felicia’s response to his question about how long it would take her to write a research paper again. He said,

And you know, one of the questions I asked her was, how long would it take you if you had to do this all over again on a different topic? She did an excellent job on this topic in eight months. She said in about half the time. You know, I think that's very true.

Trusting the Mentor

Felicia described how she had to trust Dr. Edwards' approach and the methodology he wanted her to use in the MMAS program. In the beginning, she said, "Dr. Edwards really wanted to keep me on a specific methodology, and I really didn't like his methodology." She described how she eventually appreciated his approach. She said, "I grew to appreciate it, though, and it kept me on track." She also described how her initial approach involved collecting qualitative and quantitative data. She said, "I wanted to approach it [her research] with both a qualitative and quantitative approach because I thought I needed a lot of numbers." She went on to say that she had to trust Dr. Edwards when he thought it might take too long to collect her data. She said, "Dr. Edwards was like we only have ten months or less to get this done, and that might take you way more time." In the end, Felicia said, "So, I think he knew, and I had to trust him. I didn't like it at first, but in the end, it worked."

Dr. Edwards highlighted some of his expectations for his MMAS student's methodology. He said, "So, you know, I have them define evaluation criteria and what the evaluation criteria is, why they use them..." He also explained the importance of defining the evaluation criteria: "You know, for most of these MMAS theses and dissertations, once you have developed a hypothesis and once you've developed your evaluation criteria, you're halfway through." Dr. Edwards' assessment was, "Once I went through that, I think it actually gave her some flexibility and kind of helped her out."

Case Three Summary

Data collected from this case provided insights into how mentor-mentee relationships might influence the learning experiences of graduate students. The data collected from Felicia and Dr. Edwards focused on exploring their mentor-mentee relationship and qualitatively identified themes that provide information necessary to explore both research subquestions.

Research Subquestion 1: How do graduate students perceive the influences of challenge and support within the mentor-mentee relationship? The themes that emerged while investigating the challenges Felicia experienced during her relationship with Dr. Edwards included MMAS program preparation, mentor-mentee selection, the remote learning environment, and mentor expectation. In addition, the themes that emerged while exploring how Felicia might have experienced support from Dr. Edwards included the research process, feedback, self-confidence, and overcoming biases.

Dr. Edwards and Felicia also provided examples of modeling, coaching, and scaffolding as outlined in CAT. In addition, data collected during their interviews highlighted how modeling, coaching, and scaffolding helped to support and challenge Felicia during the MMAS process. The following are examples of each category.

Examples of modeling included Dr. Clark providing specific details on the MMAS thesis format and writing process. During the first interview, Dr. Clark described how he walked Felicia through aligning her literature review, methodology, and research questions. Dr. Clark said,

I'm pretty directive on how I want students to do their literature reviews. I want a summary of the literature review as step one in the methodology. This helps ensure there

is a connection between the literature review, the methodology, and their primary and secondary questions.

Felicia also described how Dr. Edwards provided modeling. During her first interview, when asked how Dr. Edwards challenged her, she said, "I think just his way of what he wants and his way of putting together a thesis." During the second interview, Felicia said, "Dr. Edwards really kept me on track, and also, with my thesis, he ensured that every step of the way that I continue to edit it."

Both described how Dr. Edwards provided guidance and feedback to Felicia in the area of coaching. For example, Dr. Edwards wrote about guiding his journal response before the first interview. In his response, he wrote, "My support has been primarily in providing guidance in the development of her thesis, which includes discussions about the topic throughout the year as her thesis chair." Dr. Edwards also described how Felicia responded to his guidance during the first interview. He said, "... she was very good about listening to guidance and following through with it."

Similarly, Felicia commented in her reflective journal before the first interview on the feedback she received from Dr. Edwards. In her journal response, she wrote, "Dr. Edwards is very knowledgeable on my thesis's topic, and he readily provides feedback with the aim of making my arguments stronger." Felicia also mentioned Dr. Edwards' feedback in her first interview. She said, "Dr. Edwards is so helpful, and he gives great feedback on what I'm writing."

In the area of scaffolding, Dr. Edwards described how he provided support throughout the process, intending to help Felicia conduct research and write papers on her own. During the second interview, Dr. Edwards said, "She knows how to use the model of writing a dissertation

or thesis and applying that model... I think it's going to be a big advantage to her when she writes a staff paper as a staff officer."

Felicia also described how Dr. Edwards supported her by helping to scope her research. In addition, she described how she better understood Dr. Edwards' specific research approach and his desire to align her research tasks in a way that would enable her to complete her MMAS on time. She said, "He helped me with that [methodology], and I appreciate it now because I know it would have been a lot of work."

Research Subquestion 2: How do graduate students perceive the relationship with the mentors influencing the acquisition or modification of existing knowledge, skills, behaviors, or preferences? The data from this case also provided insights into how Danelle may have acquired or modified her existing knowledge, skills, behaviors, or preferences. The themes that emerged during the final interview included managing the thesis defense, empowering the learner, modeling leadership, building self-confidence, managing time, developing self-confidence, and overcoming biases.

Through articulation, reflection, and exploration, Felicia also described her acquisition or modification of specific knowledge, skills, and behaviors as influenced by her relationship with Dr. Edwards. The following are examples of each category.

During the interviews, several comments aligned with the theme of articulation as Felicia described her experiences during the MMAS process. She described how she learned to conduct research. When asked about what new knowledge she acquired while working with Dr. Edwards, she said, "I think going back to the ability to know where to research or know who to talk to..." She also said, "and thinking about being a scholar soldier." Dr. Edwards also observed articulation by Felicia. Dr. Edwards described how Felicia responded to guidance on her research

process. Dr. Edwards said the following about Felicia's learning during the MMAS process, "... I think it was the thought process where she probably learned the most. It was coming up with ideas, where do I put the pen down first, where do I start..."

Felicia also made comments which demonstrated her reflection. When asked to self-assess her performance during the MMAS process, she said, "I'm a procrastinator, and I really couldn't do that. So, I think being disciplined enough to take the time to actually schedule a time to sit down and write was important." She also self-assessed her approach to Dr. Edwards's MMAS methodology. She said, "Dr. Edwards really wanted to keep me on a specific methodology, and I really didn't like his methodology. I grew to appreciate it, though, and it kept me on track." Dr. Edwards also commented on Felicia's self-assessment and confidence. During the first interview, Dr. Edwards said, "I think her confidence level was low at first. And then, I think after she got some good feedback... You know, I think she realized I can keep up with these guys."

Felicia also provided insights aligned with exploration and how she may use her new knowledge, skills, or behaviors beyond the MMAS program. For example, Felicia said, "... this encouraged me to think about applying to the ASP3 program [School of Advanced Military Studies Strategic Planning and Policy Program] and thinking about being a scholar soldier." Dr. Edwards also commented on Felicia's exploration of research techniques beyond the MMAS program. He said, "I think now she realized that if she wanted to get a Ph.D. and I wanted to crack down, she could do it. She has the capability of consuming data, writing to that level, and assimilating all that information together."

Research Subquestion 2: How do graduate students perceive the relationship with the mentors influencing the acquisition or modification of existing knowledge, skills, behaviors, or

preferences? The data from this case also provided insights into how Felicia may have acquired or modified her existing knowledge, skills, behaviors, or preferences. The themes that best aligned with how Felicia might have acquired or modified her existing knowledge included networking with people, considering future academically-focused assignments, thinking critically and creatively, writing effectively, and trusting the mentor.

Cross-Case Analysis

A comparative analysis of the themes within each respective case identified nine cross-case themes. The researcher organized the cross-case themes as they emerged into categories generally aligned with the conceptual framework presented in Chapter 3. The identified cross-case themes were well aligned with their respective research subquestions and provided important insights to explore the primary research question: How might mentor-mentee relationships influence the learning experiences of graduate students? The categories included the educational context, mentor-mentee relationship factors (support and challenge), and the acquisition or modification of knowledge, skills, behaviors, and preferences. Table 4.1 lists the themes from each case aligned with the conceptual framework. The themes that emerged from the cross-case analysis of mentor-mentee relationship factors included research guidance and feedback. The themes that best aligned with acquiring or modifying knowledge, skills, behaviors, or preferences included new perspectives knowledge, improved communications skills, and increased self-efficacy behaviors. This study did not identify cross-case themes related to the acquisition or modification of preferences.

Table 4.1.

Cross-Case Analysis Table

	Educational Context	Relationship Features	Acquisition or Modification
Case 1	Program Preparation Mentor Selection	Academic Guidance	Communicating Overcoming Obstacles Checks and Balances
Case 2	Program Preparation Mentor Selection Remote Learning Environment	Positive Feedback	Overcoming Biases Building Self-Confidence
Case 3	Program Preparation Mentor Selection The Remote Learning Environment	The Research Process Feedback	New Outlook Writing Effectively Developing Self-Confidence
Cross- Case Synthesis	Program Preparation Mentor Selection Remote Learning	Research Guidance Feedback	New Perspectives Communication Skills Self-Efficacy

Educational Context

Although not explicitly addressed by the research questions, the study included questions designed to explore the educational context within which the mentor-mentee relationships were formed. By exploring the educational context, the researcher gained an improved understanding of the contextual challenges affecting mentor-mentee relationships. The cross-case themes best aligned with the educational context included program preparation, mentor-mentee section, and the remote learning environment.

