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Theme: Preparing Military Leaders to Effectively Resolve 21st Century Security Challenges
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Creating Students’ Leadership Competencies in the Educational Process at the Military Universities

Adam Januszko, Leszek Welyczko, and Dariusz Skorupka

Abstract: The article presents the most critical aspects related to the creation of leadership competencies in upcoming officers. Today, in the era of globalized world, it is necessary to have professionally trained soldiers who will meet the civilization expectations of leaders in keeping up with technological development, too. It must be pointed out there is no machine, even though supported by the latest solutions of artificial intelligence (AI), that will ever be able to meet all the challenges that a human being can only fulfill. In addition to the ability to make rational decisions based on efficiently functioning thought processes, e.g., imaginative-conceptual and analytical-executive, a human being has something that gives the choice of the best rational solutions a special meaning: emotion and motivation. Among the many determinants that directly impact shaping human life, the intellectual and non-intellectual factors are the most significant influence. The most important intellectual factors are personality, emotions, motivations, and non-intellectual ones, e.g., thinking, memory, and perception. They describe our image—and decide who we are today and who we will be tomorrow. It should be assumed that only people with well-developed leadership competencies (intellectual and non-intellectual factors indicated above) will be susceptible to developing the so-called emotional intelligence, so desirable for those commanders who also want to be leaders to handle interpersonal relationships judiciously and empathetically.

Keywords: Personality; Competencies; Leadership; Emotional Intelligence; Emotions; Self-esteem; Self-confidence; Motivation; Coaching; Educational Process.

Introduction

In the educational process of a military university, the basis for training professional graduates-officers-commanders is such preparation for their profession that they will be effective in terms of competencies and tasks to take their first duty post in a military unit. That requires specific officers both develop social and professional skills, and form personalities that will allow them to fulfill the primary roles simultaneously, as every graduate of a military higher education institution must be prepared to be a commander, an educator, and a trainer.

Today, however, the very knowledge, skills, and specific socio-professional attitudes require “something” more from graduates of military schools—to be a person who uses the vast resources of emotional intelligence in their competence-task effectiveness in their service
position. That, in turn, will contribute significantly to “making” every officer-commander an officer-leader as well. Officer-commander is indicated by formal institutional regulations, while the officer-leader is, in addition to the formal appointment, the actual leader.

There are probably many other factors that considerably influence the formation of an officer with leadership competencies; however, it is the possession of emotional intelligence by a commanding officer that has a crucial impact on the fact that he/she becomes an officer-leader.

**Investigation**

D. Goleman believes that emotional intelligence means the ability to recognize our own and others’ feelings, motivate ourselves, and manage emotions, both our own and those of people with whom we have some ties. At the same time, he gives the five most fundamental social competencies that determine emotional intelligence in people who possess it. These include:

- self-regulation that relates to control over one's internal states, impulses, and abilities, i.e., self-control, maintaining norms of honesty and integrity, conscientiousness, flexibility in adapting to changes, innovativeness;
- motivation that concerns emotional inclinations that lead to setting new goals or facilitate their pursuit, i.e., striving for achievement, commitment, initiative, optimism;
- empathy, which means becoming aware of the feelings, needs, and concerns of other people, namely, understanding others, improving others, service attitude, political awareness, i.e., recognizing emotional currents in the group and relationships among authority figures; and
- social skills refer to the ability to elicit desired responses from others, i.e., influencing others, agreement, conflict mitigation, leadership, bonding, cooperation and collaboration, team skills.

On the other hand, a leader is a person who is accepted by others and can influence their behavior without resorting to using force. A leader has specific personal-characteristic features,
thanks to which he can impose his beliefs on subordinates, initiate and unite the group's activity, and so forth.

Today not only commanders are needed, who often “keep” their subordinates at a distance, setting tasks based on regulations only. Nowadays, a person who leads a group, especially in a specific environment as the armed forces, is required to present a charismatic personality with high authority. The group members know that an officer with above-average professional competencies never demands more from others than from himself/herself. A person presenting such a personality, being assertive, empathetic, and self-reflective, can behave in any situation as best as possible and, in case of any disagreements or conflicts, may find rational solutions. He/she is a person who does not use only hard competencies acquired during education and training—most often confirmed by various diplomas, attestations, or other certificates, and directly related to the profession, e.g., possession of a driving license, completed computer course or other specialist training, knowledge of foreign languages, etc.—but also commands a whole spectrum of soft skills. The latter are most frequently related to the personality of the person who manages, directs, or commands a team, and usually connected with interpersonal communication, teamwork, quick adaptation to new conditions, ability to solve problems and difficult situations, creativity, interpersonal skills, time management, leadership skills, and work ethic.

The study is to answer the question, how do we shape emotional intelligence, and thus leadership competencies, among military students as part of the educational process at the military universities? The specificity of military education and training is dictated by dualism. That means that military university graduates must obtain the appropriate preparation and qualifications that every university graduate receives (confirmed by a university diploma and a given field of study). What is more, they must be appropriately qualified to perform a soldier-officer profession (after completing military training at the university level and passing an exam in this field, confirmed by earning a commission).

Comparing civilian students, who do not undergo any military training, to military ones, who undertake education and training simultaneously, should create a broader personal and professional profiles spectrum expectations. This is displayed in Figure 1.
Figure 1 shows that the training of leadership qualities in future officers is one of the elements forming a “complete” personal and professional profile of military university graduates, so they can be effective in terms of tasks and competencies in their positions in military units.

In the context of the subject matter, it appears impossible to describe in one article all aspects of the personal and professional profile of graduates of military higher education.

Figure 1. Determinants of the personal and professional profile of an officer graduating from a military university
institutions. Therefore, the aspects concerning the formation of leadership competencies in students-future military graduates have been taken up here.

The literature on personal-professional characteristics anticipates the personal-characteristic and competence expectations of efficient leaders. It should be believed that this is an essential guideline for the educational process creators in military universities.

Based on further analysis of civilian environment, the following qualities are the most essential and necessary also for future officers:

- self-esteem, self-confidence, and self-reliance;
- positive thinking;
- interdependence;
- internal consistency;
- sense of abundance;
- ability to create a vision, ability and willingness to learn continuously, ability to make decisions, ability to spot opportunities;
- ability to deal with unpleasant situations (difficult and conflict ones);
- ability to adapt quickly to change (adaptability); and
- ability to anticipate and analyze situations.

This analysis is also important to express other personality traits that are most expected for future commanders, including:

- analytical and communication skills as well as willingness to take risks;
- readiness to take initiative;
- vision and imagination;
- ability to express thoughts clearly;
- charisma;
- conflict resolution skills;
• resourcefulness;
• decisiveness;
• objectivity in judgment;
• resistance to stress; and
• ability to use own strength and available resources effectively.

The fifth-year students’ knowledge (the final year of studies) was examined in 2019 by questionnaires at the General Tadeusz Kosciuszko Military University of Land Forces in Wroclaw. Forty-five officer-cadets out of 143 (30 percent) were asked two months before commissioning as officers to declare the level of leadership competences. When it comes to identify “the necessary skills defining leadership competencies,” the respondents overwhelmingly identified the important ones, keeping their importance at the same level. The 13 different leadership competences presented in the questionnaire found almost the same percentage of answers: 8×8 percent; 3×7 percent; 1×6 percent and 1×9 percent (See Diagram 1).

The same group of respondents answered the question of “Do you have leadership competencies at the right level?” Of those surveyed, 81 percent of those answering this question approached it very cautiously, as one should think, using “common sense” in this regard. Those who chose this variant of the answer probably believed that being a leader requires gaining experience in working directly with people. In this group of respondents, 10 percent firmly believed that they possessed leadership competencies, while 6 percent were fully convinced that they did not have them, and 3 percent could not clearly distinguish between command and leadership competencies (See Diagram 2).
Diagram 1. Responses to the question, “Do you have leadership competencies at the appropriate level?”

The same group of respondents answered the question of “Do you have leadership competencies at the right level?” Of those surveyed, 81 percent of those answering this question approached it very cautiously, as one should think, using “common sense” in this regard. Those who chose this variant of the answer probably believed that being a leader requires gaining experience in working directly with people. In this group of respondents, 10 percent firmly believed that they possessed leadership competencies, while 6 percent were fully convinced that they did not have them, and 3 percent could not clearly distinguish between command and leadership competencies (See Diagram 2).

The results in Diagram 1 show that the future graduates understood the necessity of developing skills in leadership competencies. The respondents also indicated that they
understood the importance of personal qualities, too, as indispensable for the officer-commander who also wants to be considered a professional officer-leader. As mentioned earlier, a key factor for an officer-commander to be a leader is to have emotional intelligence.

Theorists who cite research in this area announced that up to 90 percent of the quality and efficiency of our actions result from emotional sense, not just acquired knowledge. Furthermore, unlike the intelligence quotient (IQ), which is essentially unchanged from childhood, emotional intelligence can be developed.

![Diagram 2. Responses to the question, “Do you have the appropriate set of skills determining leadership competencies?”](image)

In developing emotional intelligence, both key intellectual factors (i.e., perception, memory, and thinking) and key non-intellectual factors (i.e., personality, emotions, and
motivations) should be considered. At the same time, all these components should be developed simultaneously, as they determine three fundamental aspects, which boil down to thinking, feeling, and acting, and which are mutually interdependent.

Taking account of the above, and the modern science achievements related to the development of emotional intelligence, which also determines the highest qualities of a modern leader, it is impossible not to mention the ability to manage oneself (which is the effect of the so-called intrapersonal intelligence) and the ability to manage relationships (which is the effect of the so-called interpersonal intelligence).

Figure 2. A hypothetical model of emotional intelligence formation

Intrapersonal intelligence allows us to perceive what is going on inside us, thus responding to it appropriately. Interpersonal intelligence enables us to perceive what is going on within and between other people and react to it accordingly. Based on the above considerations
and our own thoughts, a "hypothetical model of emotional intelligence formation" can be presented. It is displayed in Figure 2.

As it is presented in Figure 2, the formation of emotional intelligence is a very complex process. In practice, it involves the simultaneous students’ acquisition of knowledge and skills in the process of education (professional qualifications) with the formation of their personality in various student-university situations and social ones outside the university.

At the same time, it is necessary to point out a vital aspect—each student (in this case, a cadet) is subject to constant interaction in the educational process (teaching) within the framework of both upbringing and educational activities. Each complements the other; hence, the personality formation process includes aspects of teaching, and the teaching process includes elements that have a direct emotional impact on the formation of appropriate civic, cognitive, pro-social, ethical-moral, patriotic, and other attitudes. Diagram 1 shows the generalized course of educating military students, including the types of activities and actors that are crucial for the acquisition of emotional intelligence by future officer-leaders.

Diagram 3. Types of educational activities and actors determining the acquisition of emotional intelligence in future officer-leaders
Diagram 3 presents how military students, participating either in the educational process or outside it, are subject to constant influences. In a specific way, these influences aim to make students acquire the particular knowledge and skills (professional socio-professional qualifications) and develop their personalities. That is achieved through study programs and various cultural, educational, recreational, and sports activities.

Given the above, it appears imperative that the designers and implementers of education and training, having in mind the expected personal and professional profile of the military university graduate (see Figure 1), apply these aspects in the selection of the necessary program contents to fulfill these requirements. It should also be remembered that the teaching staff and the commanders of the subunits at the university and in the military units and centers (where the cadets undergo training and command practice during their studies) must be professionally prepared to carry out the upbringing and didactic process. That is a necessary condition for the preparation of professional command staff at the highest possible level, with all the canons of modern education and didactics, the more so to “equip” them with leadership competencies (skills).

For the officer-commander to be a leader, the aspects mentioned earlier must be perfectly coordinated in the didactic and educational process. Some factors directly depend on the subject himself/herself, such as intelligence quotient and the type of multiple intelligence that the student prefers (intrapersonal, interpersonal, linguistic, logical-mathematical, spatial, kinesthetic, or musical.7

The previously mentioned professionally prepared teachers (with qualification to teach at the university level), commanders to carry out the didactic and educational process, and the military students taught, motivated, and engaged enough to finally obtain officer diplomas are the essential elements.

The remaining ones include professionally prepared curricula with the continually updated correlated content to successively equip the students with the necessary professional knowledge and skills through appropriate forms and didactic methods and the necessary didactic infrastructure (dedicated office and field equipment to provide the process).
The above four elements determine the effectiveness of the teaching and educational system, thanks to which—according to the study schedule—a professionally conducted didactic and educational process is ensured.

In general, developing leadership competencies in military graduates, to produce officers-commanders, is a challenging process. The process requires the significant involvement of all the entities that take part in the didactic and educational process. Based on the Diagram 3, the level “Military Unit/Lecture Hall/Exercise/Training Centers and Military Units” requires from upcoming leaders to communicate effectively, empathize with others, overcome challenges, and defuse conflict. Many factors, especially the most important ones indicated above, determine the final success. Emotional intelligence helps to build stronger relationships, succeed at the first commander level as a squad leader, and achieve personal goals. However, new graduates are intensively developed when they take their first official positions in military units, become platoon commanders, and start to “fulfill all social roles” which are connected to it—namely, apart from commanders, they are educators and trainers (teachers). The main determinants allowing them to improve their leadership competencies are situational and personal-subjective conditions. Relationship management, as one of the emotional intelligence attributes, teaches them how to develop and maintain good relationships with both their subordinates and superiors, who constitute closer and further surroundings.

Self-management, another important emotional intelligence attribute, helps students and graduates to control impulsive feelings and behaviors, manage emotions in healthy ways, take initiative, and adapt to changing circumstances. These factors of emotional intelligence can justify the fact that not all officers-commanders are also officers-leaders. It comes easier for some of them, while some officers-commanders may never be considered leaders because they will always lack of something, either intellectual or non-intellectual factors (See Figure 2).

To summarize, it should be emphasized that the most significant factors/elements, which are necessary for forming not only command competencies but also leadership ones in military students and future officers, include:

- continuous formation of emotional intelligence in military students (self-regulation of their own internal processes and control over them and self-control in functioning and acting in accordance with the rules of ethics, integrity, and
conscientiousness, and skillful adaptation to change, etc.; striving to change the external motivation into the internal motivation of those being taught so that they show mobility and activity in various areas of human activity; managing their own emotions and skillful recognition of them in others, etc.; shaping social competencies, i.e., correct interpersonal communication skills, the ability to solve complicated and conflict situations, cooperation and collaboration as well as team building and group work);

• teaching cadets from the first years of studies at the military university how to manage themselves (planning and organizing their own actions and controlling and evaluating progress in this area; maintaining personality balance and harmony in the following areas: intellectual, physical, and spiritual; the ability to be a self-reflective and assertive person able to draw the right conclusions and correct his/her actions);

• shaping in students professional training and methodical competences in the scope of training activity (planning, organizing, and realization of shooting) and educational activity (cultural-educational or recreation-sporting); and

• building in students ethical-moral, patriotic, civic attitudes, based on the qualities and virtues of a professional soldier, resulting from the Honor Code of the Professional Soldier of the Polish Armed Forces, which refer to:

  ▪ Features of a professional soldier: dignity, honor, honesty, and respect for others, integrity, special reverence for the emblem, colors, and national anthem, and identification with the traditions and good name of the home military unit; and

  ▪ Fundamental virtues of a professional soldier: patriotism, valor, honesty, responsibility, justice, truthfulness, and professional solidarity.

An officer with a formed personality, enriched not only with appropriate socio-professional knowledge and skills and self-management skills but also with personal qualities, must have “an effective personality,” which allows him/her to present appropriate and responsible behavior, regardless of the situation with which he/she has or will have to deal with.
The effective personality consists of:

- attitude toward oneself (consistency in action and strong will; demandingness toward oneself and striving for a goal; faith, possessed knowledge and skills and socio-professional experience; self-criticism and rationality in assessing events and situations; ability to manage one's emotions, and especially resistance to stress; prudence and wisdom in life);

- attitude toward professional duties (diligence and conscientiousness, perseverance and consistency, accuracy, attentiveness and precision in action; punctuality, regularity and punctuality in performing tasks; the ability to take and determine risk; responsibility and passion for the profession; prudent and realistic social and professional ambitions; the ability to create a vision of action and anticipate the near or distant future; showing initiative, using imagination and activity in thinking and acting);

- attitude toward people (subjective treatment of people; tolerance and acceptance of differences in people due to their beliefs, sex, skin color or professed values, etc.; care for others, conditioned by their needs and motives of behavior; friendliness and loyalty; ability to work individually and in a team, building and leading human teams; assertiveness, empathy, and self-reflexivity);

- external image (appearance and concern for one’s good image; interpersonal communication skills; observance of all conventions in any situation and place;

- occupational professionalism (general, directional, and specialist knowledge related to the profession and the job performed; necessary knowledge of psychology, pedagogy, sociology, management, mathematics, computer science, and praxeology, etc.; knowledge of foreign languages; intellectual agility and mobility; creative and conceptual skills);

- system of values (cognitive, pro-social, ethical and moral, patriotic and civic, and aesthetic);
changing situation, conditioning officer's adaptation to changing situational and organizational conditions, related to social and professional life and appropriate response to this variability, resulting in appropriate decisions in this regard.

Conclusions

In summary, the aspects presented in this article related to the formation of leadership competencies in military students in the educational process at the university are still a challenge. The point is that the designers and implementers of educational processes related to the preparation of officers-leaders to function in the modern world must respond very quickly, professionally, and effectively to any variability in this field. It must be reflected in the constantly modified curricula and the continuous improvement of the teaching staff, which is responsible for the entire educational process aimed at preparing officers to be effective in all the positions they will occupy in their service—not only as officer-commanders but also as officer-leaders.

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Silicon Volley International Invention Festival, Santa Clara, California, and in December 2018 at the Hong Kong International Invention Design Competition. In addition, he has been a participant of training in the Stanford Center for Professional Development and in the “Leaders in University Management” Program, UCL, London. He is the creator of TOP 500 Innovators Association and the co-author of Leadership Lab. His area of expertise is security and defense technology, including carbon nanotubes, graphene, liquid crystals, radiation/sensors, electrochromic materials, and color management.

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Endnotes


Equipping America’s Leaders: Resilience Under Duress

Clarke Haywood

Abstract: In this paper, I propose how Norwich University’s Corps of Cadets prepares its membership the skills of resilience when under mental duress. Cadets in this training model learn how to manage time and obligations. However, I contend how external factors and preparation, e.g., societal changes in mental resilience and stress cause delays in mentally adjusting to the Corps lifestyle. Once changes happen either by therapy and creating coping skills, will cadets be able to recognize triggers and create advocacy for themselves and their subordinates in the Corps. This paper will review current trends in psychology, education, and in the Corps data, e.g., attrition trends and the causes of attrition and what is done to address it over the long term. It is envisioned this paper will be a benchmark in prior trends and prepare for rising trends in Corps mental health, resiliency and for their success in the military and combat. Current literature shows that studies have been done at U.S. Army Basic Combat Training. Crowley, Wilkinson, and Youngstedt look at the physical fitness and the psychological benefits that come with it. For a Corps graduate, this dichotomy represents a form of coping skills to thrive in the military environment. Yeung and Martin evaluate the spiritual components of soldiery in a combat zone. The authors examine the topic of resilience on two sides of the coin, support from families and stressors from the field, e.g., death, trauma, family issues, and marital troubles. While this does not fully translate to the Norwich Corps of Cadets in some respects—all personnel carry some trauma or issue that impacts their duties. At Norwich and in other Army ROTC’s such as the paper by Molly Fischer considers the physical aspects of the program and the idea of selfless service. The ROTC construct imparts the leader, i.e., rising second lieutenant to be a master of the physical body over themselves and to act self-sacrificially as a leader. The rationale is to inspire their subordinates and gain mastery of the physical self. The trend is to have self-control over one’s shortcomings but also stand as an advocate. There appears to be no formal study of COVID-19 and the military lifestyle. Thus, this dialog remains to be explored and processed. In summary, this paper will analyze trends in resiliency in the military lifestyle. I will examine literature and case studies on the topic. Since COVID-19 is so “new,” this paper will examine and perhaps add dialog in both a training and spiritual front. As a result, this paper allows a chance for documenting past trends in resiliency and adding a pandemic in a unique military environment.

Norwich University, founded in 1819, is an ongoing experiment in the citizen-soldier and experiential education concept. The founder, Captain Alden Partridge, envisioned the nascent United States military to be comprised of chiefly militia raised in times of duress. This machination came to mainstream education in 1862 with the Morrill Land Grant Act and the 1916 National Defense Act. Partridge espoused a system of education that is stepped in hands-on
experiences to train leaders in peace and war. This model remained optimal in a military setting where intense physical training and broad academics, more comprehensive than a classical education, inculcated a sense of preparedness for the young Republic.¹

This paper argues how Captain Partridge’s leadership model inculcates resilience: a broad word to describe the Norwich University Corps of Cadets [NUCC]. The NUCC model teaches these tenets in its standard operating procedures. A comparison will be made of relevant literature how cadet training, and broader college experiences test a cadet’s resilience, especially in a global pandemic.

Parallels to current literature on leadership and psychological studies both at Norwich and elsewhere quantify the leadership foundations of a Norwich Cadet. Using Norwich faculty member Dr. Kevin Fleming’s study, argue how grit can predict success. Another aspect of cadet resilience is in the Reserved Officers Training Corps contexts and how it affects the command climate. Some of this literature studies the concept of resilience in homesickness cases where positive support and attachment bolster success. Resilience and leadership are concrete markers of how a cadet ticks in duress. A recent example of how a cadet may encounter duress is the novel coronavirus (COVID-19). Higher education faces the challenge of resiliency in its undergraduate population. There is a correlation between cadet experiences in mental effects documented in other academic papers. This paper ties the merits of the cadet leadership model inspired by two centuries of Partridge’s radical education system created in Norwich, Vermont, in 1819.

The target population is the NUCC and is a unique microcosm facing the challenges of adapting to a system created by Captain Partridge, specifically, how mainstream society and academia affect cadet resiliency. The secret sauce of heritage and ethos ties to the doctrinal overview of the NUCC. That sauce is a theme of becoming part of something greater than oneself is a common denominator, as explained by Randall H. Miller, author of Norwich Matters. That idea is a form of institutional spirit that lives on through the history and dogmas inculcated in the rookdom experience. After the cessation of that indoctrination, newly recognized Cadets begin to assume a baseline of upperclassmen's responsibilities.²

At present, the NUCC has a defined four-year leadership program outlined in its Standard Operating Procedures, “The Four Year Progressive Leadership Experience” (4YPLE). A cadet
may or may not seek to obtain a military commission in the four-year NUCC system from the onset. The plan's essence is character-based versus a complete preparatory officer training program— the cadet’s Reserve Officer Training Corps (ROTC) handles this aspect. The domains of the 4YPLE hone the physical and intellectual components. In turn, the molding of a cadet shall prepare them to desire personal wellness even after graduation. Beyond these attributes, the NUCC teaches cadets how to communicate with grace and poise and garner attributes of a leader such as “honor, integrity, duty, respect for others, perseverance, selfless service, and courage.”

Thus, the cadet training model focuses indirectly on developing leaders explicitly, but implicitly the cadets develop resiliency in universal leader traits presented.

In the author’s experience, the first primary duty of a freshman “rook” is learning how to handle stressors in the NUCC as a college student. The NUCC is unique because its upperclassmen population or cadets and rooks have challenges faced in this military lifestyle. Grit and resiliency come in situations such as answering to authority, changes within the chain of command, training, personal relationships, obligations to the Corps, ROTC commitments, extracurriculars, and academics. All of these elements easily overwhelm someone new to the military lifestyle at Norwich. The NUCC remains unique for preparing its population to handle stressors as young professionals upon graduation. This perception does not become apparent until after the early years of graduation. A graduate expects to have acquired skills in self-reliance and to be able to have overcome obstacles as a class. According to Fischer, her definition of resilience reflects the essence of the NUCC and how a civilian becomes a cadet through adaption. These traits are perceived in personal inner strength to become better people.

Angela Duckworth, a leading expert on grit, defines it with two components, “passion and perseverance.” Grit is not a physical sensation but a mentality and draws from the mind's inner wellspring, that last push towards a goal. As discussed in the NUCC SOP, there is an air of inculcating professionalism in a military lifestyle. Duckworth uses West Point’s cadets as a case study in grit. The cadet culture of both bodies relies upon well-defined standards of leadership development—versus a culture of yelling used in training. The undercurrent of a stressful indoctrination system and the cadet lifestyle is simple in definition, the tenacity to overcome and not give up. Duckworth’s book is not exclusive to cadets and grit, but also the National Spelling Bee. The crossover is a similar pulse with cadets. A cadet goes against the grain for an undergraduate experience. Under the umbrella may be interests and goals to be
achieved via practice. In an ideal circumstance, a cadet has the drive to better oneself and to make the most of their four years in clubs, leadership roles, and additional military training. Through developed knowledge comes a sense of purpose and hope. The NUCC and Norwich allow cadets numerous opportunities to learn hands-on and experientially versus through book work alone.⁹

Campbell identifies factors that bolster the success of resilience. They are … “the individual, family, unit, and community.”¹⁰ These four components create a whole person and body concept defined in twenty subcategories that deal with positive mental skills such as attitude, coping, and physical fitness, reflecting a trend the Army acknowledges as crucial as physical fitness. There is a delusion that seeking help is a form of weakness. Perhaps a shift in outlook eliminates this negative view of mental health.¹¹ The NUCC documentation outlines this directly in a belief of physical fitness and wellness. The SOP extrapolates this in a positive command climate that a cadet should not feel maligned theoretically asking for mental health to be safe.¹²

Yeung and Martin's study on Air Force personnel's spirituality connects back to the NUCC as cadets may or may not rely upon these underpinnings for grit. A spiritual mortar benefits several identifiable factors, such as having a purpose—linking to a better quality of life. Secondly, spiritual beliefs may increase meditation as a bulwark against of potential substance abuse. The authors caution their audience bleakly that … “spiritual coping is not necessarily effective in coping with such physical stressors such as pain. Several constructs of spiritual fitness may be linked to suicidality, such as religious affiliation.”¹³ The author's assessment asserts that a spiritual foundation may help overcome stressors and that in their research, they discovered the cultural ties of Airmen faith that they anticipated finding such traditions.¹⁴ The NUCC SOP articulates that its members and eventual graduates develop an ethos of “honorable living,” which encompasses qualities at the individual level. The spiritual underpinnings of a cadet are to have a sense of civic self-using empathy and social decorum in leadership. Simply put, healthy respect of one’s subordinates in the active service and professional world allows persons to use their spiritual self-identified by Yeung and Martin. The SOP stated these individual values are a measure of performance, and grit accomplishes results. If leadership in the NUCC comprises providing safety and inspiration, grit is a mechanism for delivering tangible results such as graduation and a military officer's commission.¹⁵ The relevance of grit
and resilience is not insular at Norwich University but in the profession of arms. Meredith et al. discuss why implementing resilience training lies within the leadership. They identify having adequate resources and leadership interests. Other factors preventing a successful program are the perception of weakness and the rigors of pre-deployment. The bottom line for success is implementation and consistent follow-through.  

Banning’s study on homesickness at the U.S. Air Force Academy examines the various perceptions of the experience. These perceptions are multi-faceted—a repressed childish feeling and one masked in other symptoms. Historically, *nostalgia* in the Revolutionary War and into the nineteenth century frowned upon these petulant feelings for selfless devotion to duty. Masking manifests itself in anxiety, depression, and somatic illnesses. The USAFA study quantified attrition caused by homesickness. A factor that may help someone become resilient is to find belonging via close friendships.  

Realistically, building bonds in college versus relying on home friendships prevents a sense of secure support. The cause is social anxiety and does put a student at risk for homesickness. Resilience is critical in overcoming homesickness in this study. Some factors can be generally related to the NUCC: Cadets may have homesickness due to home events, adjustment to training, and the inability to prepare mentally for a mission. A factor that helps bridge the transition from home to college is to develop secure attachments with other people in the environment. It cultivates a support system for stress when situations may be harmful.  

At Norwich University, a study from 2013 to 2019 used grit to determine academic success. The author of this study considered that high school GPA reflected a tantamount progression of a solid undergraduate GPA. Fleming discusses how grit is latent versus fixed. Students [both in the NUCC and civilian lifestyle] as undergraduates are in a prime chapter to test the waters finding new interests and explore themselves deeply. Grit is the constant in the equation that compels introspection when grades come out. A cadet may consider what it takes to achieve his or her goals. For example, a student may find their academic major challenging, which impels them to overcome their hurdle as stated “…‘like medicine, engineering, computer programming, statistics, and research methodologies.” In Fleming's discussion, he poses that grit defines when a student becomes self-aware and reflective of their triumphs and shortcomings. It is common for students to move in their ambitions in the collegiate setting. The abstract of this chapter refers to high school grades, SAT/ACT scores indicative of success: It
can be a measure against the future, e.g., a student that struggles with mathematics may also encounter the same in undergraduate work. However, Fleming points out that grit may be the factor that forces a student to push themselves. Thus, in the end, it is incumbent for students to be their advocates.24 As Banning discussed in his study, GPA may be affected by homesickness for males; females may seek help—but the best resilience factor is having a support network on campus.25 On the other hand, Fleming argues that grit studies should examine attrition and how military academies teach it.26

Holtz argues that the command climate reflects the response of soldiers and ROTC cadets in their resilience. The foundation of a successful unit lies in the chain of command. If a commander generates a toxic environment, soldiers and cadets will not respond and seek mental counseling.27 This dialog of trust between superior and subordinate is crucial in working life and when going downrange.28 Personal resilience needs the bolstering support of all parties: In the NUCC, all personnel is foremost a student, then a cadet. If those two prongs are not satisfied in a Maslow perspective, cadet will likely flounder emotionally and academically.29 Fleming’s assessment that grit is a quantifiable factor of both personal growth and assessment needs to emulsify one's progress and the ultimate goal of graduation. If hypothetically, a rook or cadet is in a toxic environment in their peer-group and unit, that will play out emotionally and physically. What if a cadet has preexisting issues, e.g., anxiety and depression upon matriculation? Cadets either seek therapy and the necessary coping skills of their own volition or mask their needs. Perhaps those who seek clinic support acquire skills of self-advocacy and recognize their triggers. As Fleming stated, the students of both lifestyles in an environment to learn and to grow.30 While Banning’s work targets homesickness—the body is greatly affected—which in some respects brings the person to just surviving and being enabled or helped by their support group. There is regrettable fear of seeking personal wellness and counseling—that hinders the ability to pursue a military commission. This challenge creates a storm of how to overcome these challenges.31 From the author’s experience as a Corps graduate and time away—the lessons and challenges posed at the NUCC prepare one for numerous responsibilities and nuances as a young professional.