Program Preparation

All three cases identified program preparation as a theme within the educational context of their mentor-mentee relationships during the MMAS program. This cross-case theme primarily emerged from the mentees during the initial interviews; however, the mentors also identified challenges associated with their preparation to become Chairs of MMAS committees.

All of the mentees highlighted their lack of knowledge of the program before attending CGSOC. One mentee stated, “I can't say that I had even known the program existed prior to getting here [CGSC].” Additionally, the mentees identified that a lack of prior knowledge of the program hindered their ability to select research topics before arriving at CGSC. One mentee stated, “I had no pre-planned [topic] prior to arriving here.” Another said, “I wish that I would have known more [prior to CGSOC].” Finally, the mentees identified a lack of prior understanding of the CGSOC organization as negatively impacting their abilities to participate in the MMAS program. One mentee stated, “...not understand the structure of the schoolhouse and the departments... and the letters behind people's department names. They were basically meaningless to me at that point [start of the MMAS program].”

Mentors also identified program preparation as a theme during the study. Specifically, the mentors highlighted the preparation they had to become MMAS chairs was predominantly talking with other MMAS faculty. One mentor commented, “I probably talked to a few other faculty who did it before....” Another mentor said, “I spent a fair amount of time with [MMAS faculty] talking about the process.” The mentor said, “... I found the more I talked with them, the more it kind of also helped me...” None of the mentors in this study identified a CGSOC program to prepare faculty to chair MMAS committees.

Overall, the cross-case analysis identified program preparation as an important issue for mentors and mentees in the study. Specifically, mentees' lack of prior knowledge of the MMAS program and the self-directed approach to mentor preparation emerged across all cases.

Mentor Selection

All of the mentees in this study commented on their challenges in choosing MMAS Chairs. The primary resource the mentees used to select their mentors was a spreadsheet maintained by CGSOC listing faculty and their respective areas of interest. The mentees only mentioned the requirement for an MMAS committee member with a terminal degree. The compressed nature of the MMAS program also impacted mentor selections, as the students had only ten months to complete the program. One mentee explained the MMAS chair selection process as “nerve-wracking” when, not knowing any of the faculty, she picked faculty names from a list of names and interests provided by the MMAS program. Two mentees said they felt “lucky” to get the mentors they selected by emailing faculty from the CGSOC spreadsheet. One mentee said, “So, luckily, I did a cold email... and it just worked out.”

Similarly, the mentors highlighted terminal degree requirements and the spreadsheet as the two key themes within the mentor selection process. The mentors felt students specifically sought them out because of the terminal degrees. One mentor said, “... [students] come from just people sending out emails saying, hey, I need a Ph.D.”

Generally, mentor selection emerged as a challenge for mentees during the cross-case analysis. Using a faculty spreadsheet, sending “cold emails,” and a lack of understanding of the CGSOC organization impacted the mentees' abilities to select a mentor. In addition, mentors highlighted a focus on terminal degrees as a critical mentor-selection criterion.

Remote Learning

While unanticipated at the start of this research, the remote learning environment caused by the COVID-19 pandemic emerged as an important theme during the cross-case analysis. The impacts of the remote learning environment were mixed.

Two mentees generally described the remote learning environment as positive and effective. One specifically said, “It's been really, really good for being remote. I don't feel like I'm missing out by not being able to sit in the same room...” However, another mentee did not have as positive an experience as the other two. One mentee indicated that face-to-face would have worked better for their committee. The mentee said, “I think if it were a different environment where I [could] get everyone on board to meet, I would. I'm more of an in-person person. That's what I work better with.”

Similarly, the mentors also described the remote learning environment as mixed. One mentor highlighted the effectiveness and potential to expand the virtual learning environment to help others improve their research abilities. The mentor said, Dr. Clark said. “I definitely think this [remote learning] is something even to consider for the future, is to build a virtual class.” One mentor stated they might have had less contact with their MMAS student due to COVID-19. The mentor said, “I probably don't know if it is a COVID thing, but I've probably spoken to him less than most of my other MMAS students.”

Mentors and mentees assessed the remote learning environment as both a positive and negative factor in the educational context of this study. Further research is required to understand the effects of remote mentoring in academic settings.

Mentor-Mentee Relationship Features

The cross-case themes that best aligned with mentor-mentee relationship factors focused on answering research Subquestion 1: How might graduate students experience challenges and

support from their mentors? The cross-case analysis identified academic guidance and feedback as the prominent themes related to how the mentees experienced challenge and support from their mentors.

Challenge and Support Through Research Guidance

All three cases identified research guidance as an important element of how mentees experienced challenge and support during their relationships with their mentors. In addition, both mentees and mentors identified the importance of mentors guiding the process while empowering their mentees to decide how to complete their research.

Mentees highlighted mentor questioning techniques and finding additional resources as important support they experienced from their mentors. One mentee explained, "... [my mentor] asked me some very pointed questions about some of the information in my paper...." Another said, "I think that there is a way to coach and mentor the process of writing a thesis that is supportive without one either just straight up telling you what to do..." Another mentee explained how their mentor helped the mentee locate additional resources. Throughout the interviews, the mentees highlighted the importance of their mentors' past MMAS and research experiences while guiding their mentees through the research process. One mentee described it best: "... like watching a little kid bowl, ... [the mentor] puts the little guardrails up, so I don't go off in the gutter and like destroy the paper."

Mentors also consistently identified research guidance as a way they supported and challenged their mentees. All three mentors described the importance of asking questions, challenging assumptions, scoping research topics, providing methodology examples, discussing options, and empowering mentees to take ownership of their MMAS research. In addition, all three mentors provided detailed examples of how they provided guidance. One mentor described

it best: “I’m working with [mentee] to make sure all the pieces fit together... [I] just kept [mentee] from going down the wrong path and wasting time.”

Mentors and mentees assessed research guidance as an important relationship feature during this study. Mentors and mentees provide examples of how they experienced support and challenge within their relationships during the MMAS program. Key elements of academic guidance included mentors empowering mentees to take ownership of their research by challenging assumptions, scoping research topics, providing methodology examples, discussing options, and empowering mentees to take ownership of their MMAS research.

Challenge and Support Through Feedback

The second mentor-mentee relationship factor that emerged during the cross-case analysis was feedback. The mentees and mentors described accessibility, timeliness, acceptance, and quality as important feedback elements they experienced in their mentor-mentee relationships during the MMAS program.

Two mentees described how their mentors’ feedback challenged and supported their research efforts during the MMAS program. One mentee specifically highlighted the importance of positive feedback during the program. The mentee said the following about the positive feedback received from their mentor: “I don’t write for the kudos, but it’s super helpful to know at least I’m on the right path.” Another mentee said the following about their feedback: “... [mentor] gives great feedback on what I’m writing, and so it helps...” Finally, another commented on the quality of the feedback they received. The mentee said, “[Mentor] really gives me feedback and says, well, perhaps you should say this instead, or is this what you mean?”

Of note was the observation of one mentee who felt that some MMAS students might not benefit fully from the feedback available from their mentors. The mentee specifically highlighted

the military culture and the desire of high-performing students to figure it out without asking too many questions. The mentee said, "... [MMAS students] who want to get it right the first time. You don't ask questions. Even if you're concerned, you'll seek out the answers yourself."

Mentors also highlighted the importance of feedback. The mentors described the balance required to not overwhelm CGSOC students with feedback due to the many demands of the course. One mentor specifically identified the many challenges of CGSOC and told their mentee, "... when you feel like you need us [MMAS committee], you know you can reach out to all of us..." Another mentor provided insights on how they hope their mentee will use their feedback. The mentor said, "... they [the mentee] would take that structured feedback, and they would put it into their work, or their paper, or their research." One mentor commented on how their mentee processed and followed through on the feedback. "... [mentee] was very good about listening to guidance and following through with it."

Feedback was an important relationship feature identified during this study. Mentors and mentees provide examples of how feedback challenged and supported mentees during the MMAS program. Key elements of feedback included accessibility, timeliness, acceptance, and quality of the feedback provided or received.

Acquisition or Modification of Knowledge, Skills, Behaviors, or Preferences

The cross-case themes that best aligned with acquiring or modifying knowledge, skills, behaviors, or preferences focused on answering research Subquestion 2: How might MMAS students acquire or modify existing knowledge, skills, behaviors, or preferences? The cross-case analysis identified the following themes: new perspectives, improved communication skills, and greater self-efficacy.

Acquisition or Modification of Perspectives

Three themes within the cross-case analysis generally aligned with new perspectives. These include new perspectives on checks and balances, overcoming biases, and new outlooks on research. Mentees from all three cases described how their perspectives changed from working with their MMAS chairs. While the specific topics or focus areas were different, all three mentees highlighted how working with their mentors during the MMAS program helped them to change their perspectives on how to manage their projects in the future, how to overcome their biases, and be more open to unanticipated outcomes, and how to broaden their outlook on their research topics and their roles as leaders in the Army. One mentee stated, “I can start looking at things differently now that I’ve done this research, and now that I’ve had this experience....” Another said, “I think some of the potential change I’m looking at is my ability as a leader to coordinate things and to be able to put some additional measures in place as checks and balances along the way.”

Mentors also highlighted their mentee’s new perspectives due to the MMAS program. Two of the mentors specifically highlighted how their mentees overcame biases. One mentor said the following about their mentee, “...[mentee] is less likely to latch on to [their] preconceived notions.” Another mentor said, “... at the beginning, [mentee] had a very concrete idea.” The mentor went on to say, “... [mentee] probably didn’t know [they] had that bias at first.” At the end of the study, the mentor said her mentee told her the following: “... you know I didn’t like my expected outcome. I would have never believed that.”

New perspectives were an important acquisition or modification of the mentees’ knowledge identified during this study. Mentors and mentees provide examples of how new perspectives on checks and balances, overcoming biases, and new outlooks on research emerged during the MMAS program.

Acquisition or Modification of Communication Skills

Two themes within the cross-case analysis generally aligned with improved communication skills. These include improved skills in communicating and writing effectively. Mentees from all three cases described improved communication skills due to the MMAS program. Improvements included enhanced abilities to communicate their research and more effective management of the writing process. For example, one mentee highlighted the importance of communicating to ensure your audience understands your topic. The mentee said, “I think more about how you over-communicate information – sell it so that everyone is on the same page and truly understands the task.” The same mentee went on to say, “Then you have to not just get it [research] published, but also get people to actually understand what you’re saying.” Another mentee highlighted improved writing abilities due to the milestones established by their mentor. The mentee said their writing process improved because “... [mentor] keeping me on track and wanting to see my drafts along the way.”

Similarly, the mentors also highlighted their mentees’ improved communication skills due to the MMAS program. One mentor said, “... [mentee’s] more anticipatory of questions that might be asked. He realizes that he needs to provide his explanation upfront...” Another mentor highlighted how his mentee improved their writing process due to the MMAS program. The mentor said, “... [mentee] was a good writer.” “... but I think it was through the process where [mentee] probably learned the most.”

Improved communication skills were an important acquisition or modification of the mentees’ skills identified during this study. Mentors and mentees alike provide examples of how the mentees demonstrated improved communication skills while communicating the result of their research and writing their MMAS theses.

Acquisition or Modification of Self-Efficacy

One of the most significant findings from the cross-case analysis was the increase in mentees' self-efficacy during the MMAS program. Overcoming obstacles, building self-confidence, and developing self-confidence were included in this cross-case theme based on data collected from the participants.

Mentees commented on how their mentors helped them overcome obstacles during the MMAS program, and meeting the challenges increased the mentees' self-confidence. One mentee said, "...every time there was a challenge, [mentor] was very helpful." Another mentee said, "I think the biggest change, for me, is just some confidence. Another mentee highlighted their ability to anticipate and overcome challenges after working with their mentor. The mentee said, "People are going to continue to challenge you, and it may surprise you when they do, but you have the tools available to be able to meet that challenge."

Mentors also highlighted greater self-confidence in their mentees as a result of the MMAS program. One mentor said, "...[mentee] was very adaptable... I think [mentee] learned quite a bit from all the challenges he faced." The mentor went on to highlight the significance of their mentee overcoming challenges. The mentor said, "[Mentee] probably learned more than somebody who didn't come up against a lot of obstacles." Another mentor highlighted the change they observed in their mentee. The mentor said, "... [mentee] is so much more confident...." And the third mentor said, "... I do think [mentee] gained confidence and the ability to go toe to toe with people. That's the biggest behavioral change."

Negative Case Analysis

The negative case analysis looked to identify data within and across the cases that were deviant or not aligned with the results. As this study focused specifically on the relationship

between MMAS Chairs and their students, the negative case analysis included looking for instances where the data did not align with the themes identified within the educational context, relationship influences, or the acquisition of knowledge, skills, behaviors, or preferences. During this analysis, two data points emerged as potentially deviant from the rest of the data collected in the study.

The first was the apprehension expressed by Felicia during her first interview. Felicia's apprehension was unique to the other two cases, where the participants were generally satisfied and optimistic about their initial mentor-mentee relationships. Field notes from the first interview with Felicia also reflected her initial confusion and concerns about her participation in the MMAS program. When asked about her experience in the program, Felicia stated, "So it's just a little bit confusing, actually." She went on to describe how she met Dr. Edwards. She said, "I was still just figuring out whether or not I wanted to continue the program..." She continued by explaining that she met Dr. Edwards on the way to learn more about the MMAS program. When they met, she said, "he asked me what my topic was about, and we started a relationship there." Felicia went on to say she "lucked out" getting Dr. Edwards as her MMAS Chair.

The second potentially deviant data point also came from Felicia's first interview. During the interview, she described how she used another instructor's help to improve her understanding of the research process. During the first interview, Felicia expressed concerns about the frequency of her interactions with Dr. Edwards. She said, "... I felt a little bit defeated because I didn't have the opportunity - maybe it was my own fault - to sit down when I did question myself and talk to Dr. Edwards about my methodology." She said, "We met a couple of times to walk through the methodologies, but I think he does it so often every year it just comes naturally. But for me, I'm like, I don't understand it. I didn't understand the approaches." At that

point, Felica explained how she also used other instructors to help her through the research process. She said she talked with another instructor for encouragement. She said, "Just the reassurance when I'm a little concerned about what I'm going to send to Dr. Edwards." She said the help from her instructor "... makes me feel better because I don't want to disappoint Dr. Edwards."

Important to this negative case analysis was the fading of confusion and greater reliance on her MMAS Chair, as described in her second interview. When asked about her experiences with her MMAS Chair since the previous interview, Felica said, "Dr. Edwards really kept me on track, and also, with my thesis, he ensured that every step of the way that I continue to edit it, he would look through it as well with a fine-tooth comb."

The initial apprehension and confusion experienced by Felica about the MMAS program and her use of another instructor for support and reassurance during the research process were unique. They provided important insights into possible alternate themes that may emerge during the initiation and cultivation phases of mentoring relationships during the MMAS program. As Felicia expressed less apprehension and more reliance on her MMAS Chair in her second interview, the overall impact of these initial two deviant data points was considered informational but not threatening to the overall validity of the case analysis.

Alternative Conclusions

Analysis of the data also included looking for alternative conclusions that may not align with the results of this study. The conclusions about educational context, mentor-mentee relationship features, and the acquisition or modification of knowledge, skills, and behaviors were consistent across all three cases. Analysis of each case independently supported the themes aligned with how MMAS students perceived the influences of challenge and support through

research guidance and feedback. Likewise, analysis of each case independently supported the conclusion that MMAS students perceived their mentors as influencing their acquisition or modification of perspectives, communications skills, and self-efficacy.

While no individual case provided sufficient data to support alternative conclusions, it is important to acknowledge that other faculty may have also influenced MMAS students during this study. A review of the three MMAS acknowledgment statements collected during this study showed that all students acknowledge the support they received from other faculty on their MMAS committees. Additionally, MMAS students are likely to develop relationships and receive support from other faculty not on their committee but who teach core or elective classes at CGSC.

Felicia specifically provided insights into the potential influences of other faculty during her first interview when she said, "I also see Dr. [redacted] as somewhat of a support system..." She highlighted the importance of his support when she said, "Just the reassurance when I'm a little concerned about what I'm going to send to Dr. Edwards. He lets me know if I'm on track. It makes me feel better..."

Brad also commented during his third interview on the role of other faculty on his committee providing subject matter expertise. Brad said, "My other committee members were the [redacted topic] experts, and they had more of an impact on the [topic] specific learning that I got out of the MMAS."

Similarly, Dr. Edwards commented during his first interview on his and other faculty's influences on his MMAS student. When asked about the effects on his student's learning, Dr. Edwards said. "So, I think I've played a role, but I have not played the most prominent role. I think it's a team effort to help her."

While others influenced the learning experiences of the MMAS students, the threats to the conclusions of this study were assessed as low overall. This assessment was based on the design of questions developed for this study. Both journal and interview questions included multiple and overlapping subjects designed to focus responses specifically on the perceived influences of mentor-mentee relationships. Therefore, while this study did not explore the potential influences of others on MMAS students, the questions used, the data collected, and the conclusions presented in this analysis are sufficiently focused to provide valid conclusions about how MMAS students perceived the influences of their relationships with the MMAS Chairs on their learning experiences.

Primary Research Question

The findings from the analysis of the research subquestions above inform the findings for the primary research question: How do graduate students perceive influences on their learning experience within the mentor-mentee relationship? The findings show that participating mentees perceived challenge and support from their mentors through academic guidance and feedback. The findings of support and challenge are consistent with the literature on mentoring. The findings also showed that mentees and mentors reported MMAS students developed new perspectives, improved their communication skills, and experienced greater self-efficacy while participating in the MMAS program. While MMAS students may experience other relationships and events during CGSOC that also impact learning, the focus of this study was to qualitatively explore the perceptions of mentors and their mentees during the MMAS program. The results of this study indicate that the support and challenge provided by academic mentors may have influenced the learning experiences of the MMAS students in specific ways. Specifically, the findings of this study indicate the mentor-mentee relationship factors of challenge and support,

as demonstrated by research guidance and feedback, may have helped MMAS students gain new perspectives, improve their communication skills, and improve their self-efficacy.

Summary

Analysis of individual cases identified multiple themes, as described in this chapter, and the cross-case analysis identified academic guidance and feedback as the two themes that best aligned with the research questions. Unfortunately, analysis of all three cases failed to provide sufficiently reliable information to provide insights on changes in mentee preferences.