The glue that bonds cadets and graduates across each generation is shared experiences. These are a bonding event that represents milestones in the cadet experience. Some of these traditions are under a century old, such as the Dog River Run; or Junior Ring. Grit in overcoming
obstacles and meeting that milestone is a concrete and tangible feeling from rook year to graduation.

These milestones can be translated into a family bond that spans across generations. In lieu of a “Long Gray Line” such as at West Point, Norwich delineates itself that at the close of the spring semester, ends with a milestone. The prevailing question is why do these events and rituals separates itself differently from other military academies? It is natural for humans to make meaning out of a shared experience, by processing it through various conduits.

As identified by Major Sean Frederick, the Corps experiences at West Point differs than the NUCC. West Point has a variety of traditions that bond alumni to one another, e.g., the Indoor Obstacle Course. Their Corps comprises of four regiments, and has cadets assigned to a company that has a lineage and allows alumni to donate to the unit’s needs. Plebe experiences also transcend generations such as performing chores. According to Captain Ryan Gibeley, a graduate, attributed discipline as a key element to the cadet experience. This discipline takes the form of wearing a daily military uniform or prescribed casual attire. This highly structured system of privileges, such as when to wear civilian clothes and obtaining passes off-post is part of the four pillars, i.e., character. Gibeley believed that in discipline resiliency is taught from the beginning. The NUCC is one regiment and cadets generally move to various units during the author’s tenure.

The process of rook to cadet involves breaking down an individual to building themselves up. A rook undergoes this process simultaneously Major Frederick agreed with the author’s assessment of NUCC life, especially rookdom, encompasses various obligations such as Corps duties, academics, and ROTC. These are simultaneous to rook training, while conducting their academics and obligations to ROTC and clubs, respectively. Captain Gibeley explained the process of first military training in the summer prior to being received as plebes in the Corps. Both environments differ for when military training is conducted. The West Point academic year remained strictly that environment, as military training is a summer event. The stressors adapting as both an undergraduate and living a military lifestyle will induce challenges both mental and physical on a person. Theoretically if a person works on their obligations and helps their fellow rooks in the company, will they accomplish greater goals together.

The NUCC uses the family bonding in the Junior Ring Ceremony. This anticipated event
ties back to the rook experience where the cadre return to march their former subordinates to a dinner and ceremony. The mainstay is military style dinning in comprising of a guest speaker and the ceremony. The ritual presentation for the rings hearkens to their welcoming into the NUCC.

Rookdom is the weaving of the overall cadet experience, where in turn cadets morph into leaders and pass down their knowledge—all the while preparing for a post-graduate life. The record at Norwich shows evidence of bonds through the first Friendship Club that called for reunions at a designated time. It can be seen that the children of Norwich’s founder, Captain Alden Partridge, either predeceased him or died childless. RADM Richard Schneider, the narrator, poignantly stated that graduates are the children of Partridge. Few military academies probably cannot assert such a profound paradigm of a family as an institutional bond versus an institutional bond such as at West Point. Grit and resiliency are acquired at Norwich University through a collective experience.

A chief example of Norwich alumni building relationships with current cadets is the Guardian Class. Mr. Barry Wright explained that each pairing is with a class fifty years apart. This idea came out of the Norwich University Alumni Association. The guardian class members come during events sponsored by the NUAA but are welcomed to be more involved with the cadets. Wright has served as a speaker for various milestones such as Junior Ring. Wright stated, “As the guardian you are seeing yourself 50 years ago as that arriving rook or civilian student and memories of how you survived that ordeal make you a tremendous mentor and asset for that new student. The guardian can make a big difference in whether a new student makes it or not.” Reflecting on his Corps experience, he attributed that a guardian class in 1966 would have impacted his experience. Being the first in the family to attend college there was an adjustment. The NUCC was all-male and knowing someone who had been through the rigors would have helped. At the time, Wright remarked that he had “a tremendous squad leader…” who put him on the right path and was “not just a screamer who could because he was an upperclassman.” The guardian class continues a link going back in spirit to 1819. Wright identified that the NUCC enjoy a bond perceived as great pride in the military. As an institution, Norwich has weathered recent storms with equanimity while other Vermont colleges have faced closure. One need identified by Wright is that the process of integrating civilian students “has neither been smooth nor is it complete.” This parallels the idea of a “One Force-One Fight tenet” and that the NUCC
and civilian students has made strides with inclusivity, but there remains more work to do.\textsuperscript{38}

After comparing literature and studies on grit and resilience, these attributes are both a group experience and one that is also personal. In recent times, the NUCC has experienced the challenge of the novel coronavirus (COVID-19). Literature has emerged on the topic of COVID-19, such as studies on the impact of college students. There has been no academic study of resiliency at Norwich University surrounding this virus.

Schlessman et al. wrote about how pharmacy students experienced COVID-19 mentally. Despite being targeted toward pharmacy students, the authors interpret the virus in the Maslow model. There was social and emotional upheaval in what the authors term “well-being” impacted.\textsuperscript{39} The authors use Maslow’s hierarchy of needs and that college students are developing a sense of identity with or without COVID-19. For example, placing students outside of a norm, i.e., the anticipation of being on campus in a set timeframe and having shared collegiate experiences, and then taking away affects students emotionally. The virus's upheaval threw students into a state of anxiety, respecting their sense of belonging, isolation, safety, and even love. This state of uncertainty placed students in a tenuous state emotionally: We tie Maslow’s hierarchy to meeting specific needs such as being fed and housed on campus—or being sent home where physiological needs are not met. This loss can be not being on campus or having no employment for themselves or their families. In the darkness, there remains a beacon of hope to be able to return to the classroom. Because of the emotional trauma of COVID-19, it sparks further dialog on resiliency.\textsuperscript{40} Schlessman’s recommendations that not all students respond to the pandemic and demonstrate resilience as its best suits themselves. Prior discussion using the support system to overcome homesickness or the historical ethos of the NUCC theoretically bonds cadets to overcome a pandemic. The virus conferred challenges and epiphanies for students when it came to online learning or reduced responsibilities such as Corps obligations. Some students may enjoy the remote structure and obtain well-being void of alarms and enjoy better sleep.\textsuperscript{41} After this study, students' emotional health may be fragile, and if there is trauma, it may manifest in … “an inability to cope with normal stress cognitively process information, regulate behavior, and/or control emotions.”\textsuperscript{42} Resilience and supporting one another in the NUCC should remain a vital aspect of honing leadership skills and well-being. If the NUCC SOP inculcates leadership in its program, cadets should avail themselves of their leadership proactively and the campus Counseling and Wellness Center to overcome their
trauma.

Conversely, in a military setting, we can adapt upon Schlessman using Chiu and Yu's study on resilience in the military community—which the scholars argue that resilience a communal matter versus individual experience. Many parts, such as cadets in the NUCC, may have a collective experience in the pandemic, but it takes the whole to overcome and learn from it. This study remains different from Schlessman et al., as it delves into a community counseling model and integrates teaching. The authors of this study observed the Taiwanese military's approach to moving mental health to an online platform. A caveat in this study advises that social workers are to benefit from adapting this into supporting clients. There is a valid concern as the NUCC remains split in remote learning and the campus experience. Both modalities, like in Taiwan, need immediate support processing situations where they may be in quarantine or finding they have COVID-19. In truth, cadets’ latency and as potential leaders latency in this pandemic require grit, perseverance, and adaptation. The authors identify communal aspects such as providing telehealth counseling; however, resilience most certainly is a … “dynamic process.”

The next aspect for cadet resilience as future leaders in a pandemic is how to address the mental impact for this demographic. If there is one word to describe March 2020 for the cadets [and the civilian population] is disruption. Liu et al. identified two aspects of mental health for college students, access to mental health and “having intentional outreach.” The disruption to not return to the Norwich University campus induced stressors that Liu also identifies in their study. Students may develop anxiety with remote learning, yearning for support from peers and faculty, and relocation to cadet homes. This upset about losing immediate campus support may affect persons seeking support for their mental health conditions. According to Liu, the pandemic elicited challenges where campus counseling needs to adapt by providing access, identifying best practices, and the legality of telehealth when necessary and appropriate. As identified by Schlessman—the communal aspects of college living may be hindered with immediate in-person support. As both studies identify, a concrete system of personal support is requisite given the pandemic's uncertainty. Cadets develop themselves as leaders must identify two support points for themselves, be their advocate, to undergird peers and subordinates. This concept is putting into practice the communalism needed to support one another.
Liu et al. make a valid concern about disparities. They identify “Low-income, underrepresented minority, and first-generation students…” these individuals may encounter more significant stressors. As Banning discussed using a Maslow modality, these students may have a great need to address stress at home. This stress can affect their studies having to access health, take on a job, and provide childcare. Liu identifies crucially that people of color may struggle with accessing mental health sources. Liu identified that Asian Americans and Asians might encounter discrimination due to COVID-19. International students are at tremendous stress having to relocate back home and address their visas to return to campus. Further study for Norwich students of color accessing mental health is required. The literature Liu writes is of great concern for any potential discrimination and the ability to access services for counseling. If we use Maslow to piece together a whole-person approach: If a cadet has numerous stressors at home, this will affect their academic performance. If we reference Meredith and attachments, resilience and adaptability may have a negative outcome without proper mental health support—affecting cadets’ ability to lead.

The final study that ties to resiliency and COVID-19 was done in July 2020 by Ferreira et al. on how the pandemic can predict resiliency. The context of the study stands out for its early review during the pandemic’s onset. A caveat from the literature identifies a higher female population with either an undergraduate or graduate degree, which may skew the results. However, the outcome reflects personal resiliency. Given the state of uncertainty, such as no vaccine and the rising death toll at the time, readers should at least heed the disparities and translate them into the NUCC’s needs. Concerns emerged where persons using English as a second language may struggle to navigate governmental services. Thus, a solid support base with avenues for advocacy is paramount for the NUCC in a pandemic and when the campus restores itself to an optimal learning environment.

To conclude, this paper weaves together Captain Partridge’s system of education promulgated in 1819. His system stood against the grain as a model of training citizen soldiers versus a professional standing army. Today, the NUCC has learning goals and outcomes specified in the standard operating procedures outline the making of leader well-versed in character and inspiring their subordinates.

Academic and psychological studies on resilience have amorphous definitions of the
word. The literature studied and compared against the NUCC leadership model demonstrate its relevance in 2021. External papers by Banning and Meredith give credence that the rook system’s rigors help individuals overcome challenges such as homesickness and develop bonds or secure attachments. Cadets or rooks make not intuitively see their pursuit of developing attachments as such until introspection. In the NUCC there is a desire for belonging. Psychological studies by Liu and Chang identified a collaborative approach versus an individual structure for resilience. The cadet training model seeks to develop a group mentality versus a personal experience. Self-actualization in the NUCC comes with working towards a common goal.

Holtz stated that trust between the superior and subordinate spurns a cadet to seek help. In a hostile environment where seeking counseling may be frowned upon—it can cause a person's well-being to spiral. There is no formalized study indigenous to Norwich University on counseling and even retention of cadets in this context of resilience. A study like this can identify gaps and strides in cadet mental health. The military lifestyle is rigorous and studying attrition and retention may factor in the state of resiliency in a pre and post-pandemic setting. Future studies can link broader societal trends in higher education and translate this data to ensure an optimal experience for a cadet from matriculation to graduation. Fleming identifies that Norwich University is an environment where students can experiment with opportunities academically or socially. The NUCC remains unique as a bastion for leadership training and encouraging the individual pursuit of interests. However, yielding to and obeying orders comes first as well as building upon resilience. The NUCC presents stress and stressors for an individual to grow and mature. If persons have a preexisting mental health condition, it may serve as a crucible for their growth. This study identifies at the end that grit and resilience come through by way of Maslow's hierarchy of needs as a concrete example. Nevertheless, this is not a clear-cut approach for all individuals, their backgrounds, and mental history.

Further studies are required to help people of color and minorities access the same opportunities and overcome barriers to achieve similar resiliency results. At this juncture, COVID-19 has revealed fissures and growth in higher education that require further conversation. The NUCC as a military lifestyle proves that its structure helps Norwich University advance in an uncertain landscape in higher education. The University is not alone as an example of resiliency training. Duckworth’s writing encapsulates and quantifies grit as the
inherent ticking of a person to accomplish and overcome the odds. This sense of self-drive sets a Norwich graduate apart by its reputation. This review of current literature on resiliency and COVID-19 will hopefully spark an academic study of what makes a Norwich Cadet tick in a crisis.

Clarke Haywood studied history and education as an undergraduate. He received a M.A. in history in 2021 from Norwich University CGCS. Haywood is a published author on Norwich University’s history; he also wrote the book In Which I Flee Ares, a historical fiction memoir on the Revolutionary War and PTSD.

Endnotes
8. Ibid, 6.
11. Ibid, 4-5.


34. Major Sean Frederick, NU 2010, telephone conversation, July 30, 2021.


40. Ibid.

41. Ibid, 678.

42. Ibid, 681.


45. Lui et al., “Priorities for addressing the impact,” 1.

46. Ibid, 2.

47. Ibid.

Hellenic Naval Academy and the Educational Tug of War Traditional and Online Education in the Era of the Pandemic Crisis

S. Kalligeros, A. Vantarakis, E. Rofouzou, A. Tsapalis, and A. Tsigkopoulos

Abstract: The integration of new technologies in education contributes significantly to the learning process as it creates a laboratory learning environment where the learner reinforces elements of his/hers personality, such as autonomy, self-discipline, and self-will. The use of Information and Communications Technology (ICT) for educational purposes is not limited, however, only to the classroom, nor has it exclusively a supplementary character. In modern times traditional education is often completely replaced by distance learning. Although in-person learning offers unique possibilities of educational reception, it is clear that there are not always perfect conditions for this to happen. Restrictions on availability in key factors, such as time, place, and expenses, but also health in some cases, prevent seamless education in its conventional option. The COVID-19 pandemic has driven the vast majority of the planet to self-isolation. People, apart from primary income, lack both general socialization and entertainment. The impact of the pandemic on education is also clear; however, education must activate the appropriate tools at its disposal in order to respond successfully to its work. This study focuses on the teaching and learning process during the period of COVID-19. Its purpose is to highlight Hellenic Naval Academy (HNA) and its educational strategies in order to increase flexibility, stay up to date, and offer an educational space with minimal restrictions. Starting with a brief presentation of HNA, this paper will focus on the curriculum and the way of transition from conventional education to its online counterpart. We will also take a closer look at e-learning and the two of its three forms—asynchronous and synchronous learning—which HNA offers in order to expand the educational framework and to successfully continue to contribute to the needs of the naval cadets and the Hellenic Navy.

Introduction

The coronavirus pandemic (COVID-19) has affected the daily habits of millions of people over the last year. Thousands of people have become ill and died of the underlying causes of this disease. The rate of transmission of this virus is high and the way to prevent it is by hand hygiene, social distancing, and use of a face mask.

In addition, in order to reduce the transmission of the virus among humans, most countries have chosen to isolate themselves for a long time. This pandemic has affected the healthcare systems, the economy, and social life in all the countries. From a social point of view, personal contact among people has been lost; traveling from country to country has been limited;
and hotels, restaurants, entertainment venues and religious places of worship have shut down. Apart from these, sports venues such as gyms and swimming pools have also been closed.

The pandemic presupposes that social isolation is the only measure to prevent its transmission, but this isolation creates negative consequences such as mental fatigue, mood swings, stress, reduced physical activity, frustration, and boredom (Brooks et al., 2020). The result of the quarantine in humans is a decrease in activity, increased calorie intake, and weight gain. Reduced physical activity and increased food consumption due to more free time have led to a high energy intake. The long-term effects of these conditions can lead to metabolic and psychological disorders (Jiménez-Pavón et al., 2020).

The aim of the present paper is to initially introduce the reader to the vision, objectives, and main characteristics of the education process within the Hellenic Naval Academy (HNA), the main institution which trains the future officers of the Hellenic Navy. In Section I, we will outline the structure of the curriculum and the integration of traditional Navy education within the acquisition of a solid academic background adequate to the needs and demands of the twenty-first century Hellenic Navy. In Section II, we will discuss in detail the way the traditional education paradigm of the instructor-centered process via lecture attendance will benefit from the utilization of digital technologies, offer flexible alternative environments, and overcome challenges created by the physical distancing requirements in a constructive way. We will outline the main e-learning environments—asynchronous and synchronous learning—and the way they are integrated within the academic process in HNA. We will discuss the timeline of evolution, assessment, and degree of acceptance by both the student and teaching faculty communities. In Section III, we focus on the physical activities and education within HNA and the way the pandemic crisis has affected these activities. We will present special measures and modifications introduced in order to ensure a proper physical education, mental health, and social distancing within an extended isolation period at the heart of the pandemic crisis. Finally, we draw our main conclusions from the educational challenges dealt within the pandemic crisis in the HNA itself.

**Hellenic Naval Academy**

**A. Vision and Aims**
The Hellenic Naval Academy (HNA), established in 1845 and located at the port of Piraeus, is the institution for the academic, naval, and military education of the Hellenic Navy officers. The words of Thucydides—“Happy are the free and free are the brave”—convey the spirit of the education that is been offered, and together with the words of Sophocles—“Have courage; when you tell the truth, you will never go wrong”—aptly cultivate the culture and the improvement of knowledge within the institution.

Within the twentieth century, the Academy acquired a prominent status and recognition within the Greek State, and a large admission of students; it expanded its facilities and solidified a tradition of offering a high level of academic training in science, engineering, and humanities along with naval and military education. HNA is recognized by Greek law as a Higher Military and Academic Institution and by the European Commission as a European Higher Education Academic Institution. The faculty is selected and evaluated with the standard election and promotion procedures applied to all Greek universities and its members are committed fully to research, teaching, and related academic duties.

The Hellenic Naval Academy is committed to serving its objectives which are the continuous improvement and modernization of education processes along with advanced research in Naval Sciences and Technology. Modern higher educational processes require the international cooperation between HNA with other military and civil educational institutions in European countries and the rest of the world, in order to promote scientific research and expertise, enhance military training, improve the educational operations at all levels—undergraduate, postgraduate—and to disseminate the cultural heritage between the countries. HNA has adopted a strategy for the development of the cooperation which will be determined by high quality standards of partner institutions involving students, staff—both academic and military—as well as educational and research infrastructures. The continuous intention and will of the HNA is to play a leading role in the development of inter-university cooperation in all fields of naval science, technical engineering science, environmental science, basic sciences, and law science, as well as economics and humanities. Additionally, in the research field, HNA will be seeking possibilities for cooperation with recognized international and industrial institutions of all sizes, large as well as small and medium-sized enterprises (SMEs). The aim focuses on the establishment of research infrastructures, which could improve the basic research capabilities of HNA and incorporate innovative applications for life improvement. The utilization of HNA’s
high level human resources and the exceptional level of infrastructure are the key elements for the achievement of the objective of inter-university cooperation.

The role of HNA in Greek state and society is well established through history and is reflected in the frequent presentation of its activities in media, public visits, and acknowledgements from collaborating institutes and social partners.

B. Undergraduate Education at the Hellenic Naval Academy

Cadets are enrolled each year at HNA following the highly competitive Pan-Hellenic University Entrance Examinations held by the Ministry of Education. The entry scores required are typically at a high success rate—within the top 5 to 10 percent—comparing to the scores required for entry to other Greek university departments. In addition, strict levels of physical and mental competence are required for acceptance in the academy. Following a 4-year education program, the graduates of HNA pursue the career of a naval officer in the Hellenic Navy. HNA is a highly preferable institution for studying and the Navy a highly sought-after career path for the young Greek generation. Successful candidates enroll in one of two course programs: I. The Deck Officers Program, illustrated in Table 1, which prepares the cadets for the deck officer career and typically enrolls around 40 new cadets each year, and II. The Engineers Program, illustrated in Table 2, which prepares the cadets for a career as a naval engineer officer and typically enrolls around 20 new cadets each year. In addition, a small number of successful students from Cyprus and a small number of students from Balkan, Middle East, and African countries are enrolled in the academy on the basis of state-to-state agreements between Greece and the above-mentioned countries.

Overall, with its curricula, HNA (www.hna.gr) aims to offer:

- Solid scientific education and training in a constantly developing technology environment;
- Analytical and synthetic skills which allow the assimilation and integration of scientific knowledge and technology on various fields for the successful tackling of all challenges that she/he will face in her/his career; and
- Strong character development, initiative, teamwork capabilities, courage, and
leadership for her/his functionality in the Greek Navy as well as the international environment.

Each program distributed in eight winter and spring academic semesters, each lasting for a 13-week period plus the final examination period. Some courses include laboratory practice, others require specific field exercises. In addition, each cadet is required to author a diploma thesis on a topic of her/his selection during her/his fourth year of study. A variety of topics requiring an in-depth investigation are offered from the faculties of the academic sectors. The depth of analysis has to meet the academic standards of an university diploma thesis and the thesis is completed with an oral presentation and examination.

In parallel to the academic program, cadets follow an intensive and coherently joined naval and military training program. The naval training program consists of lecture attendance, simulator practice, short period training trips onboard Navy vessels, and weekend sailing instruction and practice, as well as visits to naval stations. The majority of the naval training takes place during the summer semester and culminates with the participation of all cadets each summer in the summer training trip, a 45-day trip on board Navy vessels sailing on a scheduled trip, in the Mediterranean Sea or oceans beyond. These trips gradually develop the cadets naval skills and help them integrate successfully into the long tradition and practices of the Hellenic Navy. It must be noted that onboard naval training is an integral part of the curriculum that is a valuable complement to the cadets' classroom and laboratory education. During their life in the academy, the cadets also follow an extensive and suitably optimized athletic training program, with each one strongly encouraged to participate in a sports and athletics team, develop her/his special abilities, practice extensively, and excel in her/his favorite sport.

Table 1. Deck Officers Program, based on 2018-2019 syllabus.

<table>
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<tr>
<th>1st Year</th>
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<tr>
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<td>Hours</td>
<td>Semester B</td>
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<td>3</td>
<td>International Regulations for Preventing/Avoiding Collisions at Sea/Ship Handling</td>
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<tr>
<td>Course</td>
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<tr>
<td>Naval Skills</td>
<td>3</td>
<td>Applied Shipping/Navigation</td>
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<tr>
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<td>3</td>
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<td>Analytic Geometry – Geometry of Curves and Surfaces</td>
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<td>History of the oared and sailing navies</td>
<td>4</td>
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</tr>
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<td>Introduction to Marine Engineering</td>
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<td>Introduction to Electric Circuits Theory</td>
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<td>Differential Equations</td>
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<td><strong>Hours</strong></td>
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<td>Electronic Navigation Systems</td>
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<td>Hydrography - Oceanography</td>
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<td>Electronic Charts and Geographical Information Systems in Navigation and in Naval Operations</td>
<td>4</td>
<td>Naval Operations</td>
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<td>Electronics I</td>
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<td>Naval Artillery/Gunnery</td>
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<td>Introduction to Naval Materials Science and Technology</td>
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<td>Theory and Applications of Naval Military Radar and Electro optical systems</td>
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<td>Introduction to Applied Mechanics</td>
<td>3</td>
<td>Electronics II</td>
</tr>
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<td>Introduction to Electric Power Systems</td>
<td>3</td>
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<td>Mathematical Modeling and Applications</td>
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<td>Operational Research – Linear Programming</td>
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<td><strong>Semester B</strong></td>
</tr>
<tr>
<td>Special Topics in Navigation and Ocean Sciences I</td>
<td>2</td>
<td>Special Topics in Navigation and Ocean Sciences II</td>
</tr>
<tr>
<td>Marine Environment and Naval Operations</td>
<td>3</td>
<td>Electronic Warfare/Underwater Acoustics</td>
</tr>
<tr>
<td>Tactical Systems/ C4I Networks</td>
<td>4</td>
<td>Combat Systems Engineering / Guided Missiles / PWO</td>
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<td>Naval Telecommunications/Satellite and Space Systems</td>
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<td>Communication Systems II</td>
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<td>Communication Systems I</td>
<td>5</td>
<td>Information Security – Cryptography – Computational Intelligence</td>
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<tr>
<td>Leadership</td>
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<td>Naval Architecture</td>
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<tr>
<td>Computer Networks – Internet Programming</td>
<td>3</td>
<td>Maritime Law</td>
</tr>
<tr>
<td>Optimization – Non-Linear Programming</td>
<td>2</td>
<td>Game Theory and Decision Making</td>
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Table 2. Engineer Officers Program, based on 2018-2019 syllabus.
<table>
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<th>Course</th>
<th>Semester A Hours</th>
<th>Course</th>
<th>Semester B Hours</th>
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</thead>
<tbody>
<tr>
<td>Elements of Navigation/Shipping and Naval Skills</td>
<td>5</td>
<td>Mechanical Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Computers</td>
<td>2</td>
<td>Computer Programming</td>
<td>2</td>
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<td>Single Variable Calculus</td>
<td>3</td>
<td>Vector Analysis</td>
<td>3</td>
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<tr>
<td>Linear Algebra</td>
<td>2</td>
<td>Analytic Geometry – Geometry of Curves and Surfaces</td>
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</tr>
<tr>
<td>General and Applied Physics (A)</td>
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<td>General and Applied Physics (B)</td>
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<td>Chemistry</td>
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<tr>
<td>History of the oared and sailing navies</td>
<td>4</td>
<td>Social Psychology</td>
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</tr>
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**2nd Year**

<table>
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<th>Course</th>
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<th>Course</th>
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<td>Thermodynamics</td>
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<td>Applied Thermodynamics</td>
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<tr>
<td>Fluid Mechanics</td>
<td>3</td>
<td>Auxiliary Systems and Ship Networks</td>
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</tr>
<tr>
<td>Fuels and Lubricants Technology</td>
<td>3</td>
<td>Electric Circuits Theory and Applications</td>
<td>4</td>
</tr>
<tr>
<td>Theoretical and Applied Electromagnetism</td>
<td>4</td>
<td>Systems Analysis and Introduction to Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>Semester A</td>
<td>Hours</td>
<td>Semester B</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>------------</td>
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<td>------------</td>
</tr>
<tr>
<td>Electronics I</td>
<td></td>
<td>5</td>
<td>Electronics II</td>
</tr>
<tr>
<td>Heat Transfer</td>
<td></td>
<td>3</td>
<td>Marine Reciprocating Engines</td>
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<td>Marine Gas Turbines</td>
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<td>5</td>
<td>Materials Science and Engineering</td>
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<td></td>
<td>2</td>
<td>Applied Mechanics II</td>
</tr>
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<td>Introduction to Electric Machines</td>
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<td>3</td>
<td>Electrical Power Systems</td>
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<td>Theoretical Mechanics - Dynamics</td>
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<td>4</td>
<td>Mathematical Modeling and Applications</td>
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<td>Quantum Physics – IR Applications and Laser</td>
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<td>2</td>
<td>Topics on Applications of Modern Physics</td>
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<td>Foreign Languages (English, French, German) III</td>
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Total hours: 24

Total hours: 26

3rd Year
<table>
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<tr>
<th>Total hours</th>
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<th>Total hours</th>
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4th Year

<table>
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<tr>
<th>Semester A</th>
<th>Hours</th>
<th>Semester B</th>
<th>Hours</th>
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<td>Communication Systems I</td>
<td>5</td>
<td>Communications Systems II</td>
<td>5</td>
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<tr>
<td>Naval Architecture A</td>
<td>5</td>
<td>Naval Architecture B</td>
<td>5</td>
</tr>
<tr>
<td>Machine Elements I</td>
<td>3</td>
<td>Machine Elements II</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Finite Element Method</td>
<td>3</td>
<td>Applied Mechanics III</td>
<td>2</td>
</tr>
<tr>
<td>Naval Materials Technology</td>
<td>3</td>
<td>Experimental Strength and Failure of Materials</td>
<td>4</td>
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<tr>
<td>Computer Networks – Internet Programming</td>
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<td>Information Security – Cryptography – Computational Intelligence</td>
<td>2</td>
</tr>
<tr>
<td>Optimization – Non-Linear Programming</td>
<td>2</td>
<td>Maritime Law</td>
<td>3</td>
</tr>
</tbody>
</table>

Total hours | 24 | Total hours | 26 |

C. Faculty and Quality Assurance

The faculty of HNA consists of around thirty members distributed among the seven academic sectors listed in Tables 1 and 2. In addition, a number of Hellenic Navy officers who fulfill the necessary academic requirements are assigned to teach the specialized courses and a number of civilian staff on various academic and athletic courses supplement each year’s teaching personnel according to arising needs. Research is actively pursued by all faculty members on their academic specialty via participation in research grants, publications, and presentations on relevant international and domestic conferences and workshops.
As a higher education institute in Greece, HNA is committed to maintaining an Internal System of Quality Assurance, annually evaluating all levels and procedures of its educational, research, organizational and administrative operations. In 2021, HNA received from the Hellenic Authority for Higher Education—which is the Hellenic State Organization responsible for the continuous external evaluation of all Greek universities—the Certificate of Compliance of its Internal System of Quality Assurance. The organization chart of HNA Quality Assurance Unit (QAU) is depicted in Figure 1.

Figure 1. HNA Quality Assurance Unit Organization Chart

The HNA has established in the last ten years the evaluation of the teaching staff and the courses taught by the naval cadets through the completion of appropriate questionnaires. The academic staff utilizes the findings from the evaluation to improve the teaching and educational process of the program courses. Additionally, these evaluations considered for the promotion of the faculty teaching staff. The rating for all questions ranging from 1 to 5, where 1 is the lowest score and 5 is the highest score.

Grouping the answers of the tests in low score (which includes the answers with grade 1
or 2) and in high score (which includes the answers with grade 4 or 5) on a percentage basis, it is found for the questions concerning teachers’ performance the high score is 60 percent, while the percentage of the low score is 23 percent.

The questionnaires about the quality of academic education, focusing on the clarity and the organization in the curriculum, showing that the high score (grade 4 or 5) has a percentage of 60 percent while the low score (grade 1 or 2) receives percentage of 20 percent.

The time schedule is kept to a high degree. This emerges both from the data kept in the secretariat of the department and from the point of view of the naval cadets, as it was expressed in the question “Was he consistent in his / her obligations (attendance at classes, timely correction of assignments, availability),” where the high score (4 and 5) occupied a response rate of 57 percent and low score (1 and 2) 23 percent. It is noted that the annual planning becomes known to all members of the educational community at the beginning of the academic year.