Chapter 5 - Analysis and Conclusions

Introduction

This chapter will examine the analysis and conclusions of this exploratory study, discuss the implications of the findings, provide suggestions to improve the MMAS program, and recommend future research to further enhance the body of knowledge on how mentor-mentee relationships might influence the learning experiences of graduate students. The literature on mentoring identifies specifically context, knowledge, support, and challenge as critical components of mentoring relationships within academic settings (Brookfield, 1995; Cohen, 1995a, 1995b; Chen et al., 2016; Crisp, 2009, 2010; Crisp & Cruz, 2009; Merriam & Caffarella, 1991; 1997; Rose, 2003; Zackbary, 2000). Analysis of the findings of this study informs mentoring theory by exploring the educational context, mentor-mentee relationships, and graduate student learning experiences from the mentor's and mentee's points of view during their relationship.

The findings of this exploratory multi-case study included identifying the themes that emerged during a series of semi-structured interviews conducted at the beginning, middle, and end of the MMAS program. The themes focused on three components of mentor-mentee relationships: the educational context, relationship features, and acquisition or modification of knowledge, skills, behaviors, or preferences. As little literature explores these components from both the mentor's and mentee's points of view, this exploratory study provides insights from both while simultaneously participating in a mentor-mentee relationship during the MMAS program.

Analysis of Findings

The finding of this study answered the primary research question of how do graduate students perceive influences on their learning experience within the mentor-mentee relationships as supported by the literature on mentoring theory (Kram 1983, 1985), Cognitive Apprenticeship Theory (CAT) (Collins et al., 1991) and the importance of support and challenge in mentor-mentee relationships (Brookfield 1995, 2006; Cohen, 1995a, 1995b; Daloz 1986, 1999). Similarly, the research shows that students in mentoring relationships may acquire or modify their knowledge, skills, behaviors, or preferences while working with a mentor during a graduate degree program (Crisp, 2009; 2010; Ragins & Cotton, 1990; Rose, 2003).

The findings of this study support the previous research and add additional information on how both the mentor and mentee assess the possible influences of mentoring on graduate-student learning. The results of this study add insights into the educational context of the MMAS program, how MMAS students experienced support and challenge from their MMAS chairs, and how mentor-mentee relationships may have influenced learning. Participants in this study consistently identified academic guidance and feedback as how mentors provided, and mentees experienced challenges and support in their relationships with their mentors. In addition, an analysis of how MMAS students might have acquired or modified their existing knowledge, skills, behaviors, or preferences identified new perspectives, communication skills, and self-efficacy as consistent themes.

Kram's Mentoring Theory

The findings of this study enhance understanding of the application of Kram's theory (Kram 1983, 1988) as it pertains to mentoring relationships within an academic environment. Results from this study support the theory by showing how academic mentoring relationships

included psychosocial support, including role modeling, acceptance, confirmation, counseling, and friendship. The results also show how academic mentoring relationships included Kram's four phases: initiation, cultivation, separation, and redefinition (Kram, 1983, 1988). However, the scope of this study did not focus on Kram's career development function and did not specifically investigate how the mentor helped the mentee advance in the organization or profession.

Both MMAS students and their faculty described how their relationships formed during the MMAS process, how they initiated their relationships, selected mentors and mentees, established expectations, and established goals needed to complete the MMAS program. These activities align well with Kram's initiation phase (Kram 1983, 1985).

MMAS students and their faculty also provided detailed descriptions of how they developed their relationships while working together during the MMAS program. While the mentee-mentor relationships in this study developed in unique ways, the mentors and mentees consistently described how mentors used to support and challenge while developing relationships and how support through feedback and research guidance influenced their learning. These findings also support Kram's description of the cultivation phase, where mentors provide support through feedback, role modeling, and collaboration while cultivating their relationship (Kram, 1983, 1985).

Due to the compressed nature of the MMAS program, most of the data collected during this study focused on the initiation and cultivation phases of mentoring relationships. While not the intended focus, participants also described activities aligned with Kram's separation phase of mentoring (Kram 1983, 1985). During the later interviews, the mentors described how they intended their MMAS students to become less reliant on their faculty and better prepared to

conduct independent research and take on new roles after graduating from CGSC. MMAS students also commented on how they may use their newly modified or acquired knowledge, skills, and behaviors after they leave CGSC.

As the study ended when the students graduated CGSC, the data collected contains only vague references to the redefinition phase described by Kram. Mentee comments were aspirational and only described how mentees intended to use the knowledge, skills, and behaviors they acquired while working with their mentor in their next assignment. Their aspirational comments support the foreshadowing of Kram's (1983, 1985) redefinition phase; however, this study does not explicitly show how mentees took on new roles, mentored others, or changed their relationships with their mentors following graduating from the MMAS program.

Cognitive Apprenticeship Theory (CAT)

Like Kram's mentoring theory, CAT provides a highly effective approach to studying mentoring in academic environments. The data collected during this study shows how mentors used modeling, coaching, and scaffolding, as described by Collins et al. (1991), to challenge and support their mentees. Similarly, mentees used articulation, reflection, and exploration, as outlined in CAT (Collins et al., 1991), to describe their perceptions of how their mentor-mentee relationships may have influenced mentee acquisition or modification of knowledge, skills, or behaviors.

The conceptual framework for this study aligns modeling, coaching, and scaffolding with relationship influences. Specifically, these three components of CAT provided a focus for data analysis and identified how mentors challenged and supported their mentees. The data collected in this study support CAT's modeling, coaching, and scaffolding components.

Modeling describes the process of demonstrating a skill or strategy for the apprentice to observe and imitate (Collins et al., 1991). Mentors and mentees described how mentors demonstrated processes, walked mentees through the research process, and demonstrated research techniques. The mentors also provided insights and commented on their intent to model research techniques and processes based on how they learned to conduct research.

CAT describes coaching as faculty observing students and providing feedback, reminders, and hints to enhance student performance along the way (Collins et al., 1991). Data collected from mentors and mentees describes how mentors provided positive, timely, and constructive feedback throughout the MMAS process. The data also showed the importance of the accessibility, timeliness, acceptance, and quality of mentors' feedback while coaching their mentees.

Relationship influences also included the scaffolding component of CAT. According to Collis et al. (1991), scaffolding includes providing support and guidance to help students complete a task or solve a problem. In addition, it includes the instructor identifying the student's level of ability and developing intermediate steps or suggestions to help the student accomplish a task (Collins et al., 1991). Data collected from mentors and mentees describes how the mentors provided support throughout the process while allowing the mentee to become more independent. Mentors also described how they assessed students' abilities and helped them overcome challenges with sample selection, data collection, and access to other faculty or subject matter experts.

The other three components of CAT (articulation, reflection, and exploration) are aligned with the acquisition or modification component of the conceptual framework developed for this study. Articulation, reflection, and exploration provide insights into the mentee's perceptions of

their mentoring relationship and its influences on their modification of knowledge, skills, or behaviors during the MMAS program.

According to the CAT, articulation facilitates students describing their knowledge, skills, or abilities to accomplish the task. Articulation may include instructors asking questions that require students to describe and refine their understanding (Collins et al., 1991). The data from this study shows how mentees reflected on their experiences with their mentors and described their new perspectives on project management, how to recognize biases, and how to be more open to unanticipated outcomes.

Reflection allows students to compare their cognitive and problem-solving processes to other students or experts (Collins et al., 1991). In this study, reflection was observed in the data showing how mentees self-assessed their performance. Mentees described their self-assessment of their writing skills, procrastination tendencies, and their struggles with perfectionism. Perhaps more importantly, they also explained how they used reflection to identify and address areas needing improvement. Mentees described improved communication and writing skills, better time management abilities, and greater self-efficacy from working with their mentors.

Finally, CAT describes exploration as the normal progression of fading where the instructor provides less support over time and encourages the student to analyze and solve problems independently (Collins et al., 1991). In this study, mentees described how they might use their new knowledge, skills, and behaviors to explore new areas in the future. In addition, mentees described how they might conduct additional qualitative research, incorporate checks and balances, account for unexpected outcomes, anticipate potential biases, and better collaborate with multiple stakeholders in the future.

Educational Context

While the literature shows the educational context for learners can be very diverse depending on the unique characteristics of the students, faculty, and academic programs (Crisp, 2009; 2010; Ragins & Cotton, 1990; Rose, 2003), this study provided contextual insights specific to the MMAS program. The findings of this study support the literature identifying the context of mentor-mentee relationships as an important consideration when studying mentor-mentee relationships (Daloz, 1999; Merriam & Caffarella, 1991; Zachary, 2000).

According to Merriam and Caffarella (1991), understanding the context of the learning environment is as important as the learning itself. Daloz (1999) describes the importance of mentors appreciating the context of mentoring relationships. Specifically, Daloz highlights the significance of mentors and mentees understanding the influences of other contextual pressures placed on mentees, including graduate degree program requirements and other academic and personal demands (Daloz, 1999). Similarly, Merriam and Caffarella (1991) and Zachary (2000) assert that mentors should work to develop continual awareness of contextual influences on mentor-mentee relationships.

In this study, all mentees described the impacts of the academic context as described in the literature. Specific to their experiences in the MMAS program, mentees described the contextual influences of the CGSOC learning environment. The mentees specifically identified the pressures caused due to little prior knowledge of the MMAS program and how finding a mentor, selecting a research topic, meeting research milestones, and adapting to the remote learning environment and COVID-19 influenced their relationships. Finally, all of the participants in this study specifically described the contextual challenges of selecting a topic,

finding a major professor, and accomplishing the many other demands of the CGSOC learning environment as critical contextual influences impacting their mentor-mentee relationships.