Sixty-one percent of the cadets judge from quite as great (grades 4 and 5) the consistency of the lecturers into their obligations (presence, timely correction written, and volume), and 21 percent gives a low rating to the specific question.

Also, all questions relating to the organization and implementation of clock curriculum received high scores (4 and 5) ranging between 50 and 75 percent with the exception of the question of the time spent by the naval cadet weekly in the study of each course, where the low grade receives a percentage of 69 percent, corresponding to a time of less than 4 hours.

To the question, “Am I facilitated in the systematic attendance of the courses (due to other obligations)?,” responses with high scores (grade 4 or 5) for the year 2018-2019 were 59 percent of the total, while the response to low rating (grade 1 or 2) received rate of 20 percent. The results remain unchanged during the pandemic of COVID-19.

In the evaluation of the laboratories and simulators used in HNA, the high score receives the highest percentage in all questions of this section (it ranges around 52 percent), with the low score being limited to percentages of 22 percent. Therefore, the infrastructure and the quality of the laboratory exercises/spaces are considered satisfactory, and, in fact, the students’ point of view is improving compared to the past.

On the contrary, in the question regarding the availability of bibliography in the library,
the high score being limited to 44 percent and the low amounting to 33 percent. This shows that the services of the library must be modernized.

I. Online Education and Hellenic Naval Academy

The above outlined traditional education of the naval cadet has as its aim, except for the classic academic background; to develop capabilities on strategy, teamwork, and networking; and to envisage values such as loyalty, effort, and effectiveness. Traditional education and physical presence are tied together. The restricted measures, which have been implemented to delay the virus expansion within the community, instantly forced the transition from traditional education to online distance education. The pandemic forced the HNA to prove its adaptability of implementing new high quality education techniques. The teaching materials used (textbooks, notes, and laboratory guides) remain the same in both pathways.

During the period of the COVID-19 pandemic the education at the HNA takes place in the form of e-learning by distance. More specifically, courses are carried out by the method of distance education, literally following the timetable during traditional teaching—supported, however, by the platforms of both synchronous education (Big Blue Button, MS Teams) and asynchronous education (Open e-Class). The implementation of synchronous and asynchronous learning plays a significant role and the fact that all parameters are considered can successfully contribute to the needs of the naval cadets and the Hellenic Navy.

Figure 2 illustrates the increment of the synchronous learning activities. In less than a month period since the beginning of isolation, the synchronous methods cover 93.75 percent of the educational effort. It is visible proof that employing effective response strategies and implementing execution plans can help recover quickly during disruptions and resume stronger than before.

Figure 3 presents the attempt to contact laboratory experiments in real-time using institutional licensed MS Teams videoconferencing software. As a result of the limitation on the in-person naval cadet education, online learning was rapidly adapted. However, as can be easily understood the absence of the lecturer-educator at the beginning of the distance learning period results in forcing a number of the cadets to lose focus. In order to mitigate this abnormal
situation while maintaining the effectiveness of the education process, small group workshops were organized between the educator and the cadets.

Figure 2. The synchronous and asynchronous teaching at the beginning of the pandemic
II. Physical activity during the Coronavirus disease (COVID-19) period in the Hellenic Naval Academy

It is generally known that regular exercise as a physical activity and an active lifestyle activate and strengthen the human immune system (Khoramipour et al., 2021; Lu et al., 2020) and help control body weight and mental health. Therefore, physical exercises for all people play an important protective role during this particular period of the pandemic.

To date, it is accepted that indoor sports facilities, in particular, increase the transmission of the coronavirus and the only way out is open sports facilities. In other words, playing sports in the open air is allowed without any risk, provided that relative distance between the athletes is kept, especially with activities such as running, swimming in the open sea and tennis.

These general rules have influenced the daily life of all military schools, including that of the daily sporting activities of the naval cadets. At HNA, we have tried to control extra food intake in order to avoid obesity and have created exercise programs adapted to the requirements.
of the pandemic. The pandemic shows that it affects the readiness of military students while its
duration cannot be predicted. Living together in military schools, that is, in a closed
environment, seems to be the ideal way for the transmission of an infection. Also, viruses can be
easily transmitted in the environment of ships while on educational trips. During the lockdown of
the naval cadets, their youth and responsible attitude proved to be an added advantage.

The special rules of coexistence in military schools and the observance of rules played an
important role in the cooperation of the athletics faculty with the cadets in order to achieve the
continuity of the cadets’ sporting activities. In addition, the fact that HNA quickly adapted to the
pandemic requirements had a positive effect and the morning academic classes continued
without being greatly affected.

Therefore, the challenge was to maintain the readiness of the naval cadets as future
officers and, regarding sports, to maintain their level of physical condition as much as possible.
In other words, we had to choose between partial fitness and readiness or no readiness at all. We
also had to set an example to our students and future officers that in addition to theory, crisis
management can be put into practice with logic and cooperation.

For the preparation of the athletic programs the following decalogue was taken into
account:

1. Decreased physical activity causes a decrease in the immune and
cadiorespiratory system (Susuki, 2019) while moderate-intensity systemic exercise can
boost the immune system (Goh et al., 2019, Metsios et al., 2020) and is associated with a
reduced incidence, duration, and severity of upper respiratory tract infections (Nieman &
Wentz, 2019).

2. Distances among the athletes during the workouts were observed by managing the
volume of the athletes in two different arrival hours.

3. We redesign the sports training programs in order to maintain physical fitness
and not to necessarily improve it.

4. The participation of the cadets during sporting activities and the implementation
of the training programs had to be pleasant and to contain a variety in order to provide
mental rest from the academic program but also from the isolation-quarantine.
5. We chose systematic moderate intensity exercise programs outdoors.

6. The exercise programs were limited in duration to about one hour and contained moderate-intensity aerobic running, strength exercises with body weight, with dumbbells or rubber bands, but also a combination of aerobic exercise and strength without exhaustion.

7. We banned team sports that included physical contact, such as volleyball and basketball, while indoor swimming was restricted to once a week.

8. Discrete supervision and the use of a face mask by the coaches were chosen without any personal contact so as to avoid any infection since daily presence at HNA was required and it would not be possible to control completely their contacts.

9. The weekly training program was sent by mail so that each sports team was informed about the exact content of the training.

10. The frequency of sporting activities was limited for each cadet to four times a week since they were not allowed to leave the HNA for long periods of time.

    More specifically, the frequency of sporting activities was reduced by 20 percent from 20 times to 16 times per month. Until February 2020 (pre COVID-19) each cadet trained five times a week for 90 minutes, which included three times sporting activities and twice indoor swimming. Since March 2020 training has been reduced to four times per week for 60 minutes, one of which was swimming. Furthermore, from September 2020 to January 2021, the same training program was maintained by limiting the training sessions to 50 minutes.

    The training programs over the COVID-19 period include outdoor activities such as running and muscle strengthening exercises with body weight. Finally, during swimming the number of cadets was limited to two to three cadets in each lane while there was strict supervision by a professional trainer who made sure that the protection measures were kept.
III. Conclusions

The pandemic crisis was—and still is—an event of unprecedented challenge to the world, societies, and every aspect of professional and social activities. Education and training at HNA faced these challenges efficiently based on the information and communication technologies which were present or became readily available. The swift transition from the traditional educational process via in person lecturing, lab exercising, etc., to the e-learning based approach allowed the uninterrupted continuation of the academic activities at HNA in the midst of social distancing enforcement. The evaluation of the naval cadets showed that the school managed to return to the level it was at the evaluation at the end of the academic year 2019. Of course, the provision of certain services must be improved, such as the bibliographic support of the homework and the diploma thesis, but also the evolution of the laboratory exercises with the
rotating physical presence of the naval cadets.

The improvisation of a modified physical training and athletics everyday program helped the naval cadets to maintain their mental health, spirits, and positive behavior during a long period of isolation within the academy premises.

The implementation of the physical training program assisted the participation of the cadets in the academic courses. From the sports evaluation tests in January 2020 and in January 2021, a non-statistically significant reduction (-1.3 percent) in the athletic ability and the general physical condition of the naval cadets was noticed.

In an era of increasingly virtual education delivery, the evaluation of how the new learning approaches could potentially affect or substantially transform the pedagogy of its cadets must be the primary obligation of every Navy organization. Blended educational programs are giving the best available outcome as evidenced from this pandemic period.

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Dr. Antonios Vantarakis was born in Patras, Greece; specialized Laboratory and Teaching Staff of Physical Education and Field Training in Hellenic Naval Academy (1999-present). He holds a Ph.D. in sports sciences from the Democritus University of Thrace, Department of Physical Education and Sports Sciences (2019); an MSc in physical education, “Maximize Athletic Performance,” from the Democritus University of Thrace Department of Physical Education and Sports Sciences (2007), and BSc in physical education and sports sciences in track and field from National and Kapodistrian University of Athens, Department of Physical Education and Sports Sciences, (1990). He is author or coauthor of one monograph, seven scientific articles on peer-reviewed journals, two book chapters, and seventeen announcements on peer-reviewed scientific conferences.

Aimilia Rofouzou is an assistant professor at the Hellenic Naval Academy (German Language), collaborating academic staff member (Cultural Organizations Management, MSc, and the Teaching of German as a Foreign Language, M.Ed.), and member of the Academic Supervisory
Committee at the Hellenic Open University (The Teaching of German as a Foreign Language, M.Ed.). She has studied German language and philology (B.A. and Ph.D. at the University of Athens) and has attended courses in the area of education and methodology of teaching (Fern Universität in Hagen); internet and German language teaching (Goethe-Institut Munich); and terminology and psycholinguistics (Goethe-Institut Munich). She has published on foreign cultural policy of the Federal Republic of Germany, the German Democratic Republic, Greece and Cyprus; and on international relations, contemporary history, teaching of German as a foreign language, use of ICT in education, and on German and Greek military terminology, with a particular emphasis on naval terminology.

Antonios Tsapalis is currently an assistant professor (2009-present) at the Hellenic Naval Academy (Piraeus). He is a member of the Natural Sciences sector, and his specialization is on “Theoretical High Energy Physics and Computational Studies of Quantum Field Theories.” He holds a BS in physics from the University of Athens (1993) and Ph.D. from the Massachusetts Institute of Technology (1998). From 2000 to 2009, he worked as a postgraduate researcher at the Departments of Physics of the University of Wuppertal, University of Cyprus, University of Athens, and National & Technical University of Athens. He is the (co)author of more than 50 articles on peer-reviewed journals and conference proceedings. His research interests include Lattice Chromodynamics and Hadron structure calculations, sigma-models, solutions of Yang-Mills theories and phase transitions. He is an expert on large scale simulations of field theories via Monte Carlo numerical techniques on massively parallel supercomputers.

Andreas Tsigopoulos is an associate professor at the Hellenic Naval Academy (2004-present) and holds a diploma in electrical and computer engineering from the Department of Electrical and Computer Engineering, University of Patras; MSc from Telecom Paris, France; and Ph.D. from the Department of Informatics and Telecommunications (1991) National Kapodistrian University of Athens. He is an expert in wireless optical communications (terrestrial and underwater), semiconductor optoelectronics, optical fiber communications, electronic design. He was a project manager in the defense industry, with main achievements in the design and building of Mobile Command Centers and Mobile Radiological Laboratories (2003-2005). He has served an expert engineer and consultant in various telecommunications companies (1996-2003), and a senior researcher of the Optoelectronics Group of the Informatics Department of the University of Athens (1991-1996). He is the the author or co-author of more than 100 papers in international journals and conference proceedings, as well as the invited chairman and member of organizing and technical committees of many international conferences, reviewer of seven international scientific journals, auditor of various R&D projects, and chairman of the technical evaluation committees of various ICT European co-funded projects.

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Reading as a Tool for Academic Literacy at the Military Academy of Agulhas Negras

Andréa Lemos Maldonado Cruz

Abstract: Reading is an important tool for the development of language skills necessary for academic literacy. In this article, we reflect on the act of reading, as a neurobiological and pedagogical process, and on the role of comprehensive or critical reading for academic literacy at the university level. As an object of study, we present the actions carried out by the Military Academy of Agulhas Negras (AMAN) in this area. We believe that the pedagogical strategies that have been implemented by AMAN can contribute so that the future officer of the Brazilian Army perceives literacy practices, and especially reading, as a resource that can lead him to integral training, as a military professional and as citizen, capable of acting on the socio-cultural context that surrounds him.

Keywords: Academic Literacy; University Education; Reading; Military Education; AMAN.

Introduction

Reading and writing are skills directly related to the level of literacy of the users of a language and to their greater or lesser degree of interaction with the socio-cultural environment that surrounds them. Therefore, it is important to reflect on the practice of reading and writing in the current educational context, especially in university education, a place par excellence destined to the production of knowledge. Even more important is to reflect on these practices specifically in the training of future generations of our military leaders’ training, so that we are able to use these practices as tools in the development of the skills necessary for these professionals to face the challenges of modern conflicts.

The Military Academy of Agulhas Negras (AMAN), the only institution in Brazil that trains the Brazilian Army, has carried out studies on the development of the reading and writing skills in the soldiers it trains; therefore, it was chosen as the object of this study. This article aims to show the study and work that AMAN has done on reading and cognition at the university level. The study was based on concepts about reading and academic literacy developed by researchers such as Mary R. Lea, Brian Street, Eva Maria Lakatos, Marina de Andrade Marconi,
Ramon Consenza, Leonor B. Guerra, Stanislas Dehaene, and Maryanne Wolf. These authors were chosen for the relevance and quality of their research and the possibility of adapting their studies to the military academic environment present at AMAN.

In order to do that, we initially presented the concept of literacy. Then we discussed the role of reading in the process of academic literacy development, in an approach that combines pedagogy and neuroscience. This is an important aspect of this article since the impact of the transition from analog to digital culture in recent times on the process of reading, learning, and literacy acquisition has been the focus of pedagogy and neuroscience studies worldwide. Finally, we presented some considerations about AMAN’s strategies in order to encourage the practice of comprehensive or critical reading. The comprehensive reading or critical reading comprises the deep processing of information, the conscious knowledge acquisition, inductive analysis, critical thinking, imagination, and reflection. This is a model considered by the studied authors as expected for students who reach university level and we, at AMAN, consider it ideal for training the Brazilian Army officer.

**Academic Literacy**

In general, literacy can be understood as the result of the acquisition of reading and writing practices. It is when the individual becomes able to use reading and writing in a social function. The social use of reading and writing is always related to the role that we play in society, to the set of norms, rights, duties, and explanations that condition the behavior of individuals within a group or within an institution. It is in social practices—that is, in the way a society structures itself through norms and customs—that literacy has a function. These practices refer to the way we use language in our daily lives and how it activates cognitive processes and also interaction with the social dynamics.

This conception is reinforced by the studies of Lev Semionovitch Vygotsky, Mikhail Mikhailovich Bakhtin, and Jean-Paul Bronckart, studies that define human language as an activity of dialogical production, which takes up other “texts,” “speeches,” or “discourses,” in which the subjects are social builders.\(^1\) The research that followed these studies led to the emergence of a new conception of reading and writing as spaces with multiple meanings. In addition, they are tools for individual and social emancipation, as they involve the construction
of knowledge resulting from the experience and interaction of each individual in the social environment.

Thus, the process of learning to read and write goes beyond the coding and decoding of words, inserting the individual in the social and cultural context, and leading him to be able to act on this context. Then, we can consider literate someone who managed to settle reading and writing with the necessary skill to use it consciously to perform the different social and professional functions. This perspective also applies to the school environment, especially at the university level, which must be concerned with establishing reading and writing practices that will determine professional identities, considering the complexity of the construction of meanings necessary for the development of the professional to be trained.

Following this thought, three models were proposed by researchers Lea and Street that would explain the reading and writing practices found in the university environment: that of individual and cognitive skills, that of academic socialization, and that of academic literacy.

The first model refers to the individual cognitive skills that an individual needs to read, interpret, and produce academic texts. Strictly linked to formal and superficial linguistic aspects—such as sentence structure and grammar, for example—this model is based on linguistic difficulties and limitations presented by the students but gives little attention to the context. Thus, this model assumes that the student can adapt his or her writing knowledge from one communication situation to another without any difficulties. This model believes that a student with good reading and writing skills adapts to the demands of university teaching activities easily, which is not always the case.

The academic socialization model takes into account the type of reasoning, the speeches, the textual genres used in the disciplines—that is, the culture of the university environment. It assumes that the subjects studied by the students use certain textual genres, such as articles and reviews, for the construction of knowledge.

The academic literacy model, on the other hand, uses the perspectives of the two previous models, and adds the relations of meaning produced by the student in the reading and writing activities. It takes into account the previous knowledge that the subjects establish. This model works with the different forms of literacy with which the student has contact in their daily lives, such as reading newspapers and digital media, for example. The objective of this model is to
create conditions for the use of reading and writing activities as situated social and cultural practices that provide the individual with the ability to reflect and act on their context in a conscious way. This is an ideal model for university education.

At AMAN, some pedagogical actions, that we will explain next, have been implemented that lead students to achieve the third model, that of academic literacy. These actions are structured based on the so-called comprehensive or critical reading, as we believe it is the basis of the necessary academic literacy for this school level.

The Act of Reading: An Approach to Neuroscience and Pedagogy

Before examining the actions implemented by AMAN, it is necessary to understand a little more about the dynamics of the act of reading in relation to its neurobiological and pedagogical aspect, as well as the concept of comprehensive or critical reading and its importance for academic literacy.

The act of reading involves two main components: the visual and the auditory. By decoding linguistic signs, particularly letters, our eyes send information to the brain, triggering several synapses that take place in the main neuronal centers.

However, this decoding is linked to the perception or apprehension of the sounds of each letter or words and their meaning. Thus, the brain, receiving the visual stimulus, searches the stored memories for the experiences and meanings previously learned, using these relationships to make sense of what it is reading.

The human brain is divided into two hemispheres, each containing six lobes that have different functions, but which communicate and complement each other. Most of the activities that we carry out require coordination of multiple areas in the two hemispheres. The left hemisphere is generally dominant for language and the right for spatial attention.

As for the specific brain processing of the act of reading, neuroscientist Dehaene says that it occurs in the left ventral occipito-temporal region of our brain.2 His theory to explain how the brain “learns to read” unites biological and cultural perspectives since, as he argues, it is an activity that involves both a specialization of neurons and a learning process.3 Dehaene states that each region of the central nervous system is responsible for an activity or function. We were
born with the first one, which is responsible for basic functions such as breathing and seeing. In order to develop the others, neurons must mature and learn by social and cultural experiences, by external motivations.

This is what happens when we learn to read. The letters and words visualized by our eyes are fragmented by the neurons of the retina and reconstituted later, even before they are recognized in their sense. After their reconstruction or recoding, according to the scholar, these graphic symbols become sounds, what he calls the phonological path of reading. Then the brain, activating the semantic memory established by the individual’s social and cultural experiences, establishes the connection between this sound and the meaning of words, what Dehaene called the lexical path of reading.

So, initially, reading is mechanical, and uses the phonological system to perform only one decoding of sounds. With the increase of this type of activity or stimulus and its association with semantic memories, the brain becomes able to recognize linguistic patterns, processing them with increasing speed and forming new neural connections, which, in the long run, will result in a slow and gradual maturation of this system.

Consenza and Guerra also state that despite having the capacity to process the audiovisual stimuli necessary for reading and writing activities, our brain does not have the pre-established neurobiological apparatus for this. It needs to learn how to build the neural circuits that promote these skills. The authors agree that, like the other organs and physiological systems of our body, the brain also goes through stages of maturity, and say that it will be in full exercise of its capabilities only in the second decade of our lives.

Thus, neuroscience corroborates with pedagogues that learning and reading habits are more likely to develop to their fullest during childhood and adolescence. In this phase, learning is initiated, explored, intensified, and refined. For scholars Lea and Street, this phase would be related to the model of individual cognitive skills. When children and teens experience deficient schooling, which does not encourage the practice of reading, they may have greater difficulties to enjoy or acquire the habit of reading when they become adults.

However, when the individual has been encouraged since childhood to make reading a practice, when he arrives at university, his neural system will have reached a level of stimulation and learning that enables him to develop what Wolf calls comprehensive reading, and what
Lakatos and Marconi call critical reading. These also correspond to the academic literacy model proposed by Lea and Street.

**Role of Comprehensive/Critical Reading in the Academic Literacy Process**

Wolf, professor of education and director of the Center for Dyslexia, Apprentice Varieties and Social Justice at Chapman University (Orange, California), has researched the cognitive and psycholinguistic neuroscience of reading development in the brain. She states that the reading of longer texts, a reality in the academic environment, requires more complex perceptions and predictions from the brain. This is because, as we have seen, reading is cumulative, the brain gradually establishes and builds the neural network necessary to give meaning to linguistic signs according to the visual stimuli it receives, but also with the personal experiences and the social context in which the individual is inserted.

Comprehensive reading, for the researcher, comprises the deep processing of information, the conscious acquisition of knowledge, inductive analysis, critical thinking, imagination, and reflection. These are far more complex skills, which require not only the act of reading, but also working on what you read, on the quality of reading. Thus, the individual who already has the habit of reading is more likely to achieve this type of reading.

When we talk about reading quality, two aspects can be addressed: the choices of the content we read, and the time devoted to the practice of reading. For some scholars, there is no wrong type of reading or literary genre, as the student’s degree of literacy will depend on the greater or lesser presence, in his daily life, of reading and writing practice. We agree, in part, with this statement when taking into account the development of the reading habit, especially in the early stages of schooling. However, at the university level, there are other demands that make it necessary to work with certain textual genres and types of reading specific to professional training, which generally require a greater degree of reading competence, greater depth of analysis, and greater selective attention.

These skills have changed with the transition from analog to digital culture, and it is another factor to be analyzed when referring to the quality of reading in relation to textual typology. According to Wolf, subtle transformations are taking place in the brains of new
generations of readers, mainly due to the indiscriminate use of new digital technologies by young people. The different supports available for reading impact cognition, quality of attention, memorization, and content apprehension when there is a need for reading texts that are more complex. She argues that this happens because of the intense sensory stimulation of the new media and the need for hyper-attention caused mainly by the fast shift between activities. As a result, young people have reduced their capacity of perception and increased the lack of attention and patience for reading long texts that demand greater concentration power. This impatience leads them to proceed with a fragmented reading, focusing superficially on the text, paying attention to only a few excerpts, which then impairs deep reading, criticality, and memorization.

Taking into account that we cannot turn a blind eye to the presence of these digital technologies in the educational scenario, especially because they have important benefits, we ask ourselves how to reach the ideal academic literacy level for university students. Especially for the military training, we ask how we can foster the acquisition of the necessary skills for a deeper reading type that involves complex mental operations, such as analysis, comparison, differentiation, synthesis, and judgment, that are the result of the traditional reading habit. AMAN has studied strategies to provide an answer to this question.

Literacy with a Focus on Reading: AMAN Experiences

Military education has its own characteristics that demand the adoption of a unique model of methodology in the training of its human resources. The complexity of military activity requires the formation of an individual prepared to face the challenges of collective action in contexts marked by crisis management that require skills that go beyond technical knowledge, because the contexts of current military operations present singularities such as the increasing decentralization of troops, the frequent and intense use of technology, and the greater interaction with the civilian population in situations of cultural diversity. Thus, in 2010, the Brazilian Army implemented a new educational system. This change aimed to enhance the development of capacities, skills, and attitudes of its human resources, based on teaching by competencies. Competence is defined as “ability to understand a certain situation and react appropriately to it, that is, to establish an assessment of that situation in a proportional and fair way in relation to the need that it suggests in order to act in the best possible way,” “to give conditions to the military
professional to “mobilize knowledge, skill, attitude, values and experiences at the same time and in an interrelated manner to decide and act in different situations.” In this way, it seeks to prepare it to face the multiple possibilities of military employment and for the future modern scenarios of conflict.

This system fully fits into the assumptions of academic literacy as it encompasses a set of social practices located under the boarding system in which the AMAN student finds himself/herself. During the first two years of training, all students (cadets) have a common core of subjects. At the end of that year, they choose one of the seven specializations, according to the merit criterion, and then take courses common to all specializations and others specific to their professional areas.

In the last year of training, in addition to these disciplines, courses and internships in military organizations are planned. These activities are an important tool for military experience, which reproduce literacy practices, leading the cadet to develop a strong professional identity.

In specific relation to the practice of reading, promotion and improvement actions can be highlighted. As an incentive action, we cite the Reading Incentive Program, triggered by the Army's Education and Culture System, which aims to develop professional and cultural self-improvement for the military members of all military education establishments. It suggests a series of reading socialization activities to be carried out every six months, such as reading circles, meetings with authors, literary fairs, among others.

This program at AMAN is planned and managed by the Pedagogical Coordination Section of the Teaching Division, and its general objectives are to stimulate the taste for reading and to develop the future officer’s reflective thinking and ability to argue, analyze, and interpret any kind of texts. This year, the program began its actions with the application of a survey to teachers and students, the purpose of which was to map the reading habits of this target audience. The data collection instrument was a structured questionnaire applied through the Google Forms platform. Male and female respondents were surveyed: 1,544 students, between the ages of 18 and 28 years old; and 339 teachers and teaching staff, between the ages of 30 and 70 years old.

It is noteworthy that the same questionnaire was applied in 2019 by the Chair of Portuguese Language to 450 students from the first year of the training course at AMAN, men and women between the ages 18 and 24 years. Based on this data, the Portuguese Department
implemented a series of pedagogical actions to foster the practice of reading, such as providing study time devoted to reading and language comprehension.

The results from 2019 and 2020 turned out to be very similar and some data are interesting for future analysis, such as the fact that the taste for reading is greater among women than among men, or that almost 40 percent of respondents said they have a habit of reading predominantly on paper, when we know that today there are a wide variety of digital reading resources.

However, for the study that originated this article, we took for analysis some data raised by the research carried out with the students, among which we highlight: more than 66 percent of the cadets said they like to read; however, almost the same proportion, 65 percent, claimed that lack of time was the biggest barrier to increasing reading frequency. At the same time, 80 percent believe that the time they dedicate to reading is insufficient, mainly because 65 percent believe that the habit of reading is very important for their professional and personal life.

The low percentage of students who said they enjoy reading reaffirms the thesis of pedagogues that this is a characteristic that should develop in the first years of schooling, which makes the work of academic literacy more difficult at this level of education. Another difficulty is the lack of time for reading, alleged by more than half of the individuals. As the course takes place full-time, it would be natural to that students have plenty of opportunities to read. However, the military training dynamics exposes the students to a 14-hour daily routine including face-to-face classes, extracurricular activities, and strenuous physical activities. As a result, it becomes difficult to find time to read for pleasure. In a situation in a situation like this, is that students read for curricular obligation, as shown in the research: 40 percent affirm that they read for pleasure and 34 percent to obtain specific information. They perform only the initial steps necessary for a deeper reading, which are the recognition, exploratory and selective readings. These steps guarantee them success in the process of searching, assimilating, and retaining information with which they can respond to a certain level of cognitive demand. However, they do not reach the processes of comparison, analysis, and synthesis conducive to the development of the comprehensive or critical reading that we aim for our students.

Despite these results, they have the perception of not dedicating enough time to the activity even though they agree with its importance for personal and professional improvement.
This is a positive point, as it signals a good receptivity of cadets to strategic actions to encourage reading.

With this in mind, and based on the experiences of 2019, AMAN proposed for this year an institutional campaign with availability to students of reviews, suggestions for works, tool links, and websites with free virtual access to literary works. In addition, social activities to promote the habit of reading are being programmed, such as book sales and exchange fairs, debates, and lectures with writers.

Considering that this is a cooperative work that requires the involvement of all teaching agents, we could not fail to emphasize the important role of teachers in this context. Throughout the school year, they have reserved a few minutes of their classes/instructions to talk about books, disseminating quality literature, related or not to their area of activity, questioning the students about their habits and experiences.

Like last year, specific hours were made available to be used in activities to encourage reading, now for all years of the course. At the end of this year, teachers will be invited to present such practices and share their results in another pedagogical forum on the topic.

These are some strategies related to encouraging reading, a job that requires time and constancy to give good results. We know that this work is not restricted to any specific discipline or academic area. However, at AMAN, we chose to trigger this process based on the Portuguese language discipline, as we understand that it has the desirable pedagogical tools to develop reading mechanisms in teachers and the necessary language skills for comprehensive reading. Currently, the curriculum of the officer in the military line provides 150 hours/class of the Portuguese language discipline, divided equally in the first two years of training.

In order to provide better conditions for the evolution of language skills in the mother tongue and comprehensive or critical reading, which requires time, starting in 2022, the course load of this discipline will be extended to 270 hours/class, spread over four years, training, with 90 hours at EsPCEx and the rest in three years at AMAN.

This new curriculum will develop interdisciplinary connections to other courses and will include military literature, stylistics and a stronger emphasis on text interpretation. The pedagogical strategy of Portuguese language teachers has been to use literature related to various
disciplines, establishing correlations between the various areas of knowledge of recognized value for greater competence in the military professional field. From these readings, interdisciplinary symposium are elaborated in which aspects and themes raised in the works are discussed, with subsequent oral presentation by the students and the elaboration of opinion articles.

The activities establish an interaction between the reading of the work and the professional reality of the students, based on the dialogical perspective of language, contextualizing the themes presented by the author of the book and the military environment. Teachers try to show that reading is the basis on which one can have better conditions to develop the ability of writing and speaking, and a greater assimilation of grammatical rules.

The Mário Travassos Project is another proposal to develop academic literacy focused on comprehensive or critical reading. Seeking to stimulate the written production of academic and scientific work by teachers and students, it contributes to the improvement of the reflexive, analytical, and interpretive skills of content of the various national and international works.

For students, the project materializes in the preparation of critical reviews, opinion articles, scientific articles, and course completion papers, distributed over the four years of training. The papers presented can be published in the journals of the academy or in other civilian or military institutions.

Finally, we highlight the Significant Reading Project, which is still being structured by the Portuguese Language Chair and is expected to be applied in the experimental mode in the academic year 2022. Based on studies that relate aspects of neuroscience applied to pedagogy, we intend to combine visual and auditory stimuli to intensify the stages of the reading process. The intention is to transpose some works of Brazilian military literature to a digital audio platform (audio books) and to work with a group of cadets to read traditionally on paper, accompanied by the hearing of the work, while, with another group, to perform only the reading on paper. At the end of the activity, the two groups will be evaluated on linguistic and interpretive skills so that we can verify the relevance of this strategy in the development of reading skills such as memorization, knowledge retention, abstraction, reflection, and power of synthesis.
Conclusion

Reading means interpreting, deciphering, distinguishing the meanings of a text, and using them as a source of new ideas in the process of searching, assimilating, retaining, reflecting, comparing, and integrating knowledge. It is a dialectical exercise and a pedagogical and social practice of interaction between the individual and his environment.