Mentor-Mentee Relationship Features

The findings of this study on mentor-mentee relationship features, specifically about how mentors provide and balance challenge and support, align well with the literature on mentor-mentee relationships (Brookfield, 1995, 2006; Cohen, 1995a; 1995b, Daloz 1986, 1999). The findings of this study supported Daloz's assertion that mentors balance the support and challenge they provide to their mentees to foster growth and learning (Daloz, 1999). The findings also align with Daloz's discussion on the importance of support through listening, providing structure, establishing positive expectations, and understanding the uniqueness of each mentee. (Daloz, 1999).

In this study, mentors and mentees described how mentors listened to their students, provided structure, and established expectations by providing research guidance and feedback to their students. The results support Daloz's descriptions of the significance of challenging mentees by establishing tasks, engaging in discussions, setting high standards, and modeling. (Daloz 1999). Data from mentors and mentees in this study supported Daloz's ideas by describing how mentors established MMAS tasks, engaged in discussions with their students, set and maintained standards, and modeled mentoring while providing research guidance and feedback to their MMAS students.

Research Guidance

This study's findings also support the literature describing the importance of mentors guiding mentees to achieve their goals (Cohen, 1995a; Cohen 1995b, Daloz 1986, 1999; Zachary, 2000). For example, Zachary (2000) explicitly describes mentors as individuals "who

"clear a path for what it is they [mentees] are about to see and learn (p" 74)." Similarly, Daloz (1999) highlights the mentor's role in influencing their student's educational journey (Daloz, 1986). Crisp and Cruz (2009) also describe the importance and prevalence of mentors acting as guides for mentees. In addition, Cohen (1995a) and Daloz (1999) highlight the importance of mentors guiding mentees through the learning process while not attempting to change research without student consent.

The findings of this study support the previous research by explicitly describing how mentors guided their mentees while allowing them to retain ownership of their research. The findings show mentors in this study provided research guidance to their mentees by asking questions, challenging mentee assumptions, scoping research topics, providing methodology examples, and discussing research options. Moreover, all three cases described the importance of the mentors balancing academic guidance with detailed direction to help ensure their MMAS students completed the accelerated graduate-degree program while maintaining ownership of their research.

Feedback

Feedback is another important component of mentoring identified in the literature, and the findings of this study support the research. Feedback is frequently identified as an essential component of learning and mentoring. For example, Brookfield (1995) identifies feedback as "the most powerful communication" (p.115) instructors can use to affect learning. Daloz (1999) states that it is essential for mentors to be explicit when providing feedback to ensure mentees understand what they did well and to emphasize positive progress as opposed to criticizing. And Zachary (2000) identifies feedback "s a "critical enabling mechanism" (p.130) within mentoring relationships.

The results of this study agreed with the research on feedback, and all participants provided rich examples of how feedback challenged and supported the mentees during the MMAS program. For example, mentors participating in this study described how they used feedback to support learning and highlight mentee progress. Mentees also provided insights consistent with the research showing that encouraging feedback, affirmation, and confirmation of mentee potential were influential feedback tools mentors used to support mentees.

Data collected from the mentees in this study supported the principle that graduate students appreciate mentors who provide clear, constructive, encouraging feedback and value mentors who make time to discuss their feedback with their students. In addition, mentors and mentees in this study explained the importance of accessibility, timeliness, acceptance, and quality of the feedback. These qualities are consistent with how the literature describes effective feedback in a mentoring relationship (Cohen, 1995a; Daloz, 1999, Zachary, 2000).

Additionally, participants in the study provided examples of mentors providing feedback with options while allowing their mentees to make decisions and retain ownership of their MMAS research. These findings also support the research showing mentees value research guidance that advances the student's understanding of the research process while allowing the mentee to retain ownership of the process (Crisp, 2009, 2010; Daloz, 1999).

This study furthers the understanding of mentoring in academic settings by exploring how mentors use feedback to support and challenge graduate students and does so from both the mentor's and mentee's points of view. The findings are well aligned with the literature and advance the theory of how mentors influence learning through timely, clear, constructive, and encouraging feedback that allows students to retain ownership of their research.

Acquisition or Modification of Knowledge, Skills, Behaviors, and Preferences

The research highlights the important role of mentors in helping their mentees gain additional knowledge, develop new skills, create new perspectives, and gain greater self-confidence. For example, Daloz (1999) explains the role of the mentor in helping to guide mentees as they gain new knowledge and skills needed for their new roles. Similarly, Galbraith (2004) describes the role of the academic mentor as one who promotes the mentee's development, helps the mentee develop new perspectives, and allows the mentee to see themselves and others in new ways. And Brookfield (1990) states that positive learning experiences will likely increase a student's self-efficacy.

During this study, mentors and mentees consistently provided data that aligned well with the research on how mentors help mentees acquire or change their knowledge, skills, and behaviors. The findings of this study show how mentees acquired new perspectives, improved their communication skills, and developed greater self-efficacy as a result of working with their mentors during the MMAS program. However, while the findings of this study align with the research on how mentors help mentees develop knowledge, skills, and behaviors, this study did not provide sufficient data to show how mentees changed their preferences during the MMAS program.

New Perspectives

Daloz (1999) describes how mentors help their mentees shift perspectives to see things differently. Likewise, Daloz (1999) describes how mentoring helps guide students during perspective change and helps students navigate their learning experiences. Brookfield (1996) similarly identifies developing alternative perspectives as an important element of adult learning.

And finally, Galbraith (2004) describes how academic mentors help guide their students to understand the world better and develop new and broader perspectives.

The findings of this study support the research on developing new perspectives and specifically show how MMAS students gained or modified their perspectives while working with their mentors during the MMAS program. Specific to this study, the data collected from the participants showed how the mentees developed new perspectives about conducting research, using checks and balances, and overcoming biases.

Mentees from all three cases described how their perspectives changed while working with their MMAS chairs. All three mentees highlighted how their mentors helped them to change their perspectives on how to manage their projects in the future, how to overcome personal biases, how to be more open to unanticipated outcomes, and how to broaden their outlook on their research topics and their roles as leaders in the Army. In addition, mentors provided insights into how they observed their mentees develop new perspectives by validating their mentees' responses. This data will help improve understanding of how mentoring relationships may influence how graduate students acquire or modify their perspectives.

Improved Communication Skills

Daloz (1999) explains how mentors use effective communication to enhance learning and model effective communication skills to improve their mentee's communication abilities. This study supports the research and identifies how MMAS students gained or modified their communication skills while working with their mentors. Specifically, mentors and mentees highlighted how MMAS students improved their communication and writing skills while participating in the program.

This study provides specific insights into how mentors enhanced their mentees' abilities to communicate their research and manage the writing process. Mentors and mentees in all three dyads discussed communication and provided examples of how the mentees demonstrated improved communication skills while communicating the result of their research, collaborating with other committee members, and writing their MMAS theses. This study's findings support the research and enhance our understanding of how mentors improved their mentees' communication skills in the MMAS program.

Greater Self Efficacy

Bandura (1977) generally defines self-efficacy as a person's judgment of their abilities to organize and execute actions required to perform. Brookfield (1990) asserts that positive learning experiences increase student self-efficacy. Daloz (1999) describes how mentors help their mentees gain confidence in their abilities due to the support mentors provide to their learners. Additionally, Kearns et al. (2008) describe critical challenges and self-defeating behaviors many students experience during a graduate degree program, including over-commitment, procrastination, and perfectionism.

The finding of this study supported the literature, and mentors and mentees provided detailed descriptions of how the mentees' self-efficacy increased during the MMAS program and how mentors helped their students overcome self-defeating behaviors. The results align well with the research that shows that positive mentoring is likely to influence mentee self-efficacy (Cohen, 1995a; Daloz, 1999; Yob, 2012; Zacher et al., 2019).

This study provided specific insights into how mentors and mentees felt the MMAS students became more confident in their abilities due to working with their mentors. In addition, all three dyads highlighted greater mentee self-efficacy, as evident by mentees overcoming

obstacles and becoming more self-confident in their abilities. The findings of this study also provided insights into how MMAS students overcame self-doubt, procrastination, and perfectionism while working with their mentors to complete the thesis and accomplish all of the other academic demands of CGSOC.

Implications

This study has theoretical and practical implications for mentoring in graduate degree programs. Theoretical implications include a deeper understanding of how mentoring relationships influence learning from both the mentor's and mentee's points of view throughout an accelerated degree program. In addition, it furthers mentoring theory by providing insights into how mentors provided guidance and feedback during their mentee-mentor relationships and how mentors helped their mentees gain new perspectives, improve their communication skills, and gain greater self-efficacy during an accelerated graduate degree program.

These findings also have practical implications for CGSC, the MMAS program, and other accelerated degree programs. Practical implications include acknowledging the contextual influences of the learning environment on students and faculty, using mentoring theory to prepare faculty and students to conduct research in an accelerated program, and preparing faculty to provide research guidance and constructive feedback that appropriately balances the support and challenge needed to facilitate learning.