For the official future of the Brazilian Army, comprehensive or critical reading, along with other academic literacy practices, make it possible to develop fundamental skills and competences. Through these practices, students will be better able to improve attention, the power of abstraction, empathy, and the ability to project scenarios and mental maps, fundamental characteristics for the exercise of military leadership.

However, “reading with comprehension” is not a skill that students learn on their own. Teachers’ guidance and appropriate pedagogical strategies are important in all learning situations, which are not only restricted to Portuguese classes. Therefore, it is necessary a joint and continuous effort by all teaching agents in order to value the role of reading as an exercise of inquiry, understanding and critical reflection. As a result, the future officers may achieve a higher level of intellectual development that gives them conditions to act consciously in their social context and to strengthen their self-improvement.

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Endnotes


5. Cosenza et al., *Neurociência e Educação*, 256.


8. AMAN Reading Incentive Program for the year 2021 (PIL AMAN 2021).
Training Leaders Through Stories

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Abstract: “Leaders are not necessarily born; they can be made.” Training of leaders in both the civilian and military world traditionally has focused on teaching leadership methodologies and the important technical aspects of that particular field. Instilling confidence in decisions during a crisis is not a skill set that is focused on. Potential leaders are left to rely on what knowledge they have and whatever drills have been performed. Drills, which have formed the backbone of life at sea for generations by their very nature, can only be as realistic as the imagination of those conducting the drill.

Stories are the earliest ways of teaching experience. It is through the experiences of others that students start to build their “mental database.” Recognition Primed Decision-making (RPD) builds leadership by combining psychological models of cognition with practical experience. The application of advanced simulator software can take the onus off of drills as the only source of practice and training. By utilizing previous real-life incidents coupled with the experiences of subject matter experts (SME), mariners who have “been there and done that,” scenarios can be developed for individuals to use and re-use attempting different tactics to understand outcomes for specific actions. This type of training has been applied successfully in the Merchant Marine for decades in bridge operations, in the military for asymmetrical warfare, and in training firefighters. The application of this training method is only limited by the imagination and availability of subject matter experts.

Introduction

In the ordinary process of life, high-stress, high-risk situations thankfully do not occur frequently. However, it is essential for a leader to have training and experience in high-stress, high-risk environments. This is why simulation training has been developed.

This paper examines leadership in off-normal situations, with an emphasis on maritime leadership and decision-making as a critical leadership function. Simulation training is addressed as a method for “accelerating the experience” of mariners in this critical area. In this paper we address:

• The leadership function of decision-making;
• Perspectives on leadership and decision-making from experienced maritime leaders;
• Building on the perspectives to address why experience is critical to decision-making;
• Lessons-learned as the most important component of experience;
• The psychology of decision-making and how experience can be accelerated;
• The role of simulation training in accelerating experience and developing leadership skills;
• How generational differences influence the application of simulation training;
• The role of time management in finding the time to accelerate experience and develop leadership skills; and
• Combining all of these considerations in a psychologically-based approach to training decision-making for mariners.

Decision-making as a Leadership Function

Many key skills combine to produce an effective leader, whether in government, the military, business or in the maritime industry. Decision-making is a critical leadership skill that has received limited formal attention in education and training.

As defined by Trewatha and Newport (1982), “decision-making involves the selection of a course of action from among two or more possible alternatives in order to arrive at a solution for a given problem.” The skill of leadership decision-making involves:

• Understanding the problem / situation;
• Knowing and characterizing available options to resolve the problem;
• Making a “good enough” choice among the options;
• Implementing the solution;
• Continuously reviewing the situation to revise the decision as necessary; and
• Doing all this within the available time and with the available resources.

The leaders we interviewed indicated that decision-making dominates all other duties they perform and is by far the most important to mission success. Effective decision-making is a key characteristic of excellent leaders.
Perspectives from Experienced Maritime Leaders

Our team interviewed flag officers, corporate and government executives, and ship’s masters on their experiences and perspectives on leadership and decision-making and how their experience molded their leadership skills, along with how their leadership requirements has changed over time. The key take-away from each person interviewed was that experience was the key factor on how each of those interviewed lead today. The experience started with their foundation, either at an academy or in Officer Candidate School. Learning from other leaders, from mentors, and from their peers was part of the foundation in leading and decision-making; in some cases, it was on-the-job training. As those who we interviewed grew in their careers, the situations they experienced over time added to their “mental database.” As these people moved up in their careers, the positions required different decisions, and those decisions become more strategic and not tactical. But there is a theme that is constant—delegation. Learning to delegate and monitor is important. Not only does the leader want to make sure that the work is getting done, but that the work is getting done matches the end-state expected.

Another important point that those interviews focused on is making decisions under stress. This is an attribute that leaders need to start early in their career, to be put in positions where they learn how to maintain calmness in stressful situations. Decisions have cascading effects when implemented, especially under stress. Gaining and maintaining situational awareness is important, under these circumstances, to ensure the decisions made produces the effects expected. This requires leaders to process and understand the situation to the best of their ability, so they make the decision in a short period of time.

Several persons interviewed also mentioned not only knowing one’s limitations, but also knowing who in the team can complement those limitations. Knowing one’s limitations, the person can fully trust their decisions. Included in that is, by surrounding him or herself with people they know can complement their limitations, the decision maker can trust those who they reach out to for advice who have additional strengths than the decision maker.

Each person interviewed all said that they took part of simulations in way or another. For some interviewed, the simulations went over tactics, but not decision-making or strategic decisions. There was consensus regarding simulation when it came to giving students and leaders
some experience in low frequency events. One interviewer commented that simulations should be tailored to the student, not for the whole. Tailoring the simulation to include equipment and conditions the leader will experience, and the needs of the leader, will enhance the leader’s ability to gain experience to make decisions.

**Experience as a Key to Developing Decision-making Skills**

One theme we found throughout our interviews that has been observed across many disciplines is that experience is a determining characteristic of excellent decision-makers. This is consistent with the body of psychology on Recognition Primed Decision-making (RPD) discussed below. In RPD, decision-making can be intuitive, and experience contributes to the intuitive skill. This finding was corroborated by the maritime subject matter experts (SME) we interviewed, who indicated that, as they progressed through their careers, the experience they gained enhanced their ability to make decisions.

The experience gained allowed leaders to gain the knowledge to handle similar situations. It is here how simulation, when psychologically allied, can give students that experience they need in low-probability, high-consequence events. Of those leaders interviewed, as they gained more experience, they learned from those experiences and from other leaders. They were given the tools to identify common themes in those situations that can be applied in future situations. Simulation is a tool where students can be given a controlled environment to gain those experiences.

Experience is gained when students go through an event, but if that leader does not have any experience in that situation, then there is no information in that mental rolodex to make decisions and the leader is making decisions blind. The leaders we interviewed are experienced in their field. Each has over 20 years in their field. As they progressed in their careers, their work experiences, situations, events, and other experiences gave them the tools they needed to make decisions effectively and efficiently. This is why when simulation is developed, the focus needs to be on delivering both experiences and “lessons learned” so those lessons then become lessons applied.
Lessons Learned—the Golden Nuggets of Experience

Experience contributes to leadership and decision-making in many ways, but the most important outcomes of experiences are the lessons learned that form the basis for future success.

*Managing the Unexpected*, by Karl E Weick and Kathleen M. Sutcliffe, describes what organizations can learn from High Reliability Organizations (HROs). HROs are organizations where small failures can cause loss of life, e.g., wildland firefighting, nuclear aircraft operations, nuclear reactor operations, and medical surgery, to name a few examples. In these types of organizations, learning and focusing on the “small failures” are key. Monitoring small failures can prevent larger failures from happening. True leaders learn from failures and near misses, these are lessons learned. The preoccupation on failure focuses on identifying the near misses and determining why and how they occurred.

Sensitivity to operations and situational awareness keeps leaders focusing on the processes and the way work is completed, and where are there are holes and gaps. Situational awareness is key to in ensuring that early identification of potential failures can be made so changes to the operations can be made to ensure that errors do not occur. Through simulation, students can be put in positions to identify places where errors can occur to learn what to look for.

A commitment to resilience is important so the small failures, or potentially small failures, operations can adjust so the failure does not occur. That ability to make changes on the fly as an issue arise is important for leaders. Human error can be caused by exhaustion, lack of training, too many outside stimuli, or not focusing on the task at hand, to name a few. When it comes to decision-making, human error traps need to be identified in the decision-making process, on where the information comes from and how is the information processed. Leaders need to be aware where could human error occur, and what can be used to mitigate the potential human error. This is where the psychology of decision-making needs to be used in creating the simulation.

Organizations cannot think that small failures and close calls mean that the system is working, but more important, that there are error traps in the system that can be systemic to the possibility of larger failures. These small failures or close calls, going unchecked, can lead to a large failure. Organizations must create an atmosphere where employees can report near misses
without reprisal. That type of atmosphere will allow employees to report the near misses so symptoms of a potential failure can be observed and fixed before it occurs. It is these lessons learned, when incorporated in simulation, students can learn from others.

Lessons learned are important to leaders. It is more important to take these lessons learned and develop a program where they do not sit on a shelf, but changes made so they do not happen again. Taking lessons learned, determining the root cause, identifying where the organization need to change, and implement those changes are how lessons can be applied. This keeps the organization constantly learning about how it can be better.

Connecting the lessons learned program to simulation programs ensues those lessons learned become lessons applied. As people go through the simulations with updated lessons learned, the learning never stops, the leader builds upon the lessons learned of other leaders.

Experience and the Psychology of Decision-making

The experience and judgement needed to recognize, understand, and address critical situations is a determining characteristic of excellent decision-makers (Klein, 1993; 1998).

In the maritime profession this body of experience exists in a core group of seasoned individuals—the SMEs of the maritime profession. This institutional knowledge is typically personal—and not usually formalized—and is being lost due to retirement and turnover.

Becoming an excellent decision-maker can require decades of experience. Decision-makers with years of experience gain more accurate situational understanding and define more effective courses of action faster (Randel and Pugh, 1996).

Studies over the past three decades have shown that there is a strong psychological foundation for the application of experience to decision-making in humans. The approach has been termed Naturalistic Decision-making and has led to several models of cognitive behavior. In this section we introduce Naturalistic Decision-making, explore its use of Case-based Reasoning, and present a primary cognitive model that applies to urgent decision-making such as often occurs in the maritime profession.

Naturalistic Decision-making: Human error has been found to be responsible for 70 percent of aviation accidents, and for 70-82 percent of anesthetic incidents (Sniezak, Wilkins,
During crisis and emergency situations, good decision-making is critical because the primary goal is to prevent or mitigate extremely negative consequences. Events are often unexpected, life-threatening, and occur under conditions of urgency, stress, instability, and uncertainty.

An approach to decision research that is well aligned with urgent decision-making is considered naturalistic decision-making (Lipshitz, Klein, Orasanu, and Salas, 2001; Canon-Bowers and Bell, 2014; Zsambok, 2014; and Zsambok and Klein, 2014). Naturalistic Decision-making focuses on people who use their experience to make decisions in real-world contexts and aims to examine how successful decision-makers size up the situation and make reasonable decisions that are compatible with the situation. According to this view decision-makers can skillfully use their experience and prior knowledge to assess a situation and appraise a single decision option—colloquially referred to as “intuition”—and quickly settle on a course of action.

*Case-based Reasoning (CBR):* In Naturalistic Decision-making, experiences are stored in memory and then retrieved to provide the basis for decision-making. In the psychology of decision-making, these stored decisions are termed “cases” and the process of using the experiences is known as Case-based Reasoning (Kolodner, 1993, 1997; Riesbeck and Schank, 1989). CBR focuses on the mind’s ability to apply analogs in the context of solving real-world problems. More often than not, solutions are not constructed from scratch. Instead, previous experience brings to mind old problems that suggest possible solutions to new problems. Solutions that worked in one situation are likely to be applicable in similar situations.

Support for CBR can be found in cognitive psychology and artificial intelligence literature (Acorn and Walden, 1992; Kolodner, 1993; Noh, Lee, Kim, Lee, and Kim, 2000; Juslin, Olsson, and Olsson, 2003 and Bloomfield and Moulton, 2008). The key process for successful CBR is to recognize the applicability of an old situation to a new one. According to Ross (1986, 1989), the difference between novices and experts is that novices have fewer relevant experiences to draw upon and do not encode cases and case details as well, making it difficult to retrieve appropriate source cases.
Recognition-primed Decision Model

The most cited and prototypical Naturalistic Decision-making model that applies Case-based Reasoning is the RPD model (Kahneman and Tversky, 1973; Klein, 1993; 1998; Xiaocong Fan et al, 2005). It is considered by some to be the most appropriate framework for describing how proficient decision-makers operate, especially under conditions of time pressure and uncertainty (Lipshitz, et al. 2001). According to the RPD model, the goal of the decision maker is often to find and select the first reasonable and workable solution (Payne, Bettman, and Johnson, 1993; Busemeyer and Townsend, 1993 and Todd and Gigerenzer, 2001). In our view, the model essentially proposes the following major steps in the decision process (prior to carrying out a course of action):

- Characterize the decision problem and diagnose the situation;
- Recognize and retrieve from memory a similar case;
- Achieve a better understanding of the situation through a comparison with the retrieved case (considering relevant cues, goals, expectations, and actions);
- Mentally simulate the indicated course of action to gauge whether it will be successful, making modifications if necessary;
- Implement the selected course of action; and
- Observe the results and modify the course of action as indicated.

Experience Acceleration

It can take decades to construct a large enough personal “database” of experiences to effectively apply RPD (or Naturalistic Decision-making in general) in the maritime profession. Given the rarity (by definition) of low-probability critical decisions and the upcoming retirement of a generation of maritime leaders, it would be beneficial to accelerate the experience gathering of future leaders. This could also help to develop the skill of applying experience through RPD.

Given the understanding gained through research and application, we propose that this acceleration can be accomplished by:
• Providing novices with simulated experiences pertinent to maritime leadership
decision-making;

• Presenting these experiences in a way that the cases are stored in memory for
effective recall during decision-making; and

• Deliberately training the skill of RPD in novice decision-makers.

Maritime simulation can play a critical role in the experience acceleration process.

Simulation in Leadership Training

Only time and actual experience will create a great leader. Properly employed,
simulation-based training can accelerate the process of becoming a truly good leader.

A true successful leader is capable of handling themselves in any given situation
presented to them, regardless of the situation. In the ordinary procedures of life, high-stress,
high-risk situations thankfully do not occur frequently; however, it is essential for the leader to
have training and experience in a high-stress, high-risk atmosphere. This is why simulation
training has been developed.

Simulation training is an age-old concept. As technology has improved over the ages, so
has simulation training. In the modern age, simulator-based training has now become
astoundingly realistic as well as highly technologically advanced. The main concepts of
leadership (strategy, teamwork, and management) can be viewed through the development of
simulation training in the military. As mankind developed, so too did the technology used in
simulation. Simulation training has developed from the chessboard through war games and
finally on to highly advanced virtual reality programming.

The biggest issue with dealing with simulation training is keeping it as realistic as
possible. Once the student is ensconced in a simulator (whether that be a VR set or a full-mission
simulator), it is essential that the scenario unfolds as realistically as possible. The modern
generation is used to high-resolution video gaming so entering any sort of simulation training the
student can easily view it as just another type of video game. This is why it is essential not to
“pop the simulator bubble” and maintain as realistic an environment as possible (Hempstead,
The perfect example of leadership training through the use of simulation is what has developed over the years in cockpit team management for the commercial airline pilot and bridge resource management (BRM) for the merchant marine officer. In BRM, a full-mission simulator takes on the look of the navigation bridge of a cargo vessel. Either through visual monitors or a projector, the simulated cargo vessel is placed in a high-traffic, high-stress situation or scenario and the bridge team has to work together to choose the best course of action to safely navigate to the end of the exercise. The operator and assessor imitate the real-life conditions of internal and external communications through the use of radio and telephone communications and life-like alarm panels to assess the critical thinking decision-making process (ME urn, 2014).

However, it is not always possible to find time or space for training in a full-mission simulator. Through the use of simulator software, programs have been developed in RPD which allow students to develop their critical thinking capabilities through testing their skills on theoretical high-risk concepts presented to them in a structured decision-making process. These 15- to 20-minute long exercises allow the students to assess their capabilities outside the classroom environment through the process of step-by-step procedures and quick quizzes to assess the critical thinking technique of the student.

With modern technology, every aspect of the way humans react in a high-stress situation can be assessed, from mannerisms brought out by stress to saliva levels (which explains the term “cotton-mouth”). As a student improves their leadership capabilities, these different psychological and biological side-effects can be measured and seen to decrease over time. Stress Resilience In Virtual Environments (STRIVE) is an example of this analysis. Immersive Virtual Reality (VR) also has been used to help treat combat-related PTSD. The team who developed the STRIVE program has been using immersive VR to provide pre-deployment training in stress resilience with the military with very positive results (Buckwalter, 2012).

The benefits of simulation leadership training are limitless. Although nothing can replace actual real-life experience, when that experience can’t be had or is better off not being had, creating that same experience in a virtual world (be it in a simulator, using VR, or using simulation-based software) is the next best option.
A Generational Perspective on Simulation Training

Though the goal of simulation training is the same for all students, effective delivery of the training depends significantly on the generation to which a student belongs.

There are potentially five generations currently in the workforce, from the traditionalists to Generation Z, this is a challenge in training leaders. Each of these generational approaches to learning, work habits, and communication are totally different. Depending on the article, study, and report is viewed, the start and end years of each generation are not all the same. The dates are not important to this paper, but the use of technology and simulation.

<table>
<thead>
<tr>
<th>Generation</th>
<th>Years</th>
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<tbody>
<tr>
<td>Traditionalists</td>
<td>1922 to 1945</td>
</tr>
<tr>
<td>Baby Boomers</td>
<td>1943 to 1964</td>
</tr>
<tr>
<td>Gen X</td>
<td>1965 to 1980</td>
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<tr>
<td>Gen Y</td>
<td>1981 to 1994</td>
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<tr>
<td>Gen Z</td>
<td>1995 to 2015</td>
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Between all the generations, technology is one of the largest changes that spans all of them. Generation Z is known for communicating and learning via mobile devices and being born during the age of the internet. Baby Boomers were once the largest generation in the work force at the beginning of the technology change. Now, Baby Boomers are toward the ends of their careers or have already retired from the workforce. Generation X is known as the “latch-key” generation, the first generation where both parents worked and where many went home to empty homes until both parents came home from work (Holyoke, 2009). Gen X also was the first generation who experienced technology-based simulations in the maritime industry.

Some of Generation Y, also known as the Millennials, are the children of the youngest in the Baby Boomer generation. Gen Y is the generation that saw the rise of technology, and then saw that technology move fully mobile. The final generation for now is Generation Z. This
generation are those who were born just before the new millennial and after. Gen Z is always attached to their mobile devices, so using a simulation platform that is mobile compatible is a way to train Gen Z in leadership. Gen Z is the most racially and ethnically diverse and is on track to be the most educated generation (Parker, 2020).

When it comes to learning, Gen X and Gen Y prefer to learn both of their hard and soft skills on the job. Gen X and Gen Y desire leadership training. Gen X needs little coaching or pushing to learn (Holyoke, 2009). Gen Y is constantly going—their digital lifestyle blurs the line between work and personal life, and this creates issues in remaining focused. This also allows opportunities for Gen Y to learn outside of working hours. Making simulation fun and mobile, Gen Y would be willing to use the simulation outside of work hours.

Gen Y learns more when the learning is fun and teamwork. Making mistakes along with taking risks, and ignoring those mistakes, are what Gen Y considers learning. Through simulation, Gen Y can make the mistakes so they can learn. Gen Y can do work alone, but wants the guidance through control (Berkup, 2014). This is an important aspect to consider when using simulation with someone from Gen Y. Gen X, on the other hand, wants to know what is exactly expected of them and is flexible in their learning styles.

Initially simulators were used in training students in using radars for Gen X. Today there are full bridge simulators, cargo operations simulators, and simulators that connect the bridge simulator with the engine room simulator. Today, simulators can be used for the whole ship’s complement or a single person. Simulators can be large simulators or small enough to allow a student to access the simulator on the web-browser of their phone. As technology advances, the learning styles of the generations changes and that remains an important aspect to consider.

Understanding the different generations, and how each generation learns, is important when delivering an effective simulation program. As technology changes, the delivery of simulation also changes. What must be consistent is the psychology behind the simulation for the student to learn. What is important is to adjust to the technology, utilize the technology available to enhance the experience and learning of the student and base the simulator on the learning psychology.
Time Management

One of the greatest challenges to developing the leadership skill of decision-making is finding the time to gain simulated experience and practice the skill. Effective time management—whether by the student or the organization—can provide the opportunity to accelerate experience.

Perfectly coined by J.R.R. Tolkien in *The Hobbit*, time is:

“This thing all things devours: Birds, beasts, trees, flowers; Gnaws iron, bites steel; Grinds hard stones to meal;

“Slays king, ruins town, And beats high mountain down.”

Time is a resource that cannot be banked—it is not renewable. Time used, whether for personal, professional, altruistic, or other purposes, can only be used once. Proper use of time through time management techniques as well as harnessing modern technology can limit time spent on endeavors that may drain that time resource. The setting of goals, long- and short-term, appears to be the start of an effective time management strategy (Oettingen et al, 2015). This is certainly true of executive management and the ability to juggle the demands of the job, personal life, and professional development.

Perceived control over time has been shown to reduce perceived stress (Hafford, Stock, and Oberst, 2014). In a world where the work-life balance is challenged by integrated technology and the speed of information transmittal and the perceived need to respond to all requests immediately, time management is an evolving field (Ryden and El Sawy, 2018).

The theory and practice of time management has been a widely discussed topic for decades. There is no agreed upon definition of time management (Aeon and Aguinis, 2017). Roughly defined, time management, consists of the determination of needs and the prioritization thereof (Macan 1994). This simplified view takes into account time management, but not the temporal characteristics of the used time. Some jobs require punctuality (i.e., teacher), others require planning (i.e., researcher), while other jobs require the time to be spent on the job itself in a task-oriented position (i.e., plumber) (Burt et al, 2009).

This definition is associated with personality traits which time management training seek to create or enhance in the time management student:
- Punctuality,
- Procrastination/avoidance,
- Awareness of time use and planning,
- Temporal prioritization of tasks,
- Accurate allocation of time,
- Staying on schedule,
- Meeting deadlines,
- Synchronization and coordination, and
- Autonomy of time use.

A significant factor in how these traits are utilized by a person is the organizational environment in which the person is situated (Burt, et al. 2009). For students, the stress of time management of the school workload has been shown to be at the top of the list of student stressors (Hafner, Stock, and Oberst, 2014). Similar training has been integrated into executive coaching (Kombarakaran, et al 2008). Environments that require people to manage several different tasks with varying timelines are commonalities between executives and students.

In practice, time management training has focused on the prioritization of tasks, list building, and creating work plans. That has further been developed into analyzing activities that consume time and creating time logs to track time usage (Classens et al, 2004). Communication plays a key role in effectively managing time. The use of the proper medium—such as in-person, email, and/or phone—is an organizational issue that must be addressed for employees to maximize time (Burt, et al 2009).

Efficient use of time comes from experience. Experience provides a person with the knowledge of approximately how long a particular task will take as well as potential complications. When a person cannot gain that experience in real life, simulation can provide a close approximation. Proper time management allows the individual to schedule time to “experience through simulation,” what they may otherwise take years to have the opportunity to experience in real life. When properly supervised and debriefed, the simulation experience can provide valuable insight (Bergman and Shubert, 2013).
How executives utilize time goes beyond simple organizational tasks, goal setting, and list-making. The CEO, like the college student, must simultaneously coordinate several tasks and deadlines at once while setting the tone of an organization (Rovelle, 2018). As stated, time is a resource, and effective use of that time is critical. At the upper echelon of an organization, executives must have sufficient time to allocate to all of their responsibilities. The significance with this is that it allows for the maximization of time to schedule training. The goal of this paper is to examine and show how the use of simulation and accelerated experiential learning can aid a leader in their role by providing experience in non-critical situations.

Using Simulation in a Psychology-Based Approach to Decision-Training

A recent research and development program has developed a training approach that combines simulation training with the RPD model to accelerate the experience and skill of decision making in less experienced personnel (Oskarsson and Hodgin, 2010).

AlphaTRAC, Inc. (AlphaTRAC) began observing on-the-ground crisis decision-making with incident commanders and other emergency responders in 2005. It became apparent that the most effective decision-makers were those who were consistently able to quickly generate successful solutions based on limited information, by drawing on their prior experiences with similar emergency events.

A Defense Advanced Research Projects Agency (DARPA) sponsored research and development program produced a greater understanding of the science underlying decision-making and a practical methodology for applying the RPD model. An Artificial Intelligence Engine was developed to mimic the pattern recognition process in the human brain. A software application was developed to train and support decision-makers across a spectrum of military and civilian disciplines. Called the AlphaACT™ Experience Acceleration System, the application increases a user’s experience base while internalizing the RPD decision process.

The AlphaACT Experience Acceleration System has been implemented and applied to a range of disciplines, from firefighting and chemical emergency response to security incidents, and is being examined for application to the maritime profession.
Conclusion

It can be concluded that leaders are made in large part by experience, and that experience can be enhanced, enlarged, and accelerated using simulation training. Simulation does give leaders the ability to gain experience in low frequency events. What simulation must build in is using a body of psychology that focuses on leadership and decision-making. Using a body of psychology in the use of simulation will enhance the student’s ability to recall events, even in a simulator. One body of psychological that looks at decision-making is the RPD model. RPD dissects the decision-making to include gathering situational awareness, developing an action plan, implementing the action plan, and monitoring the action plan. This process can be taught through simulation.

Using the crawl, walk, and run method will build a student’s mental capacity to make rapid decisions. Teaching the methodology initially in a low-stress environment will allow the student to have that pattern mapped in their brain. Once the habit is created in the student, then the complexity can be increased. With complexity the stress of time limitation can be added. As stress is added, the process speeds up to the point the that the process becomes second nature in the student. This is the point when the student uses the decision-making process without thinking about it. In these scenarios, the student will then recall the lessons learned and, through these scenarios, become experienced. In essence, lessons learned in simulation now become lessons applied for use in the field when psychology is applied.

Richard F. Ohlsen has over 25 years’ experience in emergency management, including FEMA-DHS, non-profit, and a national laboratory. Ohlsen is currently a program manager for safeguarding nuclear material. Ohlsen has overseen response, planning, hazards and vulnerability assessments, training, drills/exercises, and using simulation in emergency management. Ohlsen was the principle investigator at Brookhaven National Laboratory in exploring the development of an emergency management training academy focusing on integrating technology into emergency management planning for utilities. Ohlsen has given various lectures to utilities and utility organizations regarding incident planning and technology in conducting drills and exercises to prepares for large scale incidents. Ohlsen has a B.S. in Marine Transportation from SUNY Maritime College, an MBA from Norwich University, and is currently all but dissertation for a doctorate in business administration from Walden University in Leadership focusing on change management.

C. Reed Hodgin has a 45-year professional background that includes management and operational experience in crisis decision-making, training development and delivery, emergency
management and response, hazards and risk assessment, facilitation, and public process management. Hodgin has led and trained crisis decision-making for more than 25 years. He is the principle investigator and lead scientist on the AlphaACT system, an advanced simulation-based decision training capability that uses artificial intelligence to capture and apply the experiences of successful decision makers. Hodgin is currently leading a program to extend the principles of experience-based decision-making to the multiple industries, including the commercial maritime sector. Hodgin is a graduate of the Massachusetts Institute of Technology, with a B.S. in atmospheric physics.

Matthew M. Bonvento has a background that spans 20 years in the U.S. Merchant Marine, the global shipping industry and higher education. To date, Bonvento has published over 40 articles for both Marine Log and Maritime Reporter and Engineering News magazines. As a current doctoral student in Leadership, Bonvento shares a passion with his colleagues for creating the leaders of tomorrow. Bonvento currently volunteers as a sexual assault Victim advocate, spiritual counselor, and club advisor to students and organizations at USMMA. His joy in watching first-year students grow into officer candidates was the impetus behind him researching leadership practices and training. Bonvento is a graduate of SUNY Maritime College with a B.S. in maritime transportation, and an M.S. in international transportation management.

Michael Sobkow is a professor at SUNY Maritime College. He graduated in 2001 with his B.S. in marine transportation. Sobkow currently teaches navigation rules and is a simulator instructor for Bridge Resource Management.
Leadership Development Course: Objectives and Outcomes

Jayson A. Altieri

Leadership Development Course Background

“The squadron is the beating heart of the United States Air Force; our most essential team. We succeed or fail in our missions at the squadron-level because that is where we develop, train, and build Airmen.” – General David Goldfein, 21st Chief of Staff of the Air Force

The United States Air Force’s Leadership Development Course (LDC) at the Air University (AU) Maxwell Air Force Base, Alabama, is designed to prepare twenty-first century total force Air and Space Force leaders to thrive in command. The LDC program was the result of a 2015 Air Force Chief of Staff-directed task force created to explore how to revitalize squadrons. The task force interviewed 3,886 airmen in person, and surveyed another 79,300 online, of whom 14,652 provided feedback on how to make the Air Force stronger and more effective in the twenty-first century. This information paper examines how the program is designed to provide a solid foundation of human domain skills upon which the Air Force builds successful leaders as they approach squadron command and directorships, and how measuring successful program outcomes are tied to the stated learning objectives.

The genesis of LDC was proposed in 2015 to address a concern by the then Air Force Chief of Staff General David Goldfein as to why seasoned U.S. Air Force officers, and noncommissioned officers (NCO) with more than 9 to 12 years of service were failing as squadron commanders and first sergeants. This occurred at a time when Department of Defense Secretary Chuck Hagel was pushing services like the Air Force and Navy to focus more on ethics, character, and competence in the human domain at all levels of service leadership. While some critics of the program would classify LDC’s methodology as a “social worker” or managerial approach to leadership, collaborative research by Rebecca J. Hannagan and the U.S. Marine Corps Lejeune Leadership Institute found this leadership approach viable.

Not once did the researcher hear, “We [Marines] would be great if only we had more gear.” The bad, good, or great units centered on the socio-relational aspects, which depended on
the shared values and motivations of the people in the unit.\textsuperscript{6}

To that end, the program’s eight-course objectives include:

- Inspiring leaders to command squadrons (what General David Goldfein described as the “heart of the Air Force”);
- Building self-awareness and understand tendencies;
- Developing a personal philosophy of command;
- Understanding the value of peer networks;
- Understanding the value of taking calculated risks and learning from mistakes;
- Aligning resources with strategy, mission, vision, and values;
- Assessing and improving command climate and organizational culture; and
- Valuing critical thinking and values in decision making.\textsuperscript{7}

LDC target audiences are Air Force and Space Force officers (captains, majors, and lieutenant colonels) and noncommissioned officers (master sergeant through chief master sergeant) with 9 to 16 years of service or Air Force civilian employees in the grades of General Schedule (GS) 13 to GS-14.\textsuperscript{8} Through instructional seminars, the program helps leaders align their personal values with those of the Air Force and Space Force’s core values and unit missions; foster fair, honest, open, and trustworthy communications and behavior; respect the diversity of individual rights and dignity of all personnel; and promote continuous improvement in a complex twenty-first century challenging environment.\textsuperscript{9}

The course content focuses on squadron-level human domain competencies and “Improving the Effectiveness of Air [and Space] Force Squadron Commanders [and Civilian Directors]” over an 8-day (67-hour period) seminar based in-residence (Maxwell Air Force Base) or online (via Zoom).\textsuperscript{10} Unlike many Air Force and Space Force or Joint Professional Military Education (PME) courses, there are no LDC in-course assessments or grading/ranking structure. The courses’ professional development incentives are for student engagement with the content strictly for the students’ own personal and professional growth.\textsuperscript{11}

The cadre consists of Air Force and Space Force graduated squadron commanders,
graduated superintendents, and first sergeants (senior noncommissioned officers), and civilian academic experts with backgrounds in counseling, education, history, leadership, management, and sociology theory. The cadre also includes Judge Advocate General School, First Sergeant Academy, Chief’s Leadership Course, and Chaplain College instructors who augment the full-time LDC faculty. Retired general officers and current Air Force and Space Forces Wing Command Teams (commander, superintendent, and first sergeant) serve as mentors to the students throughout the 8-day course.

The program’s throughput consists of 15 classes per academic rear, averaging 1,200 students from across the Air Force and Spaces Force (Active, Reserve, National Guard, Department of the Air Force civilians, and Air Force Auxiliary/Civil Air Patrol).\textsuperscript{12} Regarding joint service (Army, Coast Guard, Marine, and Navy) demographics, only one “joint student” (a U.S. Navy aviation officer) and no international officers have yet to attend the course, in part due to the COVID-19 pandemic and a decision by the LDC leadership to prioritize upcoming Total Force USAF leaders as the initial student population line of effort.\textsuperscript{13}

Since the program’s inception in 2018, the 8-day syllabus, based on the LDC Institutional Effectiveness (IE) Plan includes affective, behavioral, and cognitive outcomes to include increasing self-awareness and emotional intelligence to provide purposeful leadership; developing interpersonal skills to foster \textit{esprit de corps}; and building a unit culture conducive to achieving verifiable mission success.\textsuperscript{14} The LDC’s methods of assessment, designed to ensure course longevity, divides into two broad categories: short-term and long-term assessments.

Short-term, or the immediate impact of the course on students, includes observational data from instructors, student end-of-course surveys, and both post-course student and supervisor surveys. Long-term, or the impact of course content on students beyond six months post-course, includes Department of Defense Organizational Climate Surveys (DEOCS), surveys of course alumni currently in command/directorates, interviews of course alumni currently in command/directorates, and surveys of course alumni not in command.\textsuperscript{15} The program’s graduates will be leaders, mentors, and coaches for their teams, dedicated to personal and professional growth, committed to promoting open communication, shared values, and focused on mission accomplishment.
Overview and Development of the Course Outcomes and Learning Objectives

The LDC IE Plan is a way for the LDC faculty to “have a systematic, explicit, and documented process to measure program effectiveness and student outcomes,” and to develop absorptive capacity, adaptive capacity, and decision-making capacity as these strategic capacities “are foundational traits and skills necessary to create leaders who understand and display ethical leadership with the demanding Air and Space Forces mission, which requires leaders to think and act strategically” to display exemplary conduct as outlined in U.S. law (Title 10, US Code (USC) § 8583) and joint guidance for Joint Operational Leadership and the Profession of Arms.16 This plan is aligned with AU Instruction 36-2602, Total Force Development – AU Operations; the AU quality enhancement plan (QEP), Leadership and Ethics across the Continuum of Learning; Title 10 USC § 8535; and Department of Defense joint guidance.

The course outcomes were developed using the QEP’s ethical capacity framework of self, team/others, and organization/unit. Additionally, the three major interpersonal domains described in the QEP are related to what are generally considered the three elements of how leadership is studied in scholarly work: Self (intrapersonal), Others (interpersonal), and Organizational.17 The three course outcomes are: 1) Increase in self-awareness and intrapersonal skills to provide purposeful leadership; 2) Develop interpersonal skills in order to foster esprit de corps; and 3) Build a diverse and inclusive culture conducive to achieving verifiable mission success.

Each learning objective is comprised of a verb from one of the three domains of learning (Cognitive, Psychomotor, and Affective) with a focus that reflects Air Force Instruction (AFI) 1-2, Commander’s Responsibilities (2014), the U.S. Air Force’s Improving Air Force Squadrons: Recommendation for Vitality (2018) (also known as the Squadron Vitality Report) and the Air Force Form 724-A, the Airman Comprehensive Assessment Addendum form, as all three documents relate to expectations of performance as a squadron commander or civilian director.18 The three domains of learning and their corresponding skills in order of increasing to greater complexity were used as the basis for developing the verb associated with the focus of each learning objective (LO).19
Figure 1. The LDC Domains of Learning

The focus of each LO was first derived from the four Commanders’ Duties and Responsibilities (Execute the Mission, Lead People, Manage Resources, and Improve the Unit) that are explained in AFI 1-2 (Air Force Culture – Commander’s Responsibilities), and the Squadron Vitality Attributes (Purposeful Leadership, Esprit de Corps, and Verifiable Mission Success), outlined in Improving Air Force Squadrons. Purposeful leadership is defined as success on purpose, investment in others, productive mistakes, and building Airmen/Guardian/Family resilience. The three domains of learning (affective, behavioral [or psychomotor], and cognitive) were used in combination with Commander’s Duties and Responsibilities and the Squadron Vitality Attributes to develop the appropriate learning objective for each course outcome.

There are 16 LOs listed in the LDC Institutional Effectiveness Plan:

**Course Outcome #1: Increase self-awareness and emotional intelligence to provide purposeful leadership.**

LO 1 (Cognitive): Apply the tenets of purposeful leadership to a deliberate plan for command.

LO 2 (Cognitive): Understand foundational self-awareness and self-management EI skills.

LO 3 (Cognitive): Apply principles of time and energy management in the context of
command.

LO 4 (Affective): Value regulating personal responses in highly challenging environments.

LO 5 (Behavioral): Adapt decision making methods to mitigate personal bias and optimize implementation.

Course Outcome #2: Develop interpersonal skills to foster esprit de corps.

LO 6 (Cognitive): Understand foundational elements of social awareness and relationship management.

LO 7 (Affective): Value connecting Airmen/Guardians and families to higher purpose.

LO 8 (Affective): Value varied perspectives to increase collaboration and cognitive diversity of teams.

LO 9 (Affective): Align values of self and others for team cohesion.

LO 10 (Behavioral): Employ social awareness and relationship management EI skills.

LO 11 (Behavioral): Adapt communication styles and methods to transmit a consistent message to varied audiences.

Course Outcome #3: Build a unit culture conducive to achieving verifiable mission success.

LO 12 (Cognitive): Understand the elements of successful leadership outcomes (i.e., Executing the Mission; Leading People; Managing Resources and Improving the Unit).

LO 13 (Affective): Value the importance of a psychologically safe environment that fosters inclusiveness and diversity of thought.

LO 14 (Behavioral): Apply leadership feedback tools to encourage a growth mindset and to deliberately develop Airmen and Guardians (e.g., performance feedback, coaching, mentoring).

LO 15 (Behavioral): Cultivate an environment that encourages Airmen to take calculated risks and leverage productive mistakes.

LO 16 (Behavioral): Create a unit environment where Airmen and their families feel
valued to increase resiliency and retention.

**Out Briefs, Feedback, and Continuous Course Improvement**

All courses taught at Air University employ some kind of end-of-course assessment that is used to measure key areas for improvement, normally including: learning objectives, student experience, content, delivery, and instructor effectiveness. LDC instructors sought to go beyond the traditional assessments and develop a way to measure impact of the course and to strengthen the student experience, which was seen as a key factor for course improvement. This decision to go beyond the traditional assessment process to determine the effectiveness of the program was due both to the limited amount of data available on LDC graduates who have completed a squadron-level command or director position; the first substantial cohort is expected to complete their assignments in the summer of 2021.

The observational data is based on the military and civilian instructors’ observation of students’ interaction and application of course content in real time and evaluate to what extent students are synthesizing and internalizing course concepts. The instructors share this data among each other in a deliberate way in each of the three phases of a Deliberate Course Improvement (DCI) process. Instructors observe students in the following ways: general discussions, leadership case studies, and experiential components. Of the first two, general discussions and case studies, students are observed on how they process and apply course content in discussions with peers, as well as in dissecting a past leadership experience (e.g., the Tuskegee squadrons) with course concepts. During the experiential components, students are observed incorporating course concepts into a decision-making scenario (e.g., escapology rooms, discipline case study, or a CAPSTONE exercise in a virtual reality environment).

Daily end-of-day “hotwash” meetings (in person or on-line) during course execution and end-of-course meetings are the venues used by LDC administrators and instructors to share observations and feedback for minor modifications for the next day’s seminars or between course iterations. Additionally, three times a year, the entire LDC team will meet along with key individuals from across AU for extended 2 to 3-day DCI discussions assessing the past, current, and future state of LDC. Further, these discussions include any changes to how LDC fits into the larger AU, Air Force, and Space Force missions of leader development. This process ensures
LDC content remains current and relevant, and to plot future strategy and any large-scale revisions to course content, structure, and/or methodology.

Student end-of-course surveys are completed on the final day of the seminar. These surveys ask students to evaluate all aspects of course content, delivery, and learning environment, as well as how they will grow from and apply what they have learned. All data from student end-of-course surveys is aggregated and analyzed by trained civilian faculty or LDC’s own internal audit team every 4-6 months. A multi-stage process is used to identify patterns, trends, and other insights into the impact of the LDC experience and contents on students. Results are presented at one or more professional education conferences and submitted for publication in peer-reviewed journals.

For more long-term effects, students and supervisors are surveyed at 3-6 months from the completion of the course. Students and their supervisors both receive post-LDC surveys asking them to assess various aspects of LDC’s impact on the student since his or her return to the organization. Like the student end-of-course surveys, all data is aggregated and analyzed.

Data for the long-term assessment is collected from the following sources: DEOCS of LDC alumni in command, surveys of LDC alumni currently in command or civilian equivalent, interviews of LDC alumni currently in command or civilian equivalent, vignettes of how LDC content enhanced the leadership of LDC alumni, surveys of LDC alumni not in command, and tracing personnel with the LDC Special Experience Identifier 11 (LDC graduates) throughout the Air Force and Space Force for comparative data.24

Currently, LDC course outcomes are assessed indirectly using participants’ responses to end-of-course surveys coupled with additional data compiled from post-course follow-up surveys completed by course graduates and their supervisors.25 While LDC students generally expect to complete an end-of-course survey, they did not know ahead of receiving the post-course survey email that this second survey would be requested; therefore, any current LDC assessment uses only the existing survey data, and no additional data collection was allowed in order to prevent survey fatigue of students.26
Measuring the ‘Impact’ of the Leader Development Course

In 2019, John M. Hinck and Steven Davis, LDC faculty, conducted the first qualitative analysis of LDC’s impact on its student population. Hinck and Davis used a three-part approach to define the course’s impact on the students: area of impact (what topics were most effective in instruction), level of impact (how topics will be applied in the future), and depth of impact (why the course was effective). Based on qualitative analysis of 397 post-course surveys completed by students (92 percent Active Duty, 4 percent Reserve, and 4 percent National Guard) and their supervisors, findings revealed the ten top areas of impact.

The top ten areas included: Know Yourself and Best Fit (based on the Myers-Briggs Type Indicator [MBTI] typology); Clarity of Purpose; Know Your Team (based on the GiANT Worldwide Personality typology); CAPSTONE Experience; Cognitive Diversity; Creating a Culture of Trust and Empowerment; Air and Space Forces Culture and Climate; Leading a Squadron in Crisis; Values-Personal, Organizational, and Air and Space Forces; and Coaching.

Seven topics—Know Yourself; Clarity of Purpose; Know Your Team; Cognitive Diversity; Creating a Culture of Trust and Empowerment; Culture and Climate; and Values—were common between what students indicated had impacted them with what the graduates reported actually applying post-graduation. According to Hinck and Davis (2020), regarding level of impact, self, others, and unit were the top-rated categories of applying course content. The depth of impact of these seven topics was seen as being in an ecosystem of interconnectedness between the human microsystem interactions with instructors, peers, and self—the exosystem—that brought the student experience to life. The system of relationships is depicted in a new model called the “Student Experience Ecosystem” that may serve as a blueprint for designing similar courses. The study aids LDC revisions, informs development of similar programs in the academic community, and offers a holistic way to improve pedagogy in higher education.

Students were also asked in general terms what they liked most about the course, which was understood as depth of impact in terms of the student experience. Of the 278 of 308 respondents (90.2 percent response rate), the most liked aspects of the course were the learning environment/atmosphere, relevant content, quality instructors, learning from peers, and delivery of content. Additionally, of the 269 of 308 respondents (87.3 percent response rate), also
reported that they planned on applying what was learned in the course in five categorical ways: For Self, For/With Others, For Military Unit, Multiple Use, and At Home or Life in General.\textsuperscript{34} The survey then asked supervisors to rate how they felt the course met the mission “to equip and inspire Airmen to thrive in command” on a scale of 1 to 5 stars.\textsuperscript{35} Of the 31 student’s supervisors that responded to the question, 28 (90.33 percent) rated the course with four stars or more with 13 (41.94 percent) rating the course as five stars.\textsuperscript{36} Further, these same supervisors rated 91 percent of their LDC graduate members better prepared for squadron command, rated 81 percent more driven to command, and observed 83 percent better decision making by their members.\textsuperscript{37} This data set serves as another one of the course outcomes, specifically that students’ supervisors have very high confidence that the course met its overall mission.\textsuperscript{38}

Using students end-of-course surveys and post-course surveys completed by graduates and their supervisors, Hinck and Davis assessed that LDCs impact as having three main components. First, the topics that were most effective resulted in six highest rated areas that included Know Yourself, Clarity of Purpose, Know Your Team, Capstone Experience, Cognitive Diversity, and Creating a Culture of Trust and Empowerment. Second, the topics will be applied in the future resulted in three primary levels of impact that included application of course content for self, for others, and for the respondents’ military unit.\textsuperscript{39} Third, the program resulted in identifying a new conceptual model, the Student Experience Ecosystem, that depicted the student experience as the interconnected relationships of delivery of relevant content, applying course content, networking, teambuilding, learning from others, self-reflection, and introspection as seen through the lenses of learning from quality faculty, learning from peers and self-learning.\textsuperscript{40}

**LDC Way Forward and Conclusions**

The U.S. Air Force and Space Force civilian and military leadership at the highest levels have recognized the need for a significant change in how the forces coach, train, and mentor squadron commanders and civilian directors.

This LDC information paper provides background on both a solution and radical departure from previous Air Force and Space Force leadership development courses both in its approach helping mid-level Air Force and Space Force leaders address the complexities of the twenty-first century global environment as defined by the current U.S. National Security Strategy.
and National Defense Strategy through the strengthening of leadership and culture and developing leaders who are inspired and equipped to not just survive, but thrive in command.

Building on the results of the 2017 Air Force-directed task force created to explore how to revitalize squadrons; course development and improvement using the LDC IE Plan and short- and long-term survey results, and continued outreach to Air Force and Space Force, Joint, and private enterprise partners, LDC provides a course of instruction recognized Air Force and Space Force-wide as a solid foundation upon which to build successful military and civilian leader development as they approach command and directorships. The course reframes what command means to the student body of high performing Airmen and Guardians and gives them tools to maximize squadron potential. This course continues to improve warfighting capability through creating more aware leaders, including intentionally deeper investments in the human domain, and better aligning missions and values.

Through high quality instruction, LDC prepares future Air Force and Space Force commanders and directors to know and lead themselves; to communicate effectively among their superiors, subordinates, and peers; and to lead themselves into the future. In the words of a 2019 LDC graduate, “I left the course with a renewed sense of dedication and the tools to help those around me be better…The course taught me that Airmen [and Guardians] need clarity of purpose, verifiable mission success, purposeful leadership, and esprit de corps and it’s the commander’s responsibilities to provide those an identifiable culture of respect that Airmen [and Guardians] are proud to be a part of.”

LDC graduates will be leaders, mentors, and coaches for their people, dedicated to personal and professional growth, committed to promoting open communication and shared values, and focused on mission accomplishment.

Col. Jayson A. Altieri (ret.), U.S. Army, began his military service in 1984 and served for 33 years before retiring as the Chief of Staff of the Army’s Chair, National War College, Washington, D.C. He is graduate of Norwich University, the U.S. Air Force’s Air Command and Staff College, and the U.S. Army War College. Altieri has been an active member of the Norwich University Board of Fellows since 2019 and previously served as the Civil Air Patrol Board of Governors Chairman from 2015 to 2017. A contributing author to a number of aerospace, and military publications, his current book, A Guest of Mr. Lincoln: The Wartime Service of Sergeant Joseph H. Wheeless, 32nd North Carolina Regiment, Confederate States
Army, will be published in 2021. He currently serves as an assistant professor at the Air War College, Maxwell Air Force Base, Alabama.

Endnotes
4. The definition is based on mid-level Air Force leaders relieved of command or duty positions.
10. While originally designed as an in-residence program only, the 2020 COVID-19 pandemic led the LDC administrators and faculty to successfully redesigned the program for the online learning environment. LDC Smart Card (Maxwell Air Force Base, AL: Air University, 2019), n.p.
11. LDC students routinely refer to LDC as the “Anti-Professional Military Education” course.
13. LDC faculty has and continues to reach out to U.S. Air and Space Forces Major Commands, Joint Forces (Army, Marine Corps, and Navy), NATO (Canada), and academic partners to share and gain knowledge on best course practices utilized across the leadership development spectrum; and initial guidance issued to LDC faculty by Andy Hosler, LDC Director, 2018-2019, September 4, 2018.
15. The Defense Organizational Climate Survey (DEOCS) is conducted by the Department of Defense (DoD) to provide commanders and civilian leaders with information they can use to improve their unit, organization, or Military Service Academy (MSA). The DEOCS asks all members to answer the same questions about the experiences that they have had in their current unit, organization, or MSA and to evaluate their leadership (for example, immediate supervisor, unit commander, organizational leader, and senior NCO/senior enlisted leader). The combined responses to this survey provide commanders and leaders with important feedback about the current climate and flag emerging or existing challenges that may have an impact on units, organization, or MSA’s mission readiness. “What is DEOCS,” *DEOCS*. https://www.surveysdrc.com/deocs_portal/(S(faka4n3aiuen5mo52pa1eblo))/EnterPasscodeFAQ.aspx (accessed January 10, 2021).
18. These four performance areas and associated 10 Airman Leadership Qualities, outlined in the new Form AF 724-A, Airman Comprehensive Assessment Addendum, are: *Executing the Mission* (Job Proficiency, Initiative, Adaptability), *Leading People* (Inclusion and Teamwork, Emotional Intelligence, Communication), *Managing Resources* (Stewardship, Accountability), and *Improving the Unit* (Decision Making, Innovation).


23. In the Capstone exercise, students are placed into a ‘virtual’ scenario-based with Avatars. The students then use the knowledge gained during the 8-day course to effectively communicate with different personality types in real-world derived situations.

24. The U.S. Air and Space Forces define a Special Experience Identifier (SEI) as a three-character code that identifies special experience and training not otherwise identified in the personnel data system. SEIs may permit rapid identification of individuals already experienced to meet assignment requirements. More importantly, they provide a means for identifying critical manning requirements during wartime or contingency operations when little lead time is available for training personnel in specific technical skills needed to support a weapon system or mission. Air Force Instruction 36-2101, Classifying Military Personnel (Washington, D.C.: US Government Printing Office, 2017), 66.


27. According to Hinck and Davis, “Defining and measuring impact has become a mantra for evaluating contemporary leadership development programs. The challenge with measuring impact is two-fold. Foremost, defining what “impact” means is a somewhat controversial topic, as agreement must be made on what to measure and how to measure it and whether impact is even the right thing to measure.” This paper used Davis and Hinks’ definition of “impact,” which they define as “understanding the degree to which the course content resonated with students’ most desired leadership and human domain skills and their intent on applying those skills in the future as related to command in a military or [civilian] unit. There is a viable concern about LDC's efficacy (or the ability to produce a desired or intended result). Using the LDC IE Plan, the program has a plan for short-term and long-term evaluations but are yet unable to really examine the long-term efficacy of the course. Short-term results are phenomenal, but currently there is no longitudinal statistics for long-term efficacy.


29. LDC Fact Sheet, n.p.


32. Ibid.
33. Ibid, 11.
34. Ibid, 12.
35. Ibid, 17.
36. Ibid.
40. Ibid.
41. Examples include Public and Private Partnerships and LEDx and Total Force partnering with the Air War College, Air Command and Staff College, Squadron Officer School, ROTC, and Civil Air Patrol.
Professional Military Education 4.0 at the Turkish Military Academy

Onuralp Aydin and Bülent Yılmaz

Abstract: This study investigates the sufficiency rate of educational quality in the Turkish Military Academy (TMA), as its graduates catch up with the changes brought by the Industrial Revolution 4.0—the rapidly developing military technology and the transformation of the battlefield force cadet training programs in adapting to these innovations. In this article, we have tried to find ways that will contribute to the cadet training by sharing the experiences of the personnel using military drone technologies and the civilian personnel who produce these devices. Every industrial revolution has brought innovations that deeply affect the battlefield. One crucial feature of Industry 4.0, known as “The Internet of Things,” is the reduction of the human factor, which has started to show its effects in various conflict zones. With the Fourth Industrial Revolution, the increase in the use of robot technologies has resulted in the human factor remaining at the decision-making stage. The main thesis of this study is that Professional Military Education (PME) in the TMA is largely successful in improving itself on the requirements of this age—especially given the fact that TMA operates in the body of National Defense University and that the cultural change to adapt this situation meets contemporary needs. However, it has been argued that the arrangements made in this path are at the beginning stage and it would be beneficial to gain momentum. What are the implications of UAV Pilotage Training to Turkish higher military education?

Introduction

“Having founded the Republic with our blood and wisdom, We guard it for good even if the hells rage...The Academy glorifies army for centuries, The geniuses it creates rise up to the skies...”

These verses in Turkish Military Academy’s (TMA) alma mater would be meaningless if she has not been one of the leading intellectual education institutions of the Turkish nation. TMA has been the teaching center of intellectual depth and universal values internalized by Atatürk, “founding father of modern Turkey,” and his joinder of parties. In this day and age, the academy pursues its efforts to hold her deserved position with the remarkable institutions of Turkish Republic.

As the modernization diversifies and spreads, the requirement to converge with the
velocity of social change and transformation has become more inevitable. One of the driving sources of this change is the disruptive technologies brought by the Industrial Revolution 4.0, also known as Industry 4.0 and the Fourth Industrial Revolution.

This article focuses on the reflections of the Industry 4.0 on Professional Military Education (PME), which also can be considered as PME 4.0. This study is unique in terms of evaluating the studies related to PME 4.0 on the basis of TMA.

This study investigates sufficiency rate of educational quality in the Turkish Military Academy for its graduates to catch up with the changes brought by Industry 4.0 and trying to enlighten pursuing efforts on building an understanding about converging educational system of TMA with the needs of the twenty-first century. To accomplish that, first, the literature on building higher education 4.0 associated with the Industry 4.0 will be examined. Second, research on the prominent abilities of cadets to adapt the Industry 4.0 will be investigated. To understand the required skill set for the twenty-first century’s conflict zone, this article will also cover the literature on the latest military revolution. Finally, the semi-structured interview with the unmanned aerial vehicle (UAV or military drones) pilotage trainers of Baykar Defense Company will be helpful to understand succession rate of TMA graduates on competing with the changes brought by Industry 4.0. The interview will cover the questions about the skills needed for adapting the changes brought by Industry 4.0 and the degree TMA graduates succeed on fulfilling these skills.

The main thesis of this study is that Professional Military Education in the TMA is largely successful in improving itself on the requirements of the age—especially, given the fact that the TMA has been operating as the body of National Defense University and driving the cultural change to adapt this situation to meet contemporary needs. However, it has been argued that the arrangements made in this path are at the beginning stage and it would be beneficial to gain momentum. It has been suggested that the new regulations would aim to increase the lifelong learning, questioning, and emotional intelligence skills of graduates. Furthermore, it is argued that TMA has a great potential on becoming a center of scientific and high-tech production, which can provide output in every field, especially in the fields related to needs of military.
Literature Review

There is a widespread literature for the regulation of higher education to meet the needs of Industry 4.0. In addition to the studies that offer a general new educational philosophy, there are also those who are directly interested in PME. In the literature, Thang and Dung’s 2019 article on building Higher Education 4.0 in the armed forces has been carefully examined in terms of its intimacy to the scope of this study. The Carafano and Kochems 2005 memorandum on rethinking the professional military education also is considered an remarkable study.

Thang and Dung’s 2019 article states that Industry 4.0 resulted a paradigm shift in the conflict zone in favor of the major technology-producing states. The revolution led soldiers to work in a flexible and difficult-to-predict environment. In order to cope with this situation, it is stated that it would be useful to consider the concepts of “Teaching 4.0, Research 4.0, Management 4.0” and add more concepts to fulfill the needs of military such as “Operation 4.0 and Training 4.0.”

Carafono and Kochems, in their 2005 memorandum, encouraged readers to question conventional military officer education methods. Their article mentions that the twentieth century’s traditional PME is inadequate. It had only modestly changed until the Cold War and some measures must be taken to compete with civilian schools. They underline that most of the PME programs are outdated. They were structured for fighting a known enemy. However, the article mentions that the threat matrix has changed, thus creating a need to meet irregular challenges, combat catastrophic dangers, and counter “disruptive threats,” all of which have gained more importance. The authors suggest that students are taught critical thinking skills to cope with these upcoming challenges. They underline that the development of “thinking skills are the best preparation for ambiguity and uncertainty.”

There are prominent studies in the literature to create a teaching philosophy that will meet the needs of the twenty-first century. Of these, Zhoa (2012) suggests that the teaching style should be designed similar to real life learning. Modeling of the production area is given as an example of this situation. Sinlarat (2016) suggests focusing on four methods. These; are critical, creativity, productivity, and responsibility-based teaching styles. Gomratat (2015), proposes an education philosophy to adapt the “Constructionist Learning” that based on three domains: regulating the understanding, investigating, and producing. In detail:
1) Regulating the understanding (3R) is Recalling, Relating, and Refining;
2) Investigating (3I) is Inquiring, Interacting, and Interpreting; and
3) Producing (3P) consists of Participating, Processing and Presenting.\(^6\)

The focal point of all the reviewed studies is that -instead of rote learning, teaching should primarily focus on application, problem solving, and output. When students learn with the aim of applying the knowledge, the problem of questioning the necessity of education is avoided and encourages the students to extend their curiosity. Furthermore, learning through group tasks or group projects results the development of emotional intelligence and the emergence of leadership qualities.\(^7\)

Technological tools used in educational processes have also diversified and improved. Studies reveal that Generation Z, who have the habit of spending a long time in front of screens, are more likely to learn through computer-based video content, and games using augmented and virtual reality technologies. By using these tools, it is possible to provide students with personalized and quality content.\(^8\)

The fact that universities have become main producing centers of knowledge and innovation has had an impact on the learning process. Students of entrepreneurial-innovative universities, who have been educated by innovative academics, have a great opportunity to closely follow and join the producing process of recent developments.\(^9\)

Today, higher education has taken on the form of adopting a life culture based on curiosity and self-fulfillment rather than a process consisting of courses and duties. In this context, it is important that course contents are designed to increase curiosity and create culture of lifelong learning. However, culture is a way of life reflected not only by lectures, but also by living university traditions.\(^10\)

**Military Revolution 4.0 and Paradigm Shift in the Conflict Zone**

As we finish the first quarter of the twenty-first century, the main factor to consider is that TMA graduates will work in an atmosphere of change and transformation that has not been experienced before. The two main sources of this change are the increase in the multi-polar and multi-actor chaotic structure of international relations and the destructive changes brought by
Military Revolution which took place as a part of the Industrial Revolution 4.0.\textsuperscript{11}

The rapidly changing chaotic atmosphere of international relations and the new methods of conflict resolution have had a great impact on military affairs. Due to balance of power and terror, decision makers tend to avoid large-scale use of armed forces. However, use of armed conflicts are still a way to resolve disagreements. Threats in the twenty-first century are mostly in the form of terrorism and proxy war, in which the enemy is unknown, and most of the armed conflicts are in the form of shoot and scoot. Generally, units on the ground are to act by themselves in rapidly developing conflict atmosphere. Moreover, peacemaking, peacekeeping, post-conflict operations, and working at the multinational headquarters are part of the ordinary duties of military experts. Thus, modern military experts are facing with rapidly changing unique problems in the atmosphere of ambiguity and uncertainty.\textsuperscript{12} Thinking together with the recent developments in the industry, one can claim that the modern military experts will face and work on the age of change and transformation.

The industrial revolution comes together with deep-rooted innovations in the fields of big data analysis, material technologies, nanotechnology, artificial intelligence, virtual reality, and autonomous systems (etc.). The revolution is expected to fundamentally change what we know about defense sciences.\textsuperscript{13}

With Industry 4.0, autonomous devices which use artificial intelligence and integrated network have taken place at the conflict zone.\textsuperscript{14} Turkish Armed Forces (TAF) and the Turkish national defense industry have begun their work at last to ensure that Turkey is among the pioneers of this revolution. The recent developments on manufacturing Unmanned Aerial Vehicles (UAVs) with national technology is one of the important outcomes of these efforts. Nationally produced UAVs have proven their effectiveness and importance in various conflict areas.\textsuperscript{15} When UAVs are being used effectively on the battlefield, it significantly restricts the enemy’s mobility, forcing them to hide and rendering them unable to carry out their activities. Today, UAVs have been used as the main source of intelligence in the planning of subsequent tactical operations. Rapid adaptation of TAF’s leading staff to this technology has played a key role in the conclusion of various conflicts in the country’s favor.\textsuperscript{16}

Autonomous systems are not only in the form of aircraft systems. These systems are spreading faster in situations where human labor is exceedingly expensive, and the operation
caries great danger, requiring intense attention and robot skills.\textsuperscript{17} Military duties often include tasks that cover one or more of the above mentioned situations.