Theoretical Implications

The results of this study support the applicability of Kram's Mentoring Theory (Kram, 1983, 1988), showing that the relationship between academic mentor and mentee during the MMAS program was dynamic and evolving. The results also provide insights into the first three

phases of Kram's process model, showing how mentor and mentee relationships evolve through the initiation, cultivation, and separation phases during a graduate degree program. It is essential to highlight that this study did not collect data specifically focused on the redefinition phase defined by Kram (1988).

This study also provides results supporting Kram's theory that mentors provide psychosocial support to their mentees (Kram, 1983, 1988). Specifically, this study provides data showing how MMAS Chairs provided role modeling, acceptance, confirmation, counseling, and friendship to their students, as described by Kram. However, it is important to note that this study did not investigate Kram's other mentor function of career development and does not address how MMAS Chairs may have provided job coaching, positive career exposure, and professional protection.

Overall, the results of this study support the applicability of the key elements of Kram's theory when investigating mentoring relationships in academic settings. Specific to this study, Kram's four-phase process model and her mentor function of psychosocial support provided an effective theoretical framework to explore how graduate students perceived the influences on their learning experience within mentor-mentee relationships.

This study also has theoretical implications for using CAT (Collins et al., 1991) to study academic mentoring relationships and their potential influences on students. In this study, CAT provided an effective theoretical lens to explore how mentors support and challenge their mentees in academic settings through modeling, coaching, and scaffolding. Likewise, articulation, reflection, and exploration, as by Collins et al. (1991), provided specific focus areas

that helped to identify how academic mentoring relationships influenced the acquisition or modification of existing knowledge, skills, behaviors, or preferences.

CAT was an effective theoretical framework that enhanced the overall understanding of the possible influences of academic mentoring on graduate students. When aligned within the conceptual framework, CAT provided an effective way to identify how mentors provided challenges and support and how mentees may have acquired knowledge, skills, or behaviors due to the influences of their mentoring relationships.

The results of this study also support the importance of mentor support and challenge as outlined in the literature, including psychological, emotional, subject knowledge, degree, and career support (Crisp et al., 2017). In addition, the results of this study provide specific insights into how both the mentee and the mentor perceived support and challenge during an accelerated degree program and a broader understanding of the balance of support and challenge within a mentor-mentee relationship in an academic setting.

This study also supports the significance of guidance mentors provide to their mentees through a process based on past experiences and subject matter expertise and that mentors provide subject knowledge and degree support, as described by Crisp et al. (2017). In addition, this research provides insights into the importance and variability of the amount and type of research guidance the mentor needs to provide to ensure the mentee completes the accelerated graduated-degree program on time while still empowering their graduate student to make informed decisions about the topic of their research, the scope of their research, and their research methodology.

This study also provides additional insights into the importance of feedback as a critical component of the mentee-mentor relationship and how feedback helps mentors guide mentees in academic settings. While feedback is generally highlighted in the literature on mentoring, this study provides important insights into how mentors provided feedback and how their mentees received it in an academic setting. Finally, this study provides additional theoretical implications to consider how the accessibility, timeliness, quality, positivity, and acceptance of feedback may affect mentor-mentee relationships in graduate degree programs.

Finally, this study adds additional information on how mentees develop greater self-efficacy while working with their mentors in academic settings. Improved self-efficacy supports Cohen's theory that mentors help mentees overcome self-limiting behaviors (Cohen, 1995a). By providing insights and observations from mentors and mentees on how graduate students overcame obstacles and developed greater self-confidence, this study reinforces the importance of mentor support, as described by Cohen (1995a).

Methodological Implications

This study used a multi-case design to explore mentor-mentee relationships within an accelerated graduate degree program. This study's methodological implications include using mentor-mentee dyads to capture mentor and mentee points of view, collecting data from interviews and reflective journals at times that generally aligned with the first three phases of Kram's four-phase mentoring process model (Kram, 1983, 1988), and using a conceptual framework that includes the components of CAT as described by Collins et al. (1991).

The use of mentor-mentee dyads provided unique insights into the mentor-mentee relationships and rich descriptions from multiple points of view on the educational context, relationship influences, and acquisition or modification of knowledge, skills, and behaviors. In

addition, using mentor-mentee dyads allowed for the analysis of emerging themes directly connected with the specific mentors and mentees participating in the relationship. Finally, as the study focused on mentor-mentee relationships, this methodology provided the researcher with unique insights into the perceptions of the relationship and its effects on both the mentor and mentee. The use of mentor-mentee dyads was an effective methodology; however, it required special precautions in the research protocol to protect the participants' anonymity and prevent the faculty's potential undue influence on student interview responses.

The methodology also included three sets of interviews for each dyad during the ten-month MMAS program. Aligning data collection to Kram's initiation, cultivation, and separation phases of mentoring (Kram, 1983, 1988) was an effective way to observe mentoring relationships and provided insights into how the mentoring relationships evolved. Both mentors and mentees provided rich and detailed descriptions of their relationships at critical points of the MMAS program.

One disadvantage of this methodology was the absence of data collected focused explicitly on the redefinition phase of mentoring. A redefinition-focused interview was not included because the study ended when the students graduated from the MMAS program. Methodologies exploring academic mentoring could include data collection during the redefinition phase to better understand the overall effects of academic mentoring.

Another implication of this qualitative methodology was the challenge of collecting data from faculty and students during a graduate degree program. This study placed additional demands on faculty and students who were already very busy completing teaching and graduation requirements. The time needed to complete three interviews and their corresponding reflective journals added additional obligations that were frequently not priorities for students

and faculty. All participants made time for interviews or rescheduled if they had conflicts; however, they placed less emphasis on submitting their reflective journals. Researchers could develop methodologies that enhance data triangulation while minimizing the overall time required for faculty and students to participate to provide data.

One of the most significant methodological implications was developing and using a conceptual framework that included accepted components of mentoring theory. For example, using modeling, coaching, scaffolding, articulation, reflection, and exploration as outlined in CAT provided a framework that guided data collection and analysis. While not the only mentoring theories applicable to academic environments, research methodologies could use Kram's theory (Kram, 1988), CAT (Collins et al. 1991), or other similarly accepted models to guide their research.

Practical Implications

This study provides practical implications for other graduate degree programs. For example, graduate programs could use Kram's mentoring theory, CAT, and the conceptual framework developed for this study to explore mentoring relationships in academic settings. Additionally, leaders of graduate schools and other academic institutions could use the results of this multi-case study to enhance their faculty's understanding of the potential influences of mentoring relationships on graduate students and how to use mentoring theory to help graduate students complete their academic programs - particularly those that have a research or thesis requirements.

Mentoring theory, especially CAT, provides faculty with a more thorough understanding of how faculty may successfully support and guide their graduate students through the research process using modeling, coaching, and scaffolding. Faculty can also increase their awareness and

encourage students to articulate, reflect, and explore the knowledge, skills, behaviors, and preferences gained or modified during their graduate degree programs.

In addition, faculty who better understand the mentoring theory and the importance of mentor-mentee relationships can enhance their abilities to recognize mentee needs and balance important relationship factors such as psychological, emotional, subject knowledge, and degree support (Crisp et al., 2017, Kram, 1988). With an increased understanding of mentoring theory, faculty can also anticipate and help manage relationship changes as the mentor and mentee transition through initiation, cultivation, separation, and redefinition phases, as described by Kram (1983, 1985).

The conceptual framework also provides a theory-based structure for faculty and graduate students to understand better the key components and natural evolution of their research relationships as they begin their graduate-degree journeys. In addition, the framework can enhance awareness of how the educational context, mentor-mentee relationship features, and mentee acquisition of knowledge, skills, behaviors, and preferences are interrelated during a graduate-degree program.

Additional insights into the educational context of the mentor-mentee relationship will help identify and manage mentor and mentee expectations and cultivate meaningful relationship features needed for graduate students to be successful. While this study highlighted the importance of program preparation, mentor selection, and remote learning within the educational context of the MMAS program, the framework can be adjusted to account for specific variables within the educational context of other graduate degree programs.

The conceptual framework also provides a way for faculty and students to understand the nature of the support and challenge faculty provide to their graduate students during the research

process. Support and challenge were the features the researcher selected as most appropriate to this study; however, the framework can be modified as desired by graduate-degree programs to include mentor-mentee relationship features unique to the needs of the student and their academic mentor.

Additionally, faculty and leaders of graduate-degree programs can use the acquisition or modification of knowledge, skills, behaviors, and preferences portion of the framework to assess their academic mentoring programs. This exploratory study was intentionally general in describing the results of mentoring, not to bias the participants. Furthermore, while the participants highlighted their acquisition or modification of new perspectives, communication skills, and self-efficacy as important results, faculty and academic leaders may adjust the framework to align with their program's intended outcomes.

Beyond the conceptual framework, the specific results of this study also have practical implications for faculty development. For example, faculty and academic leaders could develop programs to help ensure graduate faculty understand the research methods and processes that best align with their specific research areas and academic institutions.

Furthermore, academic leadership can provide additional information on how faculty can best guide graduate students through the process by expanding their faculty abilities to model research activities, coach through effective and positive feedback, and scaffold research to allow the student to become more self-reliant. Programs could also provide faculty insights on how to scope research, challenge student assumptions, suggest research methodologies, discuss potential options, and empower graduate students to take ownership of their research.

Faculty and academic leaders could also provide information and collaboration opportunities focusing on how faculty provide effective feedback to their graduate students

during the research process. Faculty can use this study's identification of key feedback elements to improve faculty accessibility, response timeliness, student acceptance, and overall quality of feedback. In addition, providing faculty and students with information on effective feedback techniques will help manage mentor-mentee relationship expectations and enhance mentor-mentee pairings in graduate degree programs.