It is expected that soon the revolutionary movement initiated by the UAV technology will begin to be seen in all platforms with unmanned land and water vehicles. Various devices have already been manufactured for use in military operations on urbanized territories or bomb disposal missions.\textsuperscript{18} It is evaluated that the widespread use of technologies compatible with Industry 4.0 may cause significant changes in the structure of the TAF in the short- and medium-term. These expected transformations are:

1) Starting from the operations with high loss of life, fighting autonomous devices are to replace the soldiers in the front line;

2) Spread of autonomous headquarters defense systems, starting from critical headquarters and guardhouses;

3) Military logistics is to become easier to operate with the internet of things and artificial intelligence technologies;

4) Increasing the technology used by individual soldier in the battlefield with wearable technologies and nanotechnology;

Organized use of more than one unmanned vehicle at the same time with swarm software (swarming). Studies on swarming have begun to be developed in the field of UAVs. This situation may cause the reorganization of the platoon and company commander duties. Currently, heavy tanks and built-in artillery batteries are open targets for UAVs.

5) Increasing the mobility abilities of these weapons and building unmanned skills, and

6) Cyber warfare and electronic warfare concepts, are expected to increase their current importance.\textsuperscript{19}

Within the framework of the developments mentioned above, it has become an important need to rearrange the human resources of TAF in to adapt to the radical change experienced. As the era of autonomous technologies comes to the fore, the management of this entire technological network will continue to be carried out by the military experts.
Professional Military Experts in the Age of Revolution 4.0

Despite sensors that give them ability to perceive the outside world and advanced artificial intelligence abilities, autonomous devices still need to be guided by human beings. They do not yet have complex thinking, distinguishing between enemy and friendly, strategic decision making, or basic common-sense abilities. This is the main feature that separates them from robots. The concept of robots covers devices that can make and implement free decisions, but there are legal ambiguities about the robotization of the conflict area. For this reason, today’s armies have concentrated on the concept of human-machine teaming.20

The rapid mechanization of the work based on muscle strength Industry 4.0 enables simple but highly attentive and frequently repetitive tasks to be performed by autonomous vehicles. As a result, importance of the need of standardization is losing importance.21 That said, skills such as critical thinking, problem solving, learning to learn, and creativity are expected to be a natural part of twenty-first century sophisticated works.22 This situation creates the need to redefine the skill set that armies require. Studies suggest that the personnel who will adapt to the Industry 4.0 age would have the following abilities:

1) **Critical and analytical thinking:** Having high situational awareness and distinguish the positive and negative aspects of the circumstances. Able to make logical inferences by establishing correct cause and effect relationships.

As the factors of ambiguity and uncertainty gain importance, it becomes harder to build situational awareness. Units at the conflict zone rapidly face unexpected circumstances that they must decide on what to do immediately. The ability of critical thinking raises awareness of the units so they can think one step further than the ongoing situation.23

2) **Crisis management and overcoming complex issues:** Able to give right and timely decisions under pressure and able to understand the causes and results of complex problem to take strategic decisions.

Autonomous devices can overcome simple and expected problems; however, they need human support when strategic decision making is needed, and unexpected situations occur. Ability of crisis management and understanding the causes and effects of complex problems is required to make and undertake strategic complex decisions under pressure.24
3) **Lifelong learning:** Eager to learn new information and gain experience with developed sense of curiosity.

4) The increasing speed of change and transformation makes it is difficult to argue that the necessary skills will always be adequate. Twenty-first century military officers must be open to individual development at any time of their life.²⁵

5) **Emotional intelligence:** Can take initiative when necessary. Able to express her/his self correctly. Demonstrating leading skills.

   Emotional intelligence is the main factor that effects leadership skills and responsibility taking decisions.²⁶

   Studies on organizations suggest that institutions with high adaptation and flexibility skills have more abilities to manage the future.²⁷ The above-mentioned abilities of twenty-first century military experts have a crucial role on expanding the tools of an armed forces to cope with rapidly transforming future.

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**Turkish Military Academy and Professional Military Education 4.0**

The institutions of PME, which were created to train the professionally qualified leadership cadres of the armies, usually plays a leading role in the military modernization processes. In the last periods of the Ottoman Empire and in Turkey, TAF was one of the leading institutions of Turkish society to compete with modernization.²⁸

Professional military training in the Turkish territory continued as a master/apprentice relationship in general before the establishment of TMA. During this period, students specialized by monitoring and copying their teachers, which was the general teaching method of agricultural society. However, after 1834, with the recreation of professional military service according to the needs of the industrial society and the national army revolution, military education in the Ottoman Empire experienced a radical transformation. In the new period, which can be called Teaching 2.0, “mass education” replaced the master/apprentice relationship. The basic understanding of higher military education of this period focused on providing information that played a key role in professional life. The teaching continued in the form of giving the same information to all students according to the predetermined curriculum. In other words, higher
education was a factory that conducted vocational education, and graduates were the outputs of the process. With the Teaching 3.0 process, which developed after the 1970s with the increase of mechanization and the proliferation of computers, students became not only the learner of knowledge, but also the producer of knowledge. Self-learning and self-presentation have been important components of learning. TMA has adapted to this process with innovations such as moving to multi-undergraduate programs, expanding project tasks, and increasing the role of student communities.\textsuperscript{29}

Teaching 4.0 is a very new situation in terms of higher military education. The main feature of the period is that universities are at the center of knowledge and innovative output.\textsuperscript{30} For instance, the source of innovation in engineering sciences has been the partnership of universities and coordinated high technology clusters. The equivalent of this situation in military higher education is that the military university has a say in the production of innovation in matters concerning headquarters management, defense strategies, defense technologies, and the field of conflict.

In the 2010s, the TMA went beyond being a “high school,” where military methods were taught, by considering the institution of a “National Defense University.” During this period:

1) With the “university” identity, military service began to be considered as a branch of science.

2) Engineering sciences and social sciences have begun producing outputs by prioritizing the needs of TAF.

3) By developing the field of defense management, accumulation of knowledge in the area began increasing.

4) A web-based education system was developed, and various course contents were made available to students and academicians under the name of “Deaconship Education System.”

5) With the new laboratory and simulation center, applied learning of engineering and military sciences has been developed.\textsuperscript{31}

Although the PME 4.0 orientation that started in the Turkish Military Academy is a modern policy, for the success of the institution it is crucial that it gains momentum. Perfecting
the education system for adaptation to new industrial revolution would provide critical benefits.

**Interview with Baykar Trainers**

UAVs are the leading vehicles containing latest technology which are being actively used by TAF. The learning abilities of TMA graduates on how to manage these devices would be helpful to understand the adequateness of given education at TMA. In this study, the opinions of the trainers of Baykar Defense Company, which provides basic piloting training on UAV piloting to TMA graduates, were asked to learn difficulties that they experienced.

**Methodology**

During the interviews with Baykar Defense Company, the opinions of five trainers were taken. All trainers attended the courses of the TMA graduate trainees for a 5-month course. Furthermore, they all played an active role in teaching, assessment, and evaluation processes. Interviews were conducted by a semi-structured, in-depth interview method. The questions were open-ended, and each trainer was allowed to reflect their own views as desired. One-on-one interviews were held with the participants for periods ranging from 1 to 1.5 hours. This methodology was selected to gain maximum information from limited participants.

The research mainly focused on four areas. The first part aimed to understand the trainers’ thoughts about modern defense management and future warfare. The second part sought to understand the quality of TMA’s undergraduate education. The third aimed to understand views on TMA graduates’ capabilities to adapt the changes bring by Industry 4.0. Finally, the fourth part tries to find out importance of the skill set, presented in this paper, consisting of critical and analytical thinking, crisis management and overcoming complex issues, lifelong learning, and emotional intelligence.

**Key Findings**

1. **Views on the modern defense management and future warfare.** All participants believed that the military importance of autonomous systems will increase exponentially. This is
due to the fact that the cost of producing and using autonomous devices gradually decreases below the cost of human upbringing, upkeeping, and manned operations. The reasons for this situation are that unmanned systems remain on the ground much longer than manned vehicles; they are more difficult to detect (not caught by radar); and they do not risk human life. In addition, it has been stated that slow-moving and difficult-to-hide elements are open targets for UAVs, so it will be useful for the heavy tank and artillery class to consider new concepts.

2. Quality of undergraduate education of TMA. Participants stated that the undergraduate teaching given in TMA is largely sufficient, because more than 95 percent of TMA graduate trainees have successfully completed the pilotage course given by Baykar. In particular, the importance of electronics and communication and computer engineering departments was underlined by all participants. In addition, it was stated that the mechatronics department can be opened at undergraduate and postgraduate levels, enabling personnel specializing in autonomous systems to serve TSK more actively in the field of preventive maintenance and production. Finally, it was highlighed that TMA has an important potential in supporting military defense industry with high tech products in a university- industry-public cooperation eco-system.

3. The capability of TMA graduates to adapt the changes bring by Industry 4.0. At this stage, the trainers were asked about the comprehension skills of the TMA graduates. The questions were designed prioritizing the concept of “Constructionist Learning”, developed by Gomaratat (2015) that consist of regulating the understanding, investigating, and producing skills.

The first group of questions was about regulating the understanding skills. In this context, all trainers agreed that the trainees are successful in recalling, relating and refining skills. It was stated that the most of the trainees could understand all the information provided and did not have difficulty in learning.

The second was on investigating skills of TMA graduate trainees. While the inquiry skill was found to be insufficient by all the trainers, it was stated that the trainees were mostly successful in the fields of interaction and interpretation. The trainers stated that the trainees had little curiosity and that some of the trainees did not engage in any serious activity toward learning after finishing the TMA. It was stated that it would be beneficial to develop lifelong
learning abilities starting from TMA. In the field of interaction, all trainers emphasized that the trainees were successful. In this case, it was thought that the culture of cooperation that develops with the military profession had a great impact.

Finally, the last group of questions focused on producing skills. While all participants found TMA graduates sufficient in processing skills, presentation was an issue that the trainers did not agree with. While three out of five participants stated that the trainees were sufficient in this regard, two of them found it insufficient. Three out of five participants stated that TMA graduates may be reluctant to present output in new situations.

4. *The importance of the skill set proposed for twenty-first century military experts.* While the trainers emphasized that all the above-mentioned abilities were important, when asked to make a ranking, all five trainers placed openness to lifelong learning in the first place. They stated that among the trainees, those who are more curious and open to education are much more successful than others. In second place, three trainers placed critical and analytical thinking skills as important, while two chose emotional intelligence. The critical and analytical thinking response was explained by stating that UAV pilots should have continuous situational awareness, and they should be one step ahead of the aircraft in the intellectual background. Moreover, the trainers underlined that it is crucial to think about possible situations before events develop. The importance of emotional intelligence emphasized the critical importance of pilots’ ability to choose the right decision when caught between the air traffic control tower, the orders of the superiors, and the situation of the conflict zone. The trainees may need the persuade all stakeholders of the most reasonable solution.

**Analysis and Recommendations**

The 95 percent success rate of TMA graduates in pilotage training for UAVs illustrates that the correct policies have been implemented by the Academy. The unprecedented increase in the speed of change and the technology domain makes the need to adapt to this situation strategically important. Moreover, it is a contemporary orientation to adapt to change and to articulate a timely response to military culture. In order to ensure this management, TMA should take a pioneering role and equip its graduates with qualifications that are suitable not only for today but also for the near future. In addition, it will be of great benefit for the SSO to set a
strategic goal to become the production center of innovative outputs in every field that concerns the society by prioritizing the conflict area and military service.

The interview with Baykar instructors illustrated that the education given by the TMA played an active role in the development of the understanding skills of the graduates. It is particularly important for TMA that the high success achieved in this field repeats itself in the skills that trigger research and produce results. The university administration may focus on increasing the questioning, curiosity and initiative skills of the graduates which will have an effect on lifelong learning and critical and analytical thinking skills.

With the understanding of Teaching 4.0, the learning process can take place regardless of space and time. However, this requires a staff and infrastructure that knows the language that generation Z can understand, and that specializes in preparing quality content. It will be useful to develop the Deanship Teaching System through modern methods such as quality video content, and virtual and augmented reality applications and simulation.

Higher Military Education 4.0 has a philosophy in which methods such as application, problem solving, and presenting output are more effective than memorization and lecture-oriented methods. Student societies, which the TMA has developed in recent years, is a very beneficial trend in terms of strengthening the connection between knowledge and life and directing them to provide output. However, to develop better lifelong learning and critical and analytical thinking abilities it may be useful to review the current teaching planning in a way that leads students to establish curiosity, inquiry and cause-effect relationship.

Finally, the TMA may be able to host an ecosystem where knowledge is not only taught but produced, supporting innovation. The unique identity of the TMA and its close relationship with the TAF prepares a unmatched ground for the creation of an innovative ecosystem developed by industry-university-public cooperation. A high-tech defense industry cluster to be supported by engineering departments and laboratories affiliated to the TMA would support the TAF in every field and would make a great contribution to the quality of the teaching provided.

**Result**

Soldiers are often the first common users of high-tech products. This situation leads them
to adapt to revolutions while keeping their traditions. The adaptation of military service to change, while preserving their core values, is of vital importance. Military institutions that can successfully manage change and transformation can use the latest technology products with the highest benefit by providing tactical superiority in the conflict zone.

As U.S. Gen. Mark Welsh has emphasized that the main advantage of being first owners of the technology is the “know-how” developed before others. The costs of the latest technology products will get cheaper over time and get into the hands of the other parties. In this case, the superiority will belong to the ones who had the ability to use these devices first and developed the ability to use them the best.

Turkey is among the few powers of the world who can produce devices with Industry 4.0 technology. Continuing this superiority by developing its know-how about usage is strategically important, as stated by Welsh.

In the near future, TAF should strengthen its position among the pioneers of the last military revolution. In this context, the main duty of TMA is to prepare the graduates according to the needs of the age they will live in and to create an infrastructure ready to offer innovation and scientific support in every field.

TMA has successfully adapted to all the revolutions so far and has taken its place among the leading institutions of innovation. Recent applications are an indication that the spirit of technological revolution is already understood. The TMA will continue to meet the needs of the Turkish community today and in the future without ceasing to serve the Republic of Turkey.

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Endnotes


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An Education and Training Model to Prepare Officers for New Challenges and Scenarios

Enrico Spinello and Marina Marchisio

Abstract: Future military leaders will be required to operate in new and increasingly complex scenarios and to respond to unexpected and often not currently imaginable challenges. It is important that, starting from basic training, officers acquire specific knowledge and develop key-skills, both professional and transversal, which allow them to face future tasks. The paper presents and discusses the model developed by the Education and Training Command and School of Applied Military Studies and the University of Turin. They, in cooperation, provide the upper part of military training and academic education for young officers. The path is composed of a bachelor’s and a master’s degree in Strategic and Military Sciences, which belong to a class of degrees dedicated to the armed forces. Distinct curricula were developed according to different branches and services. The analysis carried out on the model is in accordance with the five dimensions considered in the model: multi-disciplinarity; military training; internationalization; e-learning; and Civ-Mil interaction. For each dimension, the training objectives, the strategies implemented, the resources, the strengths, the risks, and the difficulties encountered are described. The actions for monitoring and evaluating the model quality are also illustrated. Finally, some reflections are reported on how some characteristics of this model can be successful also in a lifelong learning perspective, useful for officers who, during their career, will be called by the Institution, or for personal reasons, to continue their studies to keep up to date, to specialize or to attend courses for carrying out missions and special assignments.

Keywords: Military Education; Officers Training; Security and Defense Education.

Introduction

Future military leaders will have to operate in new and increasingly complex scenarios and respond to unexpected and often not currently imaginable challenges. It is important that, from basic training, officers acquire specific knowledge and develop key, professional and transversal skills, which allow them to face the tasks they will be called to perform more easily and with situational awareness. In recent decades, the training of officers has been a subject of
attention of the European Union (EU); through its documents, the EU has indicated the strategic principles to be adopted in order to build a European defense policy and culture.\textsuperscript{3} No less important, however, are the global international contexts within those countries which have been collaborating for some time through strategic alliances, such as NATO, and which are asked to intensify their relations and their interventions in particularly delicate operational areas and in countries where the protection of the population and the territory is particularly complicated.

The IT-Army Education and Training Command and School of Applied Military Studies (ETC&SAMS) and the University of Turin (UNITO) have worked together for many decades in order to provide the best education and training for officers and, in 1998, a special cooperation was issued for managing new dedicated university courses. For the same reasons, some years later a dedicated university school was created, the Interdepartmental University School in Strategic Sciences (SUISS), which coordinates the activities carried out by civilians, military, professors, tutors, and instructors. The SUISS includes nine of the 27 departments of UNITO covering different areas: legal, political, economic, scientific, and biotechnological-medical.

Until the 1980s, the entire cycle of studies for officers was based on a two-year engineering course. Then, officers attended different university courses in a traditional area such as political sciences, computer sciences, management, mechanical and civil engineering according to their preferences or military requirements. Not everybody was admitted to an additional fifth year in order to complete their studies and obtain a master’s degree. The military and the university programs were not well harmonized. In 1997, a Legislative Act introduced exclusive and specific criteria for military education and, in 2001, a specific class of university degrees for defense and security was created for all armed forces. In accordance with the Bologna Process, the cycle of studies was organized on a three-year bachelor’s degree, plus a two-year master’s degree. The entire cycle is conceptually designed as a full five-year course.

In this context, the Education and Training Command and School of Applied Military Studies of Turin (COMFOR-SA) and UNITO designed and built together a model which allows 120 to 130 officers each year to get the bachelor’s degree, lasting three years, and the master’s degree, two years, in Strategic Sciences, which belong to this class of degrees dedicated to the training of military personnel of different military services. These university degrees contain distinct curricula depending on the branches and specialties that they belong to.
This paper presents and discusses this model according to its five peculiar dimensions and using the data we collected. This model is constantly updated in order to meet the different needs that may arise, and, during the COVID-19 pandemic period, it allowed to maintain didactic continuity and redefine some formats to respond to future scenarios.

**The Training Model**

The model was developed by ETC&SAMS and UNITO and was created to answer the following questions:

- Which training objectives are most useful for future military leaders who will be called to operate in new and increasingly complex scenarios and to respond to unexpected and often not currently imaginable challenges?
- How to organize the training of officers from the beginning to make them acquire specific knowledge and develop key professional and transversal skills, which allow them to face the tasks they will be asked to perform more easily and with situational awareness?

The model envisages a co-planning of all the activities by both institutions that work through official bodies such as the SUISS Council and the Degree Courses Council, but above all through working groups on specific topics, such as e-learning and internationalization, composed of members of both institutions who collaborate together, comparing and bringing different perspectives. The Commander is one of the members of the SUISS Council so that he can be updated in real time and actively contribute to the discussion from his privileged point of view.

The model relies on the use of a dedicated interdepartmental structure in order to:

- facilitate the organization, planning and implementation of academic teaching and training activities;
- dedicate staff who are familiar with the peculiarities of university training in the field of security and defense;
- promote multi-disciplinarity because the teaching staff, composed of civil and
military teachers, comes from different departments and disciplinary fields;

- maintain a balance between military and academic subjects; and
- optimize the resources invested in terms of infrastructure and personal resources.

For example, the entire infrastructure for e-learning was equally funded by the two institutions and also teacher training, help desk, and platform management activities are carried out in cooperation by both institutes.

Another strong point is the simultaneous provision of the training of military and civilian students in two different and parallel bachelor’s and master’s degrees. Officers practice the collaborative learning and team working with their civilian colleagues from the first day, and this enables them to be much more prepared to enter their professional life during which they will have to interact with civilian personnel and work in favor of entire populations. When military students carry out exclusively military training activities, civilian students carry out training internships at companies or public or private institutions in order to acquire experiences that facilitate entering the world of work. Some civilian students carry out internships at Italian or EU foreign military institutions. Distinct curricula are created in order to diversify the preparation of civilian students.

Finally, the model aims to favor three processes that are considered fundamental:

- integration of the officers’ training;
- internationalization; and
- transition to digital as a paradigm capable of supporting all training activities.

The first focuses on a broad-spectrum officer training obtained through a strong theoretical and practical multi-disciplinary training that allows a solid preparation, the development of transversal skills and the harmonization between theory and practice. We want to promote the ability to continuously learn also in terms of professional updating.

Through the second, a European—but not limited to Europe—security and defense culture is developed. During their university career, officers carry out activities abroad or in Italy during which they meet colleagues and teachers from other EU member states.

The third allows, through the use of new technologies and their potential, to improve
teaching and learning methods, make them more effective and more appropriate to the times, while also helping officers understand how to improve simulations and training activities when they are operated.

Analysis and Discussion

The model analysis is carried out according to the following five dimensions included in the model:

- multi-disciplinarity,
- professional training,
- internationalization,
- e-learning; and
- interaction between military and civilian students.

For each dimension the objectives, the strategies adopted, the resources used, the strengths and the risks and difficulties encountered are described using qualitative and quantitative data.

A. Multi-disciplinarity

**Objectives:** to achieve a broad-spectrum preparation which allows officers to acquire knowledge, skills and competences in different fields in order to have the reading keys to operate in different contexts and to be able to deal with professionals from different sectors.

**Strategies:** To achieve the multi-disciplinarity, teachers from different disciplinary sectors and from different university departments of UNITO are involved. Nine out of twenty-seven departments contribute to the didactic activities of SUISS. Others, such as the Department of Psychology and the Department of Foreign Languages and Literatures, contribute with their own professionals. Teachings in the field of engineering are entrusted to professors of the Polytechnic of Turin. Teachers are invited to set up their teaching in such a way as to provide a solid basic literacy and to deepen the aspects that are of greater interest for the career of an
officer. For example, in the field of administrative law, the rudiments are taught, and the aspects linked to public contracts and public work are studied in depth, the students being the future officers of a public institution. Or, in the teaching of the leading English language, after reaching an advanced medium level, also military English useful for operating in international contexts, is taught. Moreover, interactive educational activities such as formative assessment, learning by doing, debates, workshops, collaborative learning have been added to the more traditional teaching methods. In this way, transversal skills are also developed such as digital ones, problem solving, communication, argumentation, leadership, and the ability to team up.

**Resources:** To achieve the multi-disciplinarity approach, financial and human resources have been put in place by ETC&SAMS and UNITO in order to have dedicated and on-site teaching by teachers from different fields. Since the engineering and architecture sectors are not present at UNITO, a specific agreement has been signed with the Polytechnic of Turin. Military lecturers work with their civilian colleagues to design training activities.

**Strengths:** The teaching is carried out at the military institution following calendars and timetables in accordance with the needs of the military institution. During the various university courses, students go on field visits (for example, to local public offices, according to the topics, and on battlefield tours to places where historical battles took place), participate to related events such as competitions or conferences on topics they are studying in order to feel protagonists of their training path. The degree theses of the bachelor’s and master’s degrees seek to investigate issues of interest to the armed forces.

**Risks and Difficulties:** The training program is very intense; therefore, if a student lacks organization, he risks to fail some of the tests and exams. To overcome this difficulty, the students are divided into small groups supported by a captain/major who acts as a tutor. To facilitate the study, additional exercise sessions are also organized during which students can question and carry out guided activities. A difficulty that has not yet been overcome is that SUISS has dedicated administrative staff but does not yet have 100 percent dedicated teaching staff. This would facilitate the coordination of teaching and research on topics of interest to the armed forces.
B. Professional training

This includes specific training activities of various types that are not part of any academic teachings. They are recognized in terms of European Credits Transfer and Accumulation System (ECTS) and represent one third of all educational activities (100 ECTS out of 300 of the entire cycle).

Objectives: Achieve high quality military preparation and training by dedicating the necessary time.

Strategies: In order to allow the officers to obtain high quality specialized training, a university course was designed with the purpose of enhancing and recognizing part of these activities in terms of European Credits Transfer (ECT) and Accumulation System ECTS. The specific training periods are planned well in advance and inserted within the academic year in such a way as to not interfere with lessons and exams.

Resources: Military teaching staff is responsible for practical lessons on military issues, every branch receives a specific and dedicated training. A large number of specialized military personnel such as instructors of various sports (swimming, athletics, skiing, horse riding, shooting, etc.) and the sport facilities (gyms, swimming pools, and an athletics field) are available on site, while shooting ranges, military camps, and mountain training areas are not too far from the premises.

Strengths: The internship activities are carried out partly on site but partly through special periods outside, such as branch schools and summer camps. In order to reduce logistic and training efforts a complex exercise, called “UNA ACIES,” is planned and carried out every year where all the activities of the military institutes, in strong cooperation with military academy, non-commissioned officer (NCO) academy, and military high schools, are combined in order to perform the proper training with the right equipment.

Risks and Difficulties: All training activities are condensed and must be completed within the university course timeframe. If for some reasons some activities must be repeated there is a risk of not being able to achieve the bachelor’s or master’s degree on time. When it happened, in very few cases, a flexible approach was used, and students were able to achieve it with a minimum of delay compared to their colleagues.
C. Internationalization

The model tries to answer the current context and in the scenarios that are being envisaged where collaboration among EU member states and strategic alliances such as NATO are increasingly important and indispensable.\(^4\) Strongly international training is adopted not only in terms of mobility, both outgoing and incoming, but also to create more international curricula.

**Objectives:** Develop the ability of officers to operate in any international operating theatre with colleagues from all over the world, to fit into different cultural contexts and to create collaborative networks.

**Strategies:** To reach a strongly international training many actions were adopted. First of all, the outgoing and incoming mobilities through intense mobility programs and exchanges of students, teachers and staff of different duration and modalities (short, long, virtual, in presence and blended intensive programs (BIP)) were increased. Depending on the mobility, the student either attends a full semester or takes part in an international module or carries out a degree thesis or a traineeship. Seventeen bilateral agreements were signed with other European basic officers’ education institutions/universities dealing with security and defense education.

The military institute participates in the “European Initiative for the exchange of young officers, inspired by ERASMUS” (called also EMILYO).\(^5\) As member of this initiative, it offers common modules and regularly sends students to other member states’ short-module programs.\(^6\) Also, civilian students are admitted to this program in accordance with the specific topics offered. Since 2013 every year two Common Modules (CM), such as Common Security and Defence Policy (CSDP) and Law of Armed Conflicts (LOAC), are offered. In 2020, due to the pandemic, for the first time the CM program was postponed and in the 2021 four CMs were offered, with the introduction of a new one (Biosafety and Bioterrorism). The European Community Action Scheme for the Mobility of University Students (ERASMUS) Programme is also used, as UNITO has the ERASMUS Chart and students (military and civilians) can benefit of a medium-long study program mobility (minimum of 3 months to 1 year) and/or traineeship (minimum of 2 months). At the moment a total number of 17 bilateral agreements was signed with EU universities, with 63 study program mobilities and 10 for traineeship.
Moreover, in order to have more international curricula, two visiting professors from foreign universities are invited every year for the provision of two courses entirely held in English; teachers are asked to adopt the Content and Language Integrated Learning (CLIL) methodology. Teachers have also implemented four dedicated open online courses held in English (many others are available as additional) among the compulsory modules of the curriculum (Military Sociology and Leadership, International Law, History of European Integration, Mathematical Modelling) for a total of 27 ECTs. They are available to facilitate the recovery of teachings by outgoing students and to offer training activities in English to incoming students. To facilitate the participation of officers in the mobilities, an immersive week is organized at the beginning of each semester on military English. Civilian students can attend a cultural inter-comprehension course which aims to develop the ability to integrate into different cultural contexts.

Other activities are provided in English such as the Stabilization and Reconstruction Orientation Course (SROC) and, since the academic year 2021-2022, some university modules (Military Sociology and Leadership and International Humanitarian Law of Armed Conflicts) will be in English, and students will have the possibility to select them instead of the equivalent modules in Italian.

**Strengths:** The internationalization program, contemplating various actions, involved many officers. The number of participants per year to the common modules moved from two in 2009 to sixty-eight in the pre-COVID last year, while in 2019-2020 this number was stopped at fifty-five. All feedback received at the end of the various common modules are very positive. The range of the average feedback is between 4.8 and 5.40 (Linkert scale of 6). These international activities are strengthened by collaborations within European Erasmus+ Key Action 2 Strategic Partnership projects such as the Military Gender Studies (MGS) project, coordinated by the Portuguese Military Academy of Lisbon (Portugal) and involving the “Vasil LEVSKI” National Military University of Veliko Tarnovo (Bulgaria) and the “Nicolae BALCESCU” Land Forces Academy of Sibiu (Romania), which addresses the issue of gender mainstreaming within the training of officers.

**Risks and Difficulties:** In general, it is particularly challenging to create exchange, because each state has its own organization for the education and training of officers.
Fortunately, within the EU, the European Security and Defence College (ESDC), Brussels, is creating a shared framework that allows to overcome many obstacles. Last year, the biggest difficulty was the COVID-19 pandemic which slowed down internationalization activities. Luckily, the virtual mobility agreements immediately signed with the Military University of Technology, Warsaw (Poland) and the open online courses made it possible to continue, albeit with more effort, with these activities. We have not yet managed to create an international semester with other universities because some internal reviews of the Italian Army regarding the curricula have postponed it.

D. E-learning

E-learning represents a winning tool for improving the quality and the potential of officer education. It allows to add different forms of teaching to the traditional face-to-face one: blended, purely online and hybrid.

**Objectives:** The main objectives are using digital education to update training; increasing the use of technologies to facilitate and make teaching and learning more adaptive; fostering collaborative and cooperative learning; and introducing methodologies that use artificial intelligence.

**Strategies:** The main strategy was to develop a Digital Learning Environment (DLE) that is a virtual space in which students and teachers work together, independently, in groups using various technologies and sharing content. An intense e-learning program was implemented in 2013 and went through several phases: 1) strengthening of the structures, 2) integration of the Learning Management Systems used by ETC&SAMS and UNITO, 3) training of teachers to develop their digital skills, produce interactive materials, and update their teaching methods. Since 2013, many human financial resources have been invested in e-learning in terms of infrastructure, training, and content production also in a lifelong learning perspective. UNITO has a great deal of experience in digital education, and, within the Computer Science Department, there are MOODLE developers who have contributed to the creation of the entire e-learning architecture for the training of officers. Many financial and human resources have been invested since March 2020 because the COVID-19 pandemic has
required moments of forced distance training with a consequent increase in the use of the DLE. The number of logins to the DLE was 10,244 in 2019, 83,208 in 2020, and 52,239 in the period January to April 2021. In 2020, the web conference sessions were 515 with 81,194 accesses while the resources made available were 2,798 and viewed 208,331 times. Thanks to funding from the Compagnia di San Paolo Banking Foundation, UNITO intends to invest in the production of further open online courses and micro-credentials.

**Strengths**: The robust e-learning program undertaken in recent years has made it possible to implement the internationalization program described above and not to interrupt the training activities during the COVID-19 pandemic. In accordance with the indications of the Digital Education Action Plan published on September 30, 2020, and making use of the EU funding supplementary call on digital, released in October 2020, ETC&SAMS and UNITO have started the European Project DIGICODE, in collaboration with the Military University of Technology of Warsaw (coordinator), the “Vasil LEVSKI” National Military University of Veliko Tarnovo (Bulgaria) and the “Nicolae BALCESCU” Land Forces Academy of Sibiu (Romania), whose main aim is to develop the digital skills of trainers in the field of security and defense.

**Risks and Difficulties**: No particular risk was encountered, but there is necessity to introduce, in order to support the teachers, new competent figures such as instructional designers, tutors and Learning Management System managers.

**E. Interaction Between Military and Civilian Students**

It starts from the third year until the fifth year, because for the first two years, the officers attend the military academy in Modena. The number of admitted civilians is 60 every year at the bachelor’s degree level, while there is no limitations at the master’s degree level. The total number of civilian students is around 300 while the military students are 360.

**Objectives**: To teach and train the military and civilians to collaborate and tackle problems together in order to be ready for future collaboration in operational theaters.

**Strategies**: To facilitate interactions between military and civilian students, it was decided to have them attend lessons, international modules, and extracurricular activities such as conferences and sports facilities, together. In the classroom and remotely, they get used to
collaborating, cooperating, exchanging ideas, discussing various topics, and working as a team. Civilian students can carry out internships within ETC&SAMS or even at some foreign academies/universities with which we have signed a bilateral agreement.

**Resources:** To do this, ETC&SAMS made available classrooms for all didactic activities, sport facilities, and spaces for recreation. The digital learning environment created by ETC&SAMS and UNITO was designed to be interconnected and the open materials are available to be shared.

**Strengths:** The existing interaction between military and civilians is unique in Italy and not so widespread in Europe. It represents an added value and a first seed to give birth to a profound culture of security and defense within the company. The presence of civilians during lessons and seminars gives a different point of view about the same topics. The satisfaction of students who carry out international activities or internships at foreign academies/universities is always extremely high (5.8 in to 6 Likert Scale). In the comments released by graduates at the end of the master’s degree, there is often a “unique and very formative opportunity that allows you to grow by collaborating and building friendships with people who will work in different but parallel contexts.”

**Risks and Difficulties:** No particular risk has been identified. Some difficulties encountered concern the inclusion of the title of master’s degree obtained by civilian students in the public competitions of the Ministry of Defense to recruit civilian personnel. The situation is being monitored.

**Data, Monitoring, and Quality**

In order to monitor the model some actions and initiatives were undertaken to constantly check the response to training needs, to intervene immediately at various levels where the need arises, to develop new solutions and experiment with them. This constant monitoring also helps to maintain good standards of training quality.

First, there was a large and assiduous participation in international activities by students. To participate, they must apply, and the applications received are always more than the available places. This shows that the initiatives meet the interest of the students and fulfill their
expectations. To monitor the various activities carried out, the numerous data present on the platform are analyzed (logins, unique logins, access to resources, time dedicated to activities, errors made, results achieved in the tasks with automatic evaluation).

Questionnaires are then administered at the end of the various activities to students and teachers to collect their feedback. The results achieved in the various practical and theoretical tests, in presence and on the platform, contribute to checking if the training objectives are achieved and, in case of failure, we try to understand the reasons and to intervene with support activities.

Each academic year, there are two training sessions for teachers, before the start of each semester, and during the summer, the work to update infrastructure (classrooms, hardware, software) are carried out to keep the equipment efficient. Every three years, a cyclical examination of the bachelor’s and master’s degree programs is carried out and meetings with the social partners are held to collect observations and indications. These two actions are required by the Ministry of the University.

On the military side additional feedback and questionnaires are requested to the students while a firsthand feedback is required to the Regiment Commander of the unit where officers spend a five-week operational traineeship before receiving the first assignment.

Finally, continuous research is carried out in the field of digital education to find increasingly effective and efficient solutions. For example, in the context of learning analytics, techniques are being studied that allow teaching that can be reshaped in real time based on the data collected and methods of analysis that allow institutions to carry out enlightened data-driven educational policies.

Conclusions

In the paper we discussed the model developed by the Education and Training Command and School of Applied Military Studies and UNITO for the officers’ training. The analysis studied the five dimensions present in the model: multi-disciplinarity; military training; internationalization; e- learning; and Civ-Mil interaction. We can say that the model presents characteristics that allows it to be used also in a lifelong learning perspective, useful for officers
who during their career will be called by the institution, or for personal reasons, to continue their studies to update themselves, to specialize or to attend preparation courses for carrying out missions and special assignments.

Some experimentations in this direction were made. First, some military exercises and simulations of near-real time operations were carried out to test how the system would react. The responses were extremely positive, and this means that it is also necessary to invest in highly updated post-graduate training. Second, the idea and the architecture of the Portal of Italian Army was designed in Turin taking advantage of the experience gained. The model is able to involve a high number of officers from different positions, with different roles and distributed throughout the territory.

The scenarios in which the officers will have to operate will be more and more new, more and more hybrid: in the same way, their training will need to help them develop understanding and decision skills in order to make them valid military professionals and true leaders.

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Endnotes

Philosophy and Military Science in the Third Millennium: Preparing Military Leaders

Júlio Raphaël de Freitas Coutinho and Marco Antonio de Freitas Coutinho

Abstract: If the twentieth century gave rise to the era of total war, the twenty-first century ushers in the era of insecurity and the world eminence of a new wave of wars. This all began with the terrorist attack on the Twin Towers of the World Trade Center. Thus, the first year of the third millennium began with a great catastrophe, in which fear brought instability for the global security and world peace. We are experiencing a precarious, political, and social context, but on the threshold of a new wave of discoveries connected to technology and connectivity. If we accept collective responsibility for creating a future in which innovation and technology serve people and nations, in an overwhelming way, we are also about to elevate humanity to new and uncontrolled levels of behavior, and this will be directly related to ethics. Common sense indicates a dilemma for military leaders to effectively solve the security challenges of the twenty-first century: On the one hand, the armed forces should not accept, without a rigorous assessment and adaptation, the premises arising from this new world conjuncture, since they cannot always portray the characteristics, values and servitude that guided the formation of their nationality and that preserve the ethical principles that should guide the military profession. On the other hand, we cannot fail to bear in mind what Heraclitus, one of the greatest philosophers of antiquity, once taught us: “The only permanent thing is change.” So, it is also essential to present alternatives that allow the new military generations to remain creative and innovative. In order to contribute in solving this dilemma, this article aims to present the collaboration that philosophy, through ethics, can provide for the military science at this new millennium.

Keywords: Philosophy; Ethics; Military Sciences.

Introduction

It has been observed tensions and complexities during the most recent missions of the armed forces, especially of an ethical order. These ethical divergences are increasingly advancing with new technologies allied to the appearance of new types of conflicts.

These unconventional, asymmetric conflicts, with poorly defined zones of shadow, are putting in doubt aspects previously considered basic and unquestionable such as the objectives, the mission, the characterization of the enemy or the adverse forces, the delimitation of the conflagrated areas. All these aspects are hindering the action of national states in face of the war
on terror, the fight against organized crime, and the protection of the environment, among others, which are very peculiar and differentiate than fighting in a conventional war.

Samuel Huntington reminded us that military institutions are particularly shaped by two forces: “A functional imperative stemming from threats to society and a social imperative stemming from the social forces, ideologies, and dominant institutions within society.”1 As a result of those social forces, the military are increasingly being called upon to assume functions or activities not related to the roles of conventional combat only: humanitarian operations; defense of law and order; environment protection; stabilization of the world order (UN); and others that will certainly arise. To meet these new challenges, a wide range of new skills, ethical values, and a high capacity for critical analysis are increasingly being demanded.

The authors focused on analyzing the interactions between philosophy, through ethics, and military science. For this presentation, it was necessary to invite readers to reflect on these branches of science in the third millennium, having been raised the following problematization: How to develop military science through the preparation of its chiefs and leaders, effectively, in these times full of uncertainties, complexities, and ambiguities?

**Military Science and Philosophy**

Over time, both philosophy and military science sought to establish schemes for interpreting the reality of society. Hence there is something in common since the beginning of time. Both sought to establish parameters to analyze the world from peculiar points of view. Philosophy, on the one hand, was born from the search to understand or verify, continuously, the understanding of what it means “being” in the world and in the society. Military science, on the other hand, sought to establish parameters for the defense and survival of nations, overcoming threats, but also sometimes supporting societies in their needs and even contributing with the development of countries.

Philosophy has played a decisive role in understanding problems that arise in the course of scientific practice through the ages. History reveals that military science has resorted to philosophy to find, through reflection and debate, a moral and ethical support for its development.
Philosophy and military science, each with its own particularities, keep their differences among themselves. It is up to the soldier, mastering philosophy, military science, and the convergence of these two areas, to better understand his problems and find appropriate solutions, based on logic and ethics, that would allow him to solve contemporary challenges.

Military Science and New Challenges

According Cunha and Mignon, “the Military Sciences are an autonomous scientific domain characterized by a system of knowledge related to the study of the war phenomenon, the application of military coercion and the use of armed force.”² The phenomenon of war, however, has undergone profound changes over time, with direct reflections on the application of military coercion and the very development of military sciences. In this sense, Harry Bondy considers that the changes in the application of the art of war “can only be understood and shaped by an inter-disciplinary approach that addresses individual and group behavior.”³

Caforio, in his turn, considers that the new forms of warfare are characterized by a “prevalently political and ideological (often religious) nature” and many times “by consciously and determinedly ignoring any ethical standard,” aspect that presents a growing challenge for the teaching of philosophy and ethics in the field of military sciences.⁴

As we have already mentioned, Huntington pointed out the existence of two forces that can directly influence the functioning of the military institutions of any society, those arising from the threats to the society and those arising from the demands of social forces, ideologies, and institutions within the society.⁵

But still, according to Huntington, the man of the military ethic is essentially the man of Hobbes, a characteristic that becomes very clear when analyzing the fundamental role of the military structure and the chain of command as necessary ingredients to face and overcome the uncertainties and challenges involved in the conduct of war. The military professionals share a sense of organic unity and consciousness of themselves as a group apart from laymen. It is known as corporateness or “Esprit de Corps.”⁶

In this sense, loyalty is a mandatory value of the armed forces. The individual loyalty to the ideal of the good soldier, but also the loyalty of the unit to the traditions and to the spirit of
the best military unit. The most effective forces and the most competent officer corps are those which are motivated by these ideals rather than by political or ideological aims.

Yet the armed forces, and their officers, must possess in their branches many varieties of specialists, some of them with their counterparts in civilian life. We must consider, however, that there is a distinct sphere of military competence that is common to all military personnel and that distinguishes them from all civilians, or almost all. This central quality can be defined by the need to manage the peculiar situations of combat that refer to violence, which increases the importance of a military ethics.

This peculiarity of the military career was highlighted by Cremer, when he stated that the profession of arms is fundamentally moral in nature as it implicates foundational values and principles that have significant impact on the wellbeing of others.7

These principles and values of the military profession should guide the formation of skills that will allow the officer to determine the application of violence. Shooting a weapon, for example, is a basically a mechanical skill. However, directing the operations of a military unit requires an entirely different kind of expertise that has its learning in both military instructions and school education (including philosophy).

Certainly, the specificity of the military career must be sought based on one question: What skills and competencies should a military person have in the current context?

The answer, for sure, is beyond those skills and competencies only strictly developed in the military exercises. The competence of the military personnel, therefore, suggests a broader academic education. The intellectual essence of the military profession requires, above all, that the modern officer dedicates a considerable part of his professional life to formal schooling, a probably higher ratio of educational time than in any other profession. Such a requirement suggests that military science must have a broad curriculum that involves academic and professional subjects.

In modern times, a great challenge arises: How to prepare the troops for modern conflicts. In the current context, it is essential that the military leadership develop, unlike in the past, the qualification of the troops, in all levels, with high cultural competence. Until the last century, it was possible to define the soldiers only as doers of things. Nowadays, this is no
longer possible because the conflicts are asymmetric, with shadow zones and poorly defined conditions, that were so clear before.

Therefore, one can assume that, differently from what the preparation of the troop was until the twentieth century, modern soldiers must carefully assess the consequences of their decisions in the current context. Military actions are extremely decentralized, and the action of a simple soldier can compromise an entire military operation, and Military Science cannot fail to address these issues.

**Military Activity in the Third Millennium**

To understand the importance of military science, in the context of the Fourth Industrial Revolution, some comments are made in order to develop reflections to assess the military importance in this context.

In a classical sense, military activity was defined by Aristotle in the following sentence: “Within an organized society the class necessary for the preservation of a Polis (politically organized society) is the military that has the specific function of exercising authority over disobedient men and also in defense against internal and external aggressors.”

However, as summarized by Harry Bondy, the military activities are progressively affected by the development of modern technologies, and some terms have indeed appeared in the literature to better characterize those new approaches, like “fourth-generation warfare” or “revolution in military affairs.”

In this context of transformations, and from Aristotle's vision, the following question arises: is there or not another definition for military science, comparing Aristotle's phrase with the scenario represented by the Fourth Industrial Revolution?

After reflection, it can be deduced that despite the advances in technology brought by the so-called Fourth Industrial Revolution, we cannot say that it can bring with it a change in human nature. In addition, ethics presents itself as an instrument to discuss human conduct, always seeking those that are characterized as morally good values. Notorious philosophers like Kant and Espinosa reinforces that ethics cannot be dissociated from human thought and reason. Based on this logic concerning the nature of man, it will still be necessary for postmodern
society, the existence of the military class, with essentially the same attributions presented by Aristotle, concerning the maintenance of the security of society.

**Military Education in the Third Millennium**

At the threshold of the Third Millennium comes the Fourth Industrial Revolution that constituted a new chapter in human development exponentially supplanting what has already been seen in the three previous technological revolutions.

According to Klaus Schwab, a research carried out by Frey and Osborne have quantified the potential effect of technological innovation in different professions according to their probability of being automated. The research concludes that about 47 percent of total employment in the U.S. is at a serious risk of becoming obsolete in the near future.

However, still according to Klaus Schwab, this does not necessarily mean that the world faces a man-versus-machine dilemma, since in the vast majority of cases, the fusion of digital, physical, and biological technologies driving the current changes will serve to enhance human labor and cognition, meaning that leaders need to prepare workforces and develop education models to work with, and alongside, increasingly capable, connected, and intelligent machines.

On the other side, Finney and Mayfield had declared that the first and most important aspect of a military profession is its sense of a professional ethic. According those researchers, only this ethical core can provide clear directions in the absence of orders or a proper guidance, a situation which is very common for the military.

As we discussed, the profession of arms is fundamentally moral in nature as it implicates foundational values and principles that have significant impact on the wellbeing of others. Therefore, the future of military education cannot do without a foundation in ethics and values.

So, at what point in the process of technological development can we take into account these values in a way that aligns with military education in the Third Millennium?

The greatest challenge of education is not to lead people to perform tasks and dominate the world around them, but to lead them based on their own thoughts, on their intellectual capacity. Thinking is not a voluntary option of the human being; it is his inevitable destiny.
This conception of education requires from the entire contemporary human society flexibility and creativity (the basis of entrepreneurship), no longer the optimal memory and repetition of information, which imprisons intelligence. Let us observe that the simple exercise of memory and the continuous reconstruction of the past lead us only to be a mason of the same works and not creative engineers of new ideas. Therefore, in this context it is that ethics and logic, subdisciplines of philosophy, arise and can contribute to facilitate the application, particularly, in a higher military education, respectively, either of the study of human behavior (ethics and values), or of the capacity for analysis and reasoning (logic) necessary for the employment of a commander and desirable military leader.

Inserting Military Science in the Context of the Third Millennium

Military science does not live in another reality but is a participant in the changes that the world is and will be living in the challenging millennium that we already entered. However, thinking about the international regime of ethics in war can be too abstract for those who live daily with the reality of armed conflicts. We need to understand how combatants’ decision-making takes place and what factors influence them in choosing to moderate their behaviors. There is the importance of rescuing the introjection of values in military training and the urgency to treat the issue as a political issue. And here, we have a return to one of Clausewitz's lessons, that war is a continuation of politics, and it makes no sense to think of it outside its scope.14

Artificial intelligence is just a tool that suggests ways to go. The military science that has integrated, integrates, and will integrate the history of the waves of industrial revolutions cannot be oblivious to the fact that we are on the threshold of a new wave that signals for changes and a new time of human innovations. It must learn, as it has learned in the past, to insert itself into the emerging technologies of this new Industrial Revolution.

Correlation Between Philosophy and Military Sciences

The central issue that interests us here is how academic (university) education contributes to the process of formation of future military leaders. In other words, we will seek to discuss the elements that characterize this article—the discipline of philosophy in the education
of the future officers.

Before that, it should be pointed out that, without exception, military academies have been going through a restructuring process in recent years, not only curricular but also pedagogical. One aspect that seems common to all military schools is the adoption of teaching by competencies for the purpose of providing the necessary skills to the military leader in postmodernity. However, it is good to reflect on what competence would be necessary in our new times.

According to the scholar of education and philosopher Cortella, “for the third millennium, we have to work hard on the idea of competence. And there is an obstacle there. Our competence has a shorter shelf life in these times, that is, the speed of changes is so great that we lose competence just as quickly.”

The adoption of the teaching process, in this Third Millennium, leads us to the four pillars of education, according to the concepts presented by UNESCO:

- Learning to know (acquiring the instruments of understanding and intellectual autonomy; constant learning);
- Learning to do (develop skills; professional qualification);
- Learning to live together (valuing behavioral diversity); and
- Learning to be (identify yourself and develop critical and autonomous thinking).

In this sense pointed out by UNESCO, teaching by competency-based learning, even in the field of military science, will have as one of its main purposes the development of university knowledge suitable to scenarios in constant transformation. Therefore, it will be imperative to develop, within the military profession, behaviors, values, skills, and attitudes, in order to prepare soldiers capable of performing their profession in the new temporal scenario.

In this context, the teaching of philosophy is shown as an appropriate, relevant and very current means to develop, within the scope of military science, the capacities to learn to live together (ethics) and learn to be (logic).
The Philosophy and the Preparation of Fighters

The strong inhuman content inherent in war tends to confuse minds unprepared to recognize the character of the absolute necessity of armed confrontation for the defense of the nation—which presupposes the use of lethal means—when the deterrent instruments have been exhausted. Obviously, this kind of questioning cannot compromise the combative capacity of the military in this millennium. Hence their training requires them to be prepared to give responses to something we do not know will happen in the future.

As we have seen, side by side with the eminently professional tasks of learning politics, strategy, tactics, technique, and logistics, philosophy is one of the several paths that converge for the holistic preparation of the military leader, collaborating in strengthening those virtues of the commander and in the way of understanding the phenomenon of war and being able to avoid it and to face it, under the ethical, moral, and pragmatic approaches of those who have to overcome it.

As Clausewitz already told us, the original political goals can change during the course of the war, since they are influenced by events and their likely consequences. In this sense, the military leader will be permanently influenced by a mixed ethical and moral attitude, but always pressured by forces arising from the pragmatism involved in fulfilling his mission. Only on the basis of ethical and moral attitudes will the military leader be able to develop the discernment that allows him to perfectly identify the moral reality that will mark military actions in the light of national goals.

According to Walzer, the moral reality of war will not be defined by the soldiers who fight it, but by humanity who will judge it. A series of academic papers have been developed in order to establish standards of moral and legal analysis to judge a war or armed conflict, becoming such standards known as “just war theory.” In terms of international relations, according to Gory, this theory represents “a choice between liberal pacifism and political realism.” A priori, the theory is applied only to states, but it also presents itself as an orientation of how to behave to individuals who can potentially take part in the conflict.

Sun Tzu coined an aphorism in which he stated that “the commander represents the virtues of wisdom, justice, humanity, courage and austerity.” Perhaps he was, with that inspiration, the first to establish a link between war science, which he codified from experience
on the battlefields, and philosophy, which, simultaneously, his contemporary Confucius, established and taught. Two and a half millennia ago, therefore, such thinkers had already identified principles that up now form the basis of military science.

This may support the hypothesis that military science and philosophy in this millennium tend to continue to be guided by the same principles—with military doctrine being updated with every major technological innovation and unusual mode of conflict, and the sciences of philosophy being enriched by advances in human knowledge. As well as basing the belief that the military will continue in the search for professional knowledge under the influence of the philosophical view that the nation will have of the world from the point of view of what is relevant to it.

Soon, it is reiterated, a philosophical aura becomes important in the activity of the professional soldier. An example that fits like a glove to this concept is the philosophy of military leadership, which we will develop further.

With philosophical thought, the areas of knowledge and military practice will be nourished by the fertile fields of ethics and its theoretical differentiations from good and evil; of morality and its norms of conduct subject to the screening of ethical values; and of pragmatism and its permanent search for results through action.

Along with the preeminent values patriotism, hierarchy, discipline, “Esprit de Corps” and camaraderie, in an armed force also stands out the value ability to generate effective result (in this case, through war actions in defense of national interests), which, in itself, is the maximum value of pragmatism. For this reason and for valuing the action that produces the achieving results, this science is consistent with the military spirit, as much as ethics and morality.

Ethics, Logic and Military Leadership

Let’s take this opportunity of an article that celebrates philosophy in the military student environment, to exalt the most important area of military knowledge, the management with leadership through ethics and its relationship with logic.

Going down a little to the philosophy of military leadership and aiming at the young student of the science and art of war, it is important to remember that the military leaders must
have the perfect understanding that, although they have been raised to this situation according to an autocratic process of designation of commanders, since no subordinate has delegated authority or power of command to him, and therefore his leadership action must not be authoritarian, in order to be as effective as possible.

Ethics and morals, along with personality trait and empathy, will be indispensable to support the persuasive argumentation of logic, qualifying the example and perception of the way of being of subordinates. In order not to escape from the field of philosophy, let us close our focus on logic, the science of argument, and leave empathy in its quadrant of psychology.

It is very important the ability to persuade by means of logic to be part of the personal profile of a leader. A commander who strives to act with leadership must, among other measures, logically structure the messages carrying the orders. Without becoming a slave to explanations, he must organize the message in such a way that the order is the conclusion of a short, but effective argument. To do so, he must be intimate with argumentation techniques. Syllogisms, for example, should be part of the everyday life of his relationship with subordinates.

Logic—staggered by the morally good example of the boss—is the main tool of access to the reason of the subordinates so that they become aware of the intention of the commander and devotes their will to acting for the best fulfillment of the orders. Hence the importance of knowledge of the configurations of deductive and inductive arguments, keeping in mind that every order of leadership must be, in its elaboration, the conclusion of the combination of true premises. These are usually omitted in the body of the message but must necessarily be easily picked up by the recipients.

### Competencies Needed for a Military Leadership

A determined leader is recognized when he/she injects democratic essence in his actions and relations with subordinates, aware that the legitimization of his attitudes is based on persuasion and example, through some indicators that are always immersed in ethics, morality, and logic, subdisciplines of philosophy applied to leadership, whatever the millennium in which he/she has lived or will live. According to Cardoso, we can visualize some attitudes that would
characterize a leader:

- Is an ethical and moralized person. He/she reconciles personal ethical and moral personal values with those of the organization and exercises the power of the office and the authority that he/she is vested with through good actions;

- Has developed the ability to influence the will of subordinates through pure, logical and ethical persuasion without manipulation, inducing them to predisposition for beneficial behavior to the organization; mastered of Aristotelian logic or, at least, of argumentation schemes by means of syllogisms and mathematical logic;

- Uses moderate emotion and strong example, in support of obtaining the commitment of subordinates to the mission, not to his/her personal figure;

- Has mastered the sensitivity of detecting people's feelings and ethically uses this empathy to adapt his/her messages to the leaders;

- Has developed and put into practice the spirit of teamwork;

- Has solid professional knowledge, which has been always increasing;

- Sharpens discernment in times of difficulty or crisis, and keeps balanced ahead of the management of the position and is not afraid of exposing him/herself;

- Has a strong identity to the group he/she heads, but does not misrepresent in cases of indiscipline, but being fair in judgment. Warns or rebukes discreetly; always seeks to extract sources of learning from mistakes and spreads them to subordinates, without embarrassing transgressors;

- Has developed standards and values of the organizational culture and explores them in the formation of the attitudes of subordinates;

- Is patient and persistent and legitimizes him/herself as a leader before subordinates and becomes an example to be followed; and

- Is perceived as one more of the group that leads and manages that, internally, everyone feels co-responsible for achieving the results. However, everyone knows that externally to the group he/she credits the success to the team and does not give up personal responsibility for any failures.
Conclusion

To conclude, in this third millennium the student of military education (higher or professionalizing) should be prepared for some important skills: critical reasoning, argumentative ability, entrepreneurship, negotiation, environment, sustainability, high sense of values, and ethical behavior. Those skills within the military higher education and operational training must be a focus in the military curricula, by means of the study of ethics and logic.

It must be taken into account that we live in a so rich age in technology and so poor in ethics. The most recent problems that have plagued technology have their roots in the conflict with ethics, such as leaking, sales, manipulation of data (“fake news”); and technological innovations that do not consider human nature such as robotics, drones, biotechnology and the action of artificial intelligence. The differences and changes in the way of living have become increasingly striking. However, we must take into account that in the military environment the principles, values and rules of conduct have always been and will continue to be essential to the adequacy of their specificities. In addition, it is urgent to put the military student in a more active way to solve future problems that no military school and their teachers can anticipate.

The greatest challenge of military education is not to prepare military personnel to be a leader and perform tasks and dominate the world around them, but to manage their own thoughts, their intellectual world, and the means of technology put at their disposal. It is a fundamental premise: Man must drive technology and not to be driven by it.

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Uncut Gems: The Laws of Outer Space in an Age of Expanding Space Security Threats

Jeremy Grunet

Abstract: The creation of the United States Space Force (USSF) in December 2019 represented both a culmination of, and a new beginning for, the American military’s interest in outer space. The military has had an acute interest in space from the earliest days of human spaceflight—indeed, as early as 1958, General James Gavin (the WWII commander of the 82nd Airborne Division) predicted “the nation that first achieves the control of outer space will control the destiny of the human race.”¹ Gavin’s predictions, among the first formulations of the future doctrinal concepts of “Space Control” and “Space Superiority,”² have been largely borne out. The United States’ mastery of space technology has provided an until-recently unrivaled advantage in a range of essential civilian and military fields, including navigation, communication, intelligence gathering, scientific inquiry, and warfighting. Now, as space has become more “congested, contested, and competitive”—with a resurgent Russian Federation and a rising Peoples’ Republic of China threatening American interests in space—the recognition of outer space as a “warfighting domain” and the creation of the USSF provide the United States a renewed opportunity to ensure that space does not fall under the influence of its adversaries.³ In order to maintain its preeminent position in outer space, the United States cannot rely on brute strength or its current technological advantage. Such an approach is unlikely to prevail, not only because US adversaries will continue to develop new technologies and countermeasures to negate US advantages, but also because such an approach will alienate key American allies who could otherwise assist the US in maintaining a peaceful, free space environment. The best way to maximize the United States’ effectiveness in the space domain is to reexamine the outer space legal framework and encourage the development of clearer legal standards for the “final frontier.” While existing outer space law, the cornerstone of which is the 1967 Outer Space Treaty⁴ (along with three additional international space law treaties that further expand a number of its key provisions⁵), has provided a relatively stable legal environment in space, the dramatic expansion in the number and type of space actors requires a greater degree of legal certainty. Indeed, the existing outer space legal framework can be compared to an uncut gemstone: something that has an inherent value and significance, but that requires further polishing, faceting, and attention to be truly useful. This paper will examine outer space law and its effects on US security from this perspective, advocating ways in which greater specificity may be brought to the field of space law and how this specificity will bolster the United States’ position both among its terrestrial allies and in outer space itself.

Introduction

In the 2019 crime drama Uncut Gems, Howard Ratner, the seedy jewelry dealer and
gambling addict played by Adam Sandler, waxes poetic about the beauty of the uncut black opal of the film’s title: “They say you can see the whole universe in opals,” Ratner says as he displays the gemstone to Boston Celtics basketball star Kevin Garnett, “that’s how . . . old they are.”

Compared to an ancient opal, outer space law is not old. While its theoretical beginnings can be traced to the early years of the 20th century, the development of outer space law did not begin in earnest until after the Soviet Union’s launch of Sputnik I in 1957, when the United States (keen to stifle, or, at least, better control what it feared to be potential Soviet superiority in outer space activity) began pressing for the development of space law on the international stage. Despite its comparative infancy, outer space law is not unlike Ratner’s opal: examine it, and it, too, will reveal a vision of the universe—one in which humankind has attempted to constrain its worst impulses with, quite literally, universal application of international law. The potent trigger of Sputnik, the significance subsequently placed on outer space activities by both the United States and the Soviet Union, and the fear of both Cold War Superpowers that the other might achieve an insurmountable military superiority in space, resulted in the expedited development of, first, non-binding principles, and, shortly thereafter, a full, treaty-based framework of legal rules purporting to govern the whole of the cosmos.