This study showed how mentor-mentee relationships helped graduate students develop new perspectives, improve their communication skills, and enhance their self-efficacy. These results can inform other graduate degree programs with similar perspectives, communication, and self-efficacy outcomes. In addition, those graduate programs that do not explicitly identify these outcomes can use the results of this study to evaluate if the results are appropriate for their learning programs.

It is also important to note the mentors in this study said they developed their mentoring skills primarily through their own research experiences. Therefore, faculty leaders could have experienced academic mentors share their mentoring experiences with newly assigned faculty to prepare new faculty to mentor graduate students. In addition, working with experienced faculty, new academic mentors would expand their knowledge of academic mentoring beyond their own research experiences and gain additional insights specific to their academic programs.

Practical Implications for the MMAS Program

Specific to the MMAS program, CGSC leaders can use Kram's mentoring theory, CAT, the conceptual framework developed for this study, and the study's results to enhance MMAS faculty's understanding of how to mentor MMAS students. In addition, students and faculty responding to the unique demands of the accelerated-degree program within CGSC can benefit from the recommendations tailored to faculty and students participating in the MMAS program.

CGSC leaders should consider providing MMAS faculty an overview of Kram's Mentoring Theory and CAT as they apply to the MMAS program. Many of the MMAS faculty have been exposed to the Army's doctrine on mentoring; however, Army doctrine is somewhat unclear on mentoring in academic environments. For example, FM 6-22, Developing Leaders, identifies mentoring as a critical component of learning; however, it does not explicitly state how to conduct mentoring in a learning environment. Furthermore, while FM 6-22 describes mentoring techniques and the benefits of mentoring, it does so only generally and without specific references to the components of CAT.

CGSC leadership can develop a process to build upon faculty experiences, knowledge of FM 6-22, and the results of this study to prepare new MMAS Chairs to use mentoring theory while working with their MMAS students. The process may include an overview of the phases of Kram's theory, the mentor function of psychosocial support, and the components of CAT. In addition, CGSC leadership can show how the key elements of mentoring theories apply to faculty and students participating in the MMAS program, discuss how to use mentoring theory to help guide students through the specific requirements and milestones of the MMAS research process, and describe how mentors can use modeling, coaching, and scaffolding to balance challenge and support and help MMAS students manage their MMAS requirements while also completing their other required coursework.

CGSC leadership could also use the conceptual framework developed for this study to enhance faculty and student understanding of the linkages between the CGSC educational context, mentor-mentee relationship influences, and MMAS students' acquisition or modification of knowledge, skills, and behaviors. Similarly, CGSC leadership could identify and share with

faculty and students the challenges of participating in the MMAS program while attending CGSC.

CGSC leadership could also discuss mentor-mentee relationship features and describe the importance of MMAS Chairs modeling, coaching, and scaffolding the research process. Leadership could also highlight the finding of this study, identifying the importance of MMAS Chairs guiding their students through the MMAS research process and the significance of the MMAS Chairs providing timely, actionable, and constructive feedback to their students.

Finally, CGSC leadership could use the conceptual model to help faculty and students understand how mentoring relationships affect learning during the MMAS program. Faculty and students could be encouraged to use articulation, reflection, and exploration throughout the MMAS experience to help identify the acquisition or modification of knowledge, skills, behaviors, and preferences during the program. Integrating specific articulation, reflection, and exploration components into the MMAS program also provides an opportunity for CGSC to enhance its program evaluation techniques to ensure the MMAS program achieves its intended learning outcomes.

CGSC leadership can also build upon the results of this study by developing a mentoring community of practice. The community of practice can use this study's results to promote conversations about mentoring in academic settings within CGSC and the Army. This community of practice can provide a space where new and experienced faculty can share academic mentoring experiences, discuss issues, identify problems, and recommend solutions to issues impacting the MMAS and other academic programs. Specifically related to this study, the community of practice can share best practices for modeling, coaching, scaffolding, providing research guidance, using positive feedback, and empowering MMAS students to take ownership

of their learning. The community can also share effective techniques faculty can use to help students articulate and reflect on their learning and explore how students may use their learning experiences in the future.

Finally, MMAS leadership could review the knowledge, skills, and abilities identified in this study for alignment with the intended outcomes of the MMAS program. For example, broadening perspectives, improved communications skills, and enhanced self-efficacy align with the Army's doctrine on the benefits of mentoring and can enhance the perceived value of the MMAS program. These outcomes are important to future leaders' development. CGSC could highlight MMAS outcomes in the information provided to students as they consider entering the program, faculty teaching and mentoring MMAS students, and senior leaders overseeing the CGSC.

Recommendations for Future Research

This study explored how graduate students perceived influences on their learning experience within their mentor-mentee relationships. The results focused on the perceptions of graduate students and their mentors on the influences of challenge and support within their mentor-mentee relationships. The results also described the mentees' perceptions of their mentor-mentee relationships' influences on acquiring or modifying existing mentee knowledge, skills, behaviors, or preferences. The results suggest that future research is needed to enhance the body of knowledge on the importance of mentoring in academic settings. Recommendations for future research include investigating the effectiveness of mentor training for graduate faculty, studying the effectiveness of mentor selection, exploring how mentoring may enable mentees to become future mentors, and investigating the long-term effects of mentoring in graduate-degree programs.

Highlighted in this study was the lack of information provided to MMAS faculty on mentoring theory and the potential impact of mentoring on graduate students. Additional research to determine if faculty receiving information on mentoring theories such as Kram's Mentoring Theory (Kram, 1983, 1985) and CAT, as described by Collins et al. (1991), improves academic mentoring would enhance understanding of mentoring in academic settings.

Likewise, additional research is needed to determine if graduate students also benefit from a greater appreciation of academic mentoring theories as they pursue their graduate degrees. Finally, additional research is also required to determine if providing graduate students with insights into how their academic mentors may provide modeling, coaching, and scaffolding throughout the research process enhances faculty-student relationships and helps manage relationship expectations and outcomes.

Also highlighted in this study were the unique expectations and challenges associated with selecting an academic mentor. Additional research to identify and pair mentors with mentees based on their respective characteristics and expectations may help to inform the body of knowledge on establishing and developing effective academic mentoring relationships and their potential impact on graduate students. Additional research could investigate how to capture faculty and student characteristics and expectations using the components of CAT and determine if matching mentors with mentees based on their characteristics and expectations improves degree completion.

Some of the participants in this study highlighted the important role their mentors played in demonstrating effective mentoring in an academic setting. In one case, the student underscored the value of observing their mentor as one of the student's only experiences observing a female faculty member demonstrate leadership in the CGSC. Additional research to

investigate the role academic mentors play in preparing graduate students to mentor others in academic or other environments would enhance the body of knowledge on mentor development.

This study only investigated mentoring relationships during the ten months of the MMAS program and did not include information about how mentoring may have impacted graduate students after they graduated. Therefore, the long-term effects of student experiences are unknown. While resource intensive, a longitudinal study focused on how academic mentoring may impact MMAS students after they depart CGSC may provide more significant insights into how mentor-mentee relationships may influence graduate students over an extended period.

Conclusion

This exploratory case study provided insights into the perceptions of how mentor-mentee relationships influenced the learning experiences of graduate students in the MMAS program. This study described how mentees perceived the influences of mentor support and challenge and how the relationships influenced graduate students' knowledge, skills, and behaviors. Highlighted explicitly by participants in this study, research guidance and feedback provided by mentor modeling, coaching, and scaffolding helped mentees gain new perspectives, improve their communication skills, and gain self-efficacy. While these findings are consistent with the literature on mentoring, this study is uniquely informative as the findings were the result of investigating mentor-mentee dyads participating in mentoring relationships during an accelerated graduate degree program. As such, the results describe mentoring relationships and their influence on learning from both the mentor's and mentee's points of view in an academic environment over time.

This study also provides important insights that academic leadership and faculty can use to enhance understanding of the potential effects of mentoring on student learning. While the

effects identified in this research may be unique to the MMAS program and the participants interviewed, the results and theory-based conceptual framework developed for the study provide a structure or frame of reference that others may use to investigate mentoring relationships in academic settings. Finally, the results of this exploratory case study provide insights other researchers can use to understand better the importance of mentoring in academic settings, advance mentoring theory and its application in faculty development, and better prepare faculty and students to navigate their graduate-degree journeys.

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Appendix A - Informed Consent Form

PROJECT TITLE: Investigating the influence of mentoring relationships on transformative learning

PROJECT APPROVAL DATE: October 8, 2020

PROJECT EXPIRATION DATE: January 23, 2023

LENGTH OF STUDY: 6 months

PRINCIPAL INVESTIGATOR: Royce Ann Collins, Ph.D., Associate Professor, Adult Learning and

Leadership, Educational Leadership Department

CO-INVESTIGATOR(S): William Kuchinski, Doctoral Student

CONTACT DETAILS FOR PROBLEMS/QUESTIONS: Dr. Royce Ann Collins, (913) 307-7353

KANSAS STATE UNIVERSITY IRB CHAIR CONTACT INFORMATION: Rick Scheidt, Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University,

Manhattan, KS 66506, (785) 532-3224; Cheryl Doerr, Associate Vice President for Research Compliance, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224

COMMAND AND GENERAL STAFF COLLEGE IRB CONTACT INFORMATION: Dale F. Spurlin, Ph.D. Director, Command and General Staff College Human Protection Program. 100 Stimson Avenue, Fort Leavenworth, KS 66043, Email: dale.f.spurlin.civ@mail.mil, Phone: (913) 684-7311

PURPOSE OF THE RESEARCH: The purpose of this study is to investigate how mentor-mentee relationships may influence learning experiences of graduate students. Participants include students, who are U.S. citizens, currently pursuing the MMAS program and their faculty committee chairs.

PROCEDURES OR METHODS TO BE USED: If you agree to participate in this study, will be asked to take part in three semi-structured interviews and complete three reflective journal entries about your experience with the mentoring relationship while in the MMAS program. The interviews will be conducted via password protected Zoom link and last from 45 to 60 minutes

each. The video file will be deleted, and the audio file retained for transcription purposes. You will be provided the opportunity to review all interview transcripts for accuracy. The reflective journals will only be shared directly with the researcher prior to each interview. You may choose to share a handwritten journal entry or electronic.

The journal entries may be completed in 20 to 30 minutes. DoD personnel should not discuss classified information or potential violations of federal law as disclosures could adversely impact your security clearance, credentials, or duties.

RISKS OR DISCOMFORTS ANTICIPATED: There are no expected discomfort or risks related to this study. Participants may withdraw from the study at any time. If one of the paired mentor-mentees withdraws, then the other person is also withdrawn.

BENEFITS ANTICIPATED: The participant may gain insights into mentoring.

EXTENT OF CONFIDENTIALITY: Each interviewed participant will be assigned a pseudonym which will be used for all documents and reports, except personal correspondence with the participant. Responses of mentors and mentees are considered confidential and will not be shared with either party. Each interview participant will have the opportunity to review transcripts to identify potentially sensitive data for exclusion. If necessary, reviews can be handled over a password-protected Zoom link with the researcher sharing his screen to display the interview transcript. Data will be kept on a password protected hard drive which will be kept in a fire-proof locked cabinet. Hard copies will be kept in a fireproof locked cabinet and shredded five years after the completion of the dissertation. The information that will be collected, as part of this research, will not be shared with any other investigators.

IS COMPENSATION OR MEDICAL TREATMENT AVAILABLE IF INJURY OCCURS? No

Terms of participation: I understand this project is research, and that my participation is voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

PARTICIPANT NAME: _____

PARTICIPANT SIGNATURE: _____

Date: _____

WITNESS TO SIGNATURE: _____

Date: _____

Appendix B - Reflective Journal Questions

Participant will be asked to voluntarily respond to reflective journal questions during the study. The questions generally align to the semi-structured interviews; however, participants may submit their responses at any time. The intent of the journaling is to collect participants' reflection on both their mentor-mentee relationship as well the potential impacts of the mentor-mentee relationship on graduate student learning.

Codes: I = Initial; M=Mid; F=Final; SQ=Subquestion Alignment

Mentor (MMAS Chair) Reflective Journal Questions

#	Question	I	M	F	SQ
1	Please describe your relationship with your MMAS student.	I	M	F	1
2	How would you describe the support, if any, you are providing to your MMAS student?	I	M	F	1
3	Please describe how your relationship with you MMAS student is or is not impacting your student's learning.		M	F	2
4	Please explain any changes you may have observed in your student during the MMAS program.		M	F	2

Mentee (MMAS Student) Reflective Journal Questions

#	Question	I	M	F	SQ
1	Please describe your relationship with your MMAS Chair.	I	M	F	1
2	How would you describe the support, if any, you are receiving from your MMAS Chair?	I	M	F	1
3	Please describe how your relationship with your MMAS Chair is or is not impacting your learning.		M	F	2
4	How, if at all, has your relationship with your MMAS Chair changed you?		M	F	2

Appendix C - Interview Protocol

Introduction. “Thank you for agreeing to participate in this study. The aim of this interview is to gain your insights into your learning experiences while working with your MMAS committee chair or student. This interview consists of three parts. The first part is administration where we will review your informed consent, discuss the confidentiality of your responses, and review the overall purpose of this research. During the second part, I will ask you a few open-ended questions on mentoring. Please feel free to discuss each question as much as needed to explain your point of view. Lastly, we will finish our interview by allowing you to add any additional information you think will enhance our understanding of mentoring during the MMAS program. The interview should last about 45 minutes.”

Administration. “The purpose of this study is to investigate how mentoring may impact learning of MMAS students. The results of this study may help to improve the learning experiences of future students participating in the MMAS program. I will record this interview using a digital recorder. Your responses are strictly confidential and I will not attribute any of your responses directly to you. I also want to remind you that your participation is voluntary and that you may withdraw from this study at any time. Do you have any questions about your informed consent, confidentiality, or purpose of the study?”

Questions. Researcher conducts semi-structured interviews using Kansas State and CGSC IRB approved questions.

Field Notes: Researcher takes notes to record student reactions and key points.

Member Checking. The researcher reminds participants they will have an opportunity to review their respective transcripts for accuracy prior to inclusion in the study.

Closing. “Is there anything you would like to share about your MMAS experience? If there is in the future, please feel free to email me at wkuchins@ksu.edu. Our next meeting is scheduled

for _____ on _____. Please bring your journal entry to the meeting. Thank you for sharing your insights on this important topic.”

Appendix D - Mentor Interview Questions

Note. Table includes all interview questions for use during the initial (I), mid (M), and final (F) interviews to explore how mentor-mentee relationships might influence the learning experiences of graduate students. Additionally, the table depicts the alignment of the interview questions with the research subquestions (SQ): 1) How might graduate students experience challenge and support from their mentors? 2) How might MMAS students acquire or modify existing knowledge, skills, behaviors, or preferences?

#	Question	I	M	F	SQ
1	Tell me about your previous experiences as an MMAS chair.	X			1
1.1	What motivated you to become an MMAS chair?	X			1
1.2	How did you prepare to assume your role as an MMAS chair?	X			1
2	How would you describe your ideal MMAS student?	X			1, 2
2.1	How do you select MMAS students to chair?	X			1, 2
3	Tell me about your relationship with you MMAS student.	X	X	X	1
3.1	Give me an example of time you think you challenged this MMAS student. What happened? (over the past few months or since our last interview)	X	X	X	1
3.2	Give me an example of when you supported this MMAS student over the past few months. (or since our last interview).	X	X	X	1
3.3	How does your student respond to your support and challenge?	X	X	X	1
4	How do you assess if the student is learning as you progress through the thesis? Give me an example of when your student demonstrated learning. (over the past few months or since the last interview)	X	X	X	1
5	Do you think your student has changed in any way over the last few months?		X	X	2
5.1	How would you describe the changes?		X	X	2
5.2	Do you think your student has changed or acquired new knowledge over the last few months? If so, please explain.		X	X	2
5.3	Do you think your student has changed or acquired new skills over the last few months? If so, please explain	X	X	X	2
5.4	Do you think your student has changed or acquired new behaviors over the last few months? If so, please explain.		X	X	2
5.5	Do you think your student has changed or acquired new preferences over the last few months? If so, please explain.				
6	Overall, how would you describe the effects of your relationship on your MMAS student's learning and development?		X	X	2
7	Is there anything else you would like to tell me about your relationship with your student?		X	X	2

Appendix E - Mentee Interview Questions

Note. Table includes all interview questions for use during the initial (I), mid (M), and final (F) interviews to explore how mentor-mentee relationships might influence the learning experiences of graduate students. Additionally, the table depicts the alignment of the interview questions with the research subquestions (SQ): 1) How might graduate students experience challenge and support from their mentors? 2) How might MMAS students acquire or modify existing knowledge, skills, behaviors, or preferences?

#	Question	I	M	F	SQ
1	Tell me about your previous experiences as an MMAS student.	X			1
1.1	What motivated you to enter the MMAS program?	X			1
1.2	How did you prepare to become an MMAS student?	X			1
2	How would you describe your ideal MMAS chair?	X			1, 2
2.1	How did you select your MMAS chair?	X			1, 2
3	Tell me about your relationship with your MMAS chair.	X	X	X	1
3.1	Tell me about an experience you had with MMAS chair that made you feel supported in the past few months (or since our last interview)?	X	X	X	1
3.2	Tell me about an experience you had with MMAS chair that made you feel challenged in the past few months (or since our last interview)?	X	X	X	1
3.3	In what ways, did this experience affect you? (How did it make you feel? What were your actions as a result of this experience?)	X	X	X	1
4	Tell me some things you have learned as a result of working with your MMAS chair and working on your thesis.	X	X	X	1
5	Do you find yourself thinking in a new way or being aware of information and people in a different way?		X	X	2
5.1	How would you describe the changes?		X	X	2
5.2	How do you think you changed or acquired new knowledge? Tell me how.		X	X	2
5.3	How do you find you have changed or acquired new skills? Tell me how.	X	X	X	2
5.4	How do you think you changed or acquired new behaviors? Tell me how.		X	X	2
5.5	How do you think you changed or acquired new preferences? Tell me how.				
6	Overall, how would you describe the effects of your relationship with your MMAS chair? (performance, leadership, how you learn)		X	X	2
7	Is there anything else you would like to tell me about your relationship with your MMAS chair?		X	X	2