International outer space law has done an admirable job of regulating military uses of the outer space environment in the almost 63 years since Sputnik orbited the Earth for the first time. But military interest in outer space—one of the driving forces behind space launch and satellite capability development during the Cold War—never waned. A year after the Sputnik launch, General James Gavin, the Commander of the 82nd Airborne Division during World War II, predicted space flight would alter the very nature of military strategy and “the nation that first achieves the control of outer space will control the destiny of the human race.” Gavin’s words—among the first formulations of what would become the American military’s doctrinal concepts of “Space Control” and “Space Superiority”—have been largely borne out. Since the end of the Cold War, the United States’ mastery of space technology has provided an until-recently unrivaled advantage in a range of essential civilian and military fields, including navigation, communication, intelligence gathering, scientific inquiry, and warfighting. But it would be foolish to assume American preeminence in space would remain unchallenged: unlike the early years of the Space Age, outer space is no longer the exclusive domain of just two powerful States. Instead, in the (pithy and much maligned) words of the United States’ 2011 National
Security Space Strategy, it is increasingly “congested, contested, and competitive.” At least nine States, one international organization, and, now, several private companies have independent space launch capabilities, and over sixty States own or operate satellites. Increased military, commercial, and even personal reliance on space-based systems has resulted not just in proliferating numbers of space objects and their attendant debris, but in the proliferation—or perceived proliferation—of military threats to such space systems. Anti-satellite (“ASAT”) missiles, on-orbit proximity operations, jamming and spoofing technology, and hacking are but a few of the tools designed to target, destroy, or disable space objects. Such threats have resulted in increased concern for the space security environment, a concern manifested in the United States’ recent creation of the United States Space Force (“USSF”) and designation of outer space as a new “warfighting domain.” In many ways, the creation of the USSF represents both a culmination of, and a new beginning for, the American military’s interest in outer space.

New beginnings provide an excellent time for reflection, not just about where one has been but, more importantly, where one wishes to go. The United States was a driving force behind the development of the international space law framework—a framework that, like the uncut stone containing Ratner’s opal, outlined a general structure of beauty, significance, and aspiration. While additional treaties involving specific subsets of space law (see below) chipped this framework into greater detail, revealing clearer facets of the underlying whole, much of international outer space law remains undefined, its structure hidden beneath an ossified shell of general principles. Since the mid-1970s, and the ratification of the last binding international treaty related to outer space, the United States has been content with the more nebulous aspects of space law, operating, particularly from a military/space security perspective, in the “gray zones” left undescribed or unexplored by the international legal framework. With the radical changes to the space environment described in the previous paragraph, many unthinkable during the late 1960s and early 1970s as the outer space legal framework developed, and the emergence (or reemergence) of significant space competitors, however, the United States must consider a significant question: existing international outer space law, like an uncut gemstone, is unquestionably valuable—but does it lack utility given shifting conditions in the environment it seeks to regulate? Is additional polishing, or even excision and re-faceting, necessary to make international space law more applicable to modern issues and concerns—particularly if the United States and its allies seek to preserve their relative space superiority and prevent outer
space from falling under the influence of Russia and China?

While a full examination of these questions could easily fill multiple books, this paper seeks to briefly address them in the context of military and space security operations. I will argue that, in order to maintain its preeminent position in outer space, the United States cannot gamble on brute strength or its current technological advantages under the existing space law regime.

Such an approach is unlikely to prevail, not only because U.S. adversaries will continue to develop new technologies and counter-measures to negate U.S. advantages, but also because such an approach will alienate key American allies who could otherwise assist the U.S. in maintaining a peaceful, free space environment. The best way to maximize the United States’ effectiveness in the space domain is to reexamine the outer space legal framework and encourage the development of clearer legal standards for the “final frontier.”

**Outer Space Legal Framework: The Outer Space Treaty and Military/Security Affairs**

As State and private space capabilities have expanded over the past several decades, it has become increasingly popular to characterize outer space as a lawless “wild West” in which States vie with one another—and, now, with a growing number of private companies—for supremacy. Such a description is an oversimplification. Within twenty years of the launch of Sputnik, four treaties—the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (“Outer Space Treaty”) (1967), Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (“Rescue and Return Agreement”) (1969), Convention on International Liability for Damage Caused by Space Objects (“Liability Convention”) (1972), and Convention on Registration of Objects Launched into Outer Space (“Registration Convention”) (1975)—were developed and ratified, providing broad-based principles and provisions concerning State activities in near-Earth orbit, on or around the celestial bodies within our solar system and beyond, and in the void of space separating such celestial bodies. The international, treaty-based legal framework created by these four treaties regulates State space activities (to a degree) and, indeed, provides at least limited instruction for national regulation of private space activities. The 1967 Outer Space Treaty serves as the cornerstone of this framework and is the international treaty of primary significance from a space
security perspective.

From the standpoint of military activity and space security operations, the Outer Space Treaty contains a number of significant provisions. The Treaty’s Preamble arguably sets the tone for the text as a whole with one of its most controversial and debatable concepts: the use of outer space for “peaceful purposes.” The Preamble states that its signatories “[r]ecogniz[e] the common interest of all mankind in the progress of the exploration and use of outer space for peaceful purposes” and “[d]esir[e] to contribute to broad international co-operation in the scientific as well as the legal aspects of the exploration and use of outer space for peaceful purposes.” The concept is echoed later in the Outer Space Treaty in Article IV (discussed further below), when the Treaty mandates that “[t]he moon and other celestial bodies shall be used … exclusively for peaceful purposes.”

The framing of the “peaceful purposes” language in the Outer Space Treaty has resulted in no end of debate. Is there a mandate under international law that not only the exploration, but the very use of outer space be restricted to “peaceful purposes?” If so, why the more explicit limitation in Article IV that certain areas, i.e., celestial bodies, be used exclusively for “peaceful purposes?” Professor Bin Cheng, the late expert in international air and space law, vehemently argued that Article IV’s language provided the only binding mandate related to “peaceful purposes” in the Outer Space Treaty. Referring to the perception of a general requirement to use outer space for “peaceful purposes” as a “fairly prevalent misconception,” Cheng insisted that “[i]n law, it is well established that preambles to treaties do not normally contain provisions with binding obligations,” and, thus, at best, the Preamble could only “serve as an aid in interpreting the substantive provisions of the Treaty.”

If the view that the whole of outer space is reserved for “peaceful purposes” is a misconception, however, it is one shared, at least in a qualified way, by the world’s preeminent space power: the United States. Indeed, the United States itself proposed, in the immediate aftermath of the Sputnik launch, that the United Nations take steps “to lay a solid basis for international co-operation in [the] development of the peaceful uses of outer space” and “giv[e] its support to the principle of peaceful utilization of outer space.” Similarly, “[c]ommitment to the principles of the exploration and use of outer space by all nations for peaceful purposes” has been a standard principle of every U.S. National Space Policy since the Carter Administration.
Even the U.S. military appears to recognize the “peaceful purposes” language as legally binding to one degree or another: the USSF’s 2020 doctrine document, for instance, states that, “in keeping with international law, the United States acknowledges the use of space is for peaceful purposes” (emphasis added).  

As the Outer Space Treaty neither defines nor contains any further explanation of terms like “peaceful purposes,” interpretations of such terms have largely been left to space-faring States themselves. The United States has steadfastly avoided offering an “official” definition of “peaceful purposes,” instead preferring a somewhat nebulous characterization (relying on principles of general international law and the provisions of the United Nations Charter) of the term as meaning that “non-aggressive,” rather than wholly non-military, uses of space are permissible. Senator Albert Gore, Sr., then the United States’ representative at the United Nations, articulated a version of this U.S. interpretation during a speech to the United Nations’ First Committee in December 1962, stating that “outer space should be used only for peaceful—that is, non-aggressive and beneficial—purposes.” The United States’ National Space Policies (at least one of which has been issued by every President since President Carter) echo this formulation of the meaning of “peaceful purposes,” although, again, they never officially define the term. The Carter Administration’s PD/NSC-37 stated that “[p]eaceful purposes’ allow for military and intelligence-related activities in pursuit of national security and other goals,” and each NSP since has contained similar descriptions of “peaceful purposes.” Former President Trump’s December 2020 NSP is no exception. “Consistent with [the] principle [that all nations have the right to explore and use space for peaceful purposes and for the benefit of all humanity],” the former Trump Administration NSP states (citing this principle as “applicable law”), “the United States will continue to use space for national security activities, including for the exercise of the inherent right of self-defense.” While not all States subscribe to the “peaceful” as “non-aggressive” formulation, publicly available documents—and, certainly, States’ actions themselves—indicate that most, if not all, of the major spacefaring States have accepted a similar formulation of the “peaceful purposes” principle.

Among the Outer Space Treaty’s other key space security provisions are Articles III and IV. Article III mandates that States Parties to the Outer Space Treaty “shall carry on activities in the exploration of use of outer space . . . in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and
promoting international co-operation and understanding.” Effectively, Article III applies the whole of public international law—including prohibitions on the unlawful use of force, aggression, and the like, as well as rights to such remedies as self-defense—to the cosmos. Article IV, mentioned above for its application of the “peaceful purposes” principle to celestial bodies, also serves as the Outer Space Treaty’s key disarmament provision: it prohibits States Parties from “plac[ing] in orbit around the earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install[ing] such weapons on celestial bodies, or station[ing] such weapons in outer space in any other manner.” As many have noted, Article IV’s ban on only specific, especially-destructive subsets of weapons (nuclear weapons and weapons of mass destruction) preserves significant leeway for the placement of so-called “conventional” weapons in orbit.

Perceived Security Weaknesses of Existing Space Law and Potential Remedies

The existing provisions of international space law related to military and space security issues demonstrate a number of imperfections in the outer space legal framework. Forged at the height of the Cold War to restrict competition and conflict between the United States and the Soviet Union, this framework banned only the most egregious and dangerous military-oriented activities in outer space. Prohibitions on nuclear weapons, weapons of mass destruction, and the creation of military installations on celestial bodies are all beneficial; however, a wide range of military activities—including the development and even deployment of more “traditional” space weapons, ASATs, and anti-space cyber, jamming, or spoofing weapons—remain lawful under the existing legal framework. As the Defense Intelligence Agency noted in a recent report, all these permissible space security-related technologies pose significant risks to American space systems. But while the U.S. frets about potential threats to its space infrastructure, other nations accuse the U.S. of being the primary driver of space insecurity, arguing that its broad definition of “peaceful purposes,” its research and development of space-related weapons and military technology, and its somewhat-bellicose space-related military doctrines (such as “space control” and “space superiority,” see above) are contributing to a more militarized view of space—and even, potentially, creating the conditions for a space-based “arms race.” Existing outer space law, as noted above, does not prohibit, nor, indeed, even regulate, military technology and weapons development, military maneuvers or missions in outer space void, or any of the factors
that could contribute to a non-nuclear, non-WMD weaponization of outer space.

States, academics, and others have offered a wide range of potential remedies that, they claim, could alleviate these weaknesses. In general, these remedies involve the further development of international outer space law—either by clarifying its relevant terms or by supplementing it with additional binding or non-binding legal frameworks. As Steven Freeland, Professor of International Law at Western Sydney University, has noted,

\[\ldots\] if we are to avoid ‘grey areas’ in the law, and provide a framework which strengthens co-operation in outer space whilst deterring additional military pursuits in this area, it is necessary to develop specific and clear rules and standards that categorically prohibit the weaponization of outer space, as well as any form of conflict in the region of outer space and against space assets. \ldots\]

Ideally, clear definitions must be developed for concepts such as “space weapons,” and “military use” and, perhaps most significantly, “peaceful purposes.”

Freeland’s argument that greater clarity in defining terms and concepts is necessary to more firmly solidify the structure of international space law is not an uncommon one. The idea that either specific terms, or overarching aspects, of international space law must be clarified—if not now, at some point in the future—is one that has been common to academic analysis of space law for decades.

Meanwhile, a number of States, led by Russia and China, have advocated a new, binding international treaty to regulate space weapons: the Treaty on the Prevention of the Placement of Weapons in Outer Space, the Threat or Use of Force against Outer Space Objects (more commonly known as the “Prevention of the Placement of Weapons Treaty,” or “PPWT”). The PPWT would, purportedly, prohibit States Parties from “plac[ing] in orbit around the Earth any objects carrying any kinds of weapons,” “plac[ing] such weapons in outer space in any other manner,” “threat[ening] or us[ing]........ force against outer space objects,” and “assist[ing] or induc[ing] other States or international organizations to participate in activities prohibited by [the PPWT].” Despite its peaceful surface-level provisions, the U.S. and its allies have largely rejected the PPWT due to the lack of verification mechanisms to police the treaty and suspicions that the treaty does not sufficiently limit the military space capabilities of its primary proponents.
Other States and international actors, most notably the European Union, have proposed non-binding methods of developing regulations for State behavior in outer space—regulations that could, in time, evolve into customary international law. The European Union’s Draft Code of Conduct for Outer Space Activities is the most notable example of such an attempt to clarify outer space behavior. The 12-article Draft Code of Conduct, first proposed internationally by the E.U. in 2008, aimed both “to strengthen existing United Nations treaties, principles and other arrangements, as subscribing states commit to make progress toward adhering to them, implementing them and promoting their universality” and to “complement the United Nations treaties, principles and other arrangements by codifying new best practices in space operations, including notification and consultation.” The original version of the Draft Code of Conduct was rejected as too restrictive by the United States, though the U.S. agreed, during the second half of the Obama Administration, to work with the E.U. on further non-binding efforts to develop outer space norms and build upon the binding international space law framework. These joint American-European efforts to develop a now-redesignated International Code of Conduct by amending the initial E.U. Code have been stymied by consistent rejection by Russia and China.

While the majority consensus appears to be that additional steps—of whatever kind—must be taken to clarify and more fully develop the outer space legal framework, others take a different tack. Most infamously (at least in the United States), Everett C. Dolman, a Professor of Military Strategy at the United States Air Force’s Air Command and Staff College, has advocated the United States unilaterally dismantle the existing international space law framework by withdrawing from the Outer Space Treaty, “establishing a principal of free market sovereignty in space,” and “seiz[ing] control of Low Earth Orbit.” Such a nationalistic, or, perhaps, realist (in the international relations theory sense of the term), view of American space operations assumes that such a brute-force play on the part of the United States would result in effective control of space. Even if it was possible to “seize” Low Earth Orbit in this manner (an increasingly dubious proposition given increased international activity in outer space and the ability of even a small space power to act as a potential debris-producing “spoiler” for a space hegemon’s aims), the United States’ serious consideration of such a bellicose course of action would arguably play into the greatest fears of not just the United States’ adversaries, but even its ostensible allies. States otherwise friendly with the United States and supportive of its efforts to limit possible destabilizing space activities by such States as Russia, China, Iran, and North
Korea would balk at attempts by the U.S. to assert hegemonic control of space. Despite the United States’ interpretation of existing space law and concepts like the use of outer space for “peaceful purposes” to maximize its freedom of action in outer space, thankfully, a Dolman-esque rejection of international space law and pursuit of militarized space hegemony has never been the policy of the United States.

**Toward Space Law Clarification and Stability: Current U.S. Policies and Recommendations**

As the previous section indicates, proposed methods of clarifying international space law run the gamut from outright rejection of existing space law principles to the development of new, binding international treaties. Indeed, many of these remedies flow into one another on a spectrum: academics’ insistence, for instance, that space law terms and concepts be clarified could only meaningfully occur via non-binding or binding international agreements among space-faring States. Similarly, non-binding attempts at State regulation in space (such as the E.U.’s Draft Code of Conduct) can serve as either building blocks for the further development of binding treaties or as the basis of the development of international customary law. Indeed, regardless of “official” international law-making efforts, legal development of outer space behavior will be shaped one way or another—State action in space, if nothing else, will contribute to the development of new norms or force changes to existing non-binding space regimes. The U.S. may currently maintain a technological advantage in outer space, but it cannot expect to maintain technological superiority forever; indeed, if the U.S. hopes to continue shaping the outer space environment to its and its allies’ advantage, it must be willing to work with its international partners to continue creating non-binding, if not binding, norms for State behavior in outer space.

There may be no better time than the present for the United States to make renewed efforts at developing outer space norms and clarifying existing space law. While previous Presidential Administrations, most notably the George W. Bush Administration, overarchingly rejected altering the international space legal framework, the former Obama and Trump Administrations have encouraged greater international cooperation in the development of outer space behavior among States. Former President Trump’s National Space Policy, the United States’ current statement of official government space policy, mandates that the United States
shall “[c]reate a safe, stable, secure, and sustainable environment for space activities . . . through the development and promotion of responsible behaviors.” This mandate includes direction to the Secretary of State to “[lead] the consideration of proposals and concepts for arms control measures if they are equitable, effectively verifiable, and enhance the national security of the United States and its allies;” to “[p]ursue bilateral and multilateral transparency and confidence-building measures to encourage responsible actions in, and the peaceful use of, outer space . . .;” and to “[c]ooperate with likeminded international partners to establish standards of safe and responsible behavior” in outer space.34

Former President Trump’s advocacy for, and eventual approval of, the creation of the United States Space Force dominated headlines and created a perception of increased American militarism in outer space. The more cooperative elements of the former Trump Administration’s broader space policies have received less attention. The language of the National Space Policy, however, clearly envisions international cooperation between the United States and its allies to increase the safety and stability of the space environment. The Biden Administration—which (at least thus far) has tentatively continued former President Trump’s broader space policies, including continued support for the Space Force35—should build on this policy and kickstart a new attempt at an international code of conduct with its European and East Asian space partners. Indeed, at least based on early reports of Biden Administration goals and activities in the outer space realm, working with international partners on just such a Code of Conduct seems to be one of the primary space policy-making activities in which the Biden Administration intends to engage.36

By participating in, or perhaps even leading, the development of a multilateral Code of Conduct, the United States can reassure its allies of its noble, non-militaristic intentions in space, while building a united front of like-minded States against potential rule-breaking by “irresponsible” space actors. An International Code of Conduct for outer space behavior could also serve as a springboard to advance the development of bolder, more binding space law-making endeavors, similar to those spearheaded by the United States and the Soviet Union during the Cold War. As the use of outer space by both new spacefaring States and increasingly technologically-advanced private companies and institutions continues to increase the congestion and competitiveness of space, bold, and internationally-supported, measures by the United States to clarify the legal environment of outer space are necessary to preserve the productive and safe
use of space for all.

Conclusion

The international outer space law framework has proven to be resilient and valuable since its development in the early decades of the Space Age. New outer space developments, including the emergence of prominent new space actors, proliferating space technology, and a general increase in the number of space-faring or space-utilizing States, however, require that this framework be further polished and developed. If it wishes to maintain its preeminence in outer space, and a safe, stable outer space environment for itself and its allies, the United States cannot, like Howard Ratner, gamble that an uncut gem—in this case, the half-century-old outer space legal framework—will provide it the means to solve its future problems. The time for the U.S. to work with its international partners to clarify space law and acceptable norms of space behavior is now. To “see the whole universe” in an uncut opal or an international treaty is one thing; to create a lasting, comprehensive legal framework to govern that universe is quite another. As the nations of the world continue their outer space activities in the seventh decade of the Space Age, it is high time that the United States dust off its international law-making tool kit and again take the lead in shaping, polishing, and developing international space law.

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Endnotes

2. See Joint Chiefs of Staff, Joint Publication 3-14, Space Operations I-3 (2018).
3. Id. at I-6.


6. Uncut Gems, directed by Josh and Benny Safdie (2019; A24).


8. See Joint Chiefs of Staff, Joint Publication 3-14, Space Operations I-3 (2018).


16. *Id.* at art. IV.


20. Headquarters United States Space Force, *Space Capstone Publication, Spacepower*, June 2020, 17. Although it should be noted that the USSF qualifies its acknowledgement of international law with the added comment that the U.S. is, nevertheless, “preparing for the reality that space must be defended from those who will seek to undermine [American] goals in space.” *Id.*


23. Outer Space Treaty, art. III.

24. *Id.* at art. IV.


of Weapons in Outer Space and the Threat or Use of Force Against Outer Space Objects (PPWT)” Introduced by the Russian Federation and China, CD/1839, Feb. 29, 2008.


32. President Bush’s unclassified National Space Policy stated that the U.S. “will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space.” George W. Bush, NSPD-49, Aug. 31, 2006.

33. National Space Policy of the United States, supra note 11, 5.

34. Id. at 13–14.


Preparing Cadets for Effective Global Engagement as Army Officers: Global Military Programs at the University of North Georgia

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Abstract: The University of North Georgia prizes its role as one of our nation’s six senior military colleges in educating today’s Army cadets for leadership in tomorrow’s global security environment. Army leaders must understand and practice competence in cultural understanding, which will enable them to think more broadly and critically about security challenges and to effectively work with partner nations in multinational security environments. Recognizing the importance of cultural understanding for the Army’s future leaders, the University of North Georgia has been developing new programs and organizational structure to support and grow those programs since the early 2000’s. An Institute for Leadership and Strategic Studies was formed in 2015 to identify gaps in cadet education requirements and offerings, and to incubate programs to fill those gaps. And a Global Military Programs directorate was formed in 2020 to support and grow international partnerships with foreign military academies for cadet semester exchange, international internship programs, foreign military training, international conferences, and faculty exchange for research, teaching, and consultation. This paper provides an overview of the context for creating cadet cultural understanding programs at the University of North Georgia and how they were developed and implemented.

Introduction

The University of North Georgia (UNG) prizes its federally-designated role as one of the United States’ six senior military colleges in developing today’s cadets for leadership in tomorrow’s global security environment. While the other senior military colleges produce officers for all U.S. military services, UNG is unique in that it commissions cadets only to serve as U.S. Army officers; therefore, this paper is written from an Army perspective regarding the preparation of cadets for effective global engagement as future officers. According to the U.S. Army’s Training and Doctrine Command (TRADOC), “cultural understanding, regional expertise, and language proficiency (CREL) are key enablers that allow the Army to respond globally and engage regionally to conduct joint combined arms operations.”

The first section briefly provides context to the momentum that CREL gained in Army pre-commissioning education over the last twenty years. The second section describes the effort
and resources that UNG has committed toward creating opportunities for cadets to gain CREL. The final section contains conclusions drawn from UNG’s global awareness curricular and co-curricular programing for cadets.

**Context**

**Overview of Army Pre-commissioning in U.S. Higher Education Institutions**

There are four sources from which Army officers are commissioned: (1) The U.S. Military Academy (USMA) at West Point; (2) Army Reserve Officer Training Corps (ROTC); U.S. higher education institutions; (3) Officer Candidate School; and (4) direct commission. Of these, Army ROTC and the USMA are the only commissioning sources within higher education institutions and where Army pre-commissioning education occurs. The focus of this paper is on the largest commissioning source: Army ROTC. Under the U.S. Army’s Cadet Command (USACC), Army ROTC programs are embedded in 274 host universities, many of which have cross-enrollment agreements with other higher education institutions in their geographic areas. Together, these programs were to commission 6,000 Army officers in federal fiscal year 2020. This compared to 1,107 cadets who commissioned from the USMA in 2020. While each year these numbers vary based on Army requirements, Army ROTC generally produces about 80 percent of the cadets commissioning from U.S. higher education institutions.

**Cultural Understanding in Army Leaders**

In 2001, the Army Chief of Staff directed the U.S. Army War College to “identify the strategic leader skill sets for officers” in the post-9/11 environment. Subsequently, the War College’s Strategic Studies Institute scholars produced a report in which six “metacompetencies” were identified, one of which was cross-cultural savvy. In their report, the authors argued that cross-cultural skills can be developed in future strategic leaders as early as precommissioning with courses in foreign languages, international relations, or regional studies. Time spent abroad or interning with various organizations can also help broaden the horizons of officers. In the institutional school setting, joint and interagency issues can be taught along with focused electives on specific regions.
Increasing cross-cultural savvy in the institutional arena should move the officer from the introduction early in the career of a general understanding and appreciation of other cultures to gradually focusing later in the career on particular cultures, organizations, or regions.\(^9\)

After the Strategic Studies Institute noted the value of officer pre-commissioning education, in 2017 TRADOC espoused the importance of cultural understanding in Army operations:

Over the past fourteen years of war, the Army has recognized the need for its forces to be culturally aware, culturally empathetic, regionally informed, and to use the appropriate language to facilitate communication and improve understanding with the nation’s joint, interorganizational, and multinational partners, and local populations. A force that is empathetic culturally . . . will be able to get in the adversaries’ decision cycle, and to communicate more effectively with coalition members. This will require critical thinking emphasis on understanding cognitive frameworks and the worldviews of adversaries and partners. Cultural understanding, regional expertise, and language proficiency (CREL) are key enablers that allow the Army to respond globally and engage regionally to conduct joint combined arms operations.\(^10\)

In addition to Army War College analysis and TRADOC guidance, many other Army documents and writings emphasize the criticality of developing cultural awareness in Army leaders.

Supporting Army doctrine, an abundance of literature and scholarly research exists on the value of international experiences. Writing in the context of the employability of young people who gained experience abroad, one author blogging for the National Association of Colleges and Employers summarized a few of the benefits which is worth quoting at length:

. . . company leaders . . . want their rising employees to be able to adapt quickly and think outside of the box—and—outside national boundaries. Spending time immersed in another culture either through a professional internship, study abroad, or international travel can make Millennials and Generation Z more employable for a number of reasons. For one, a young person who spends an extended period of time outside their culture is forced to adapt to new
circumstances. They begin to exercise tolerance and open-mindedness more than ever, having to learn how a different culture operates. Whether completing work tasks or navigating a foreign city, young people become better equipped to problem solve, adapt, and negotiate with people outside their culture. This boosted intercultural competency is increasingly crucial as workplaces become more diverse and globalism spreads. In general, going abroad also makes a person more empathetic to anyone that lives a different reality than their own. Once you’ve been the outsider, you are more likely to extend a hospitable welcome to someone new.\textsuperscript{11}

The cadet programs at USMA and in Army ROTC have responded to the call for pre-commissioning education that provides robust opportunities for cadets to begin developing cultural understanding. For example, the USMA has been expanding their cadet semester abroad program since the early 2000s so that between 2010 and 2017, over 900 cadets studied abroad.\textsuperscript{12} In addition, each year the USMA enrolls up to sixty international cadets from eligible countries selected by the U.S. Departments of State and Defense.\textsuperscript{13} The West Point Association of Graduates observed that “as Army officers . . . cadets will need to be able to adapt to diverse cultures and environments, to live, work, and communicate with different populations, and to understand and consider new and different perspectives. Travel abroad . . . increases cadets’ foreign language proficiency, regional expertise, and cross-cultural competence.”\textsuperscript{14}

Army Cadet Command also acknowledged the importance of developing cultural understanding in Army ROTC cadets. A 2018 USACC pamphlet stated that future Army leaders must be capable of operating in complex operational environments throughout the world. To succeed, they must interact with the populace, security forces, governing officials, and others with influence. Leaders must understand how the local culture affects the environment and take this into account when executing military operations. \textit{Cultural awareness training begins during pre-commissioning training} [emphasis added].\textsuperscript{15}

USACC regulations also provide incentives for ROTC cadets to develop cultural competence including ROTC foreign language scholarships, and incentive pay for studying languages that are “of importance to the Army.”\textsuperscript{16}

Recognizing the educational value of pre-commissioning international education,
UNG began to develop and expand opportunities for its cadets to acquire the cultural understanding needed to operate in tomorrow’s international security environment. The following section describes UNG’s academic and co-curricular programs that contribute to cadet cultural understanding and development. Note that although the Corps of Cadets comprises only 4% of the UNG student population, the opportunities that were developed to enhance cadet education are also available to other students at the university.

**International Education Programs for UNG Cadets**

In 2014, UNG published a strategic plan that included a mission statement, part of which read “to develop students into leaders for a diverse and global society.” One objective read that “UNG will become a leader in internationalized learning with an emphasis on globalization and the needs of an emerging civilian and military workforce.” And a strategy to accomplish that objective was to “ensure the military education academic program meets the needs of the next generation of military officers and supports foundational competencies for effective leadership in complex and uncertain environments.” Now the university’s general education (core) curriculum includes coursework that requires all students (including cadets) to “analyze political, cultural, or socioeconomic interactions among people or organizations of the world.” The strategic plan nested nicely with the aforementioned Army War College Strategic Studies Institute, TRADOC, and USACC ideas of developing leaders prepared to operate in an uncertain future international security environment.

Recognizing the importance of cultural understanding for the Army’s future leaders, UNG has been developing new programs and organizational structure to support and grow those programs since the early 2000s. The programs include foreign language offerings and becoming a Mandarin Chinese Language Flagship university; degree programs in international affairs and security and strategic studies; collaborating with the International Military Academic Forum to develop partnerships with European military academies; developing cadet semester exchange programs with foreign military academies; developing faculty exchange opportunities with partner foreign military academies; developing international military internships; encouraging cadet participation in international conferences; and partnering with the George and Carol Olmsted Foundation for grant funding under their Undergraduate
Program for Overseas Travel and Cultural Immersion opportunities for cadets. An Institute for Leadership and Strategic Studies was formed in 2015 to identify gaps in cadet education requirements and offerings, and to incubate programs to fill those gaps.

**Institute for Leadership and Strategic Studies**

To prepare cadets for future leadership challenges, the university created an Institute for Leadership and Strategic Studies (ILSS), led by the university’s senior vice president for leadership and global engagement (a former UNG professor of military science), and served by an advisory board consisting of leaders who have an interest in the Cadet Military Program and who have senior executive experience in various parts of the world. The Institute identifies gaps between current academic and co-curricular offerings, and organizational structure, and works across university divisions to incubate programs to fill those gaps with programs that enhance cadet military education. One gap addressed was the absence of organizational structure to create and manage opportunities with international military partners and the U.S. Department of Defense for cadet cultural understanding. The result was the establishment of a Global Military Programs Directorate.

**Global Military Programs Directorate**

The university created a Global Military Programs directorate and hired a director and an assistant director to maintain and develop partnerships with international military academies, and to promote cultural understanding development opportunities—*and their value*—to cadets. The directorate provides services for cadets from foreign military academies visiting or enrolling in UNG’s Corps of Cadets, foreign military scholars, UNG faculty and staff travelling abroad to enhance military education programs and opportunities for cadets, and for UNG cadets to study, intern, and train with U.S. military entities and foreign military academies and militaries abroad. These programs are described in more detail in the following sections; however, before delving into more detail on the array of Global Military Program’s activities, an example of their work with the Republic of China Military Academy (ROCMA) is illustrative.
The UNG-ROCMA partnership was formalized with the signing of a Cooperation and Exchange Agreement in 2012 by the president of then North Georgia College & State University (now UNG) and the superintendent of ROCMA. Since then, the agreement has been updated, the most recent in 2018 with an expiration year of 2023. An abridged list of activities to which each party agreed illuminates the nature of the partnership:

- Explore opportunities for collaboration in student, faculty, and staff exchange; sharing joint scholarly research for publication; exchange for professional development opportunities; and military training for cadets.
- Enter into written agreements for each of the above activities, which will include identifying academic units and people involved, duration of the activity, and funding.
- Conduct planning and evaluation meetings to review progress.
- Resolve disputes in a friendly manner via consultation and negotiation.
- For cadet semester exchange, each party will (among other stipulations):
  - Provide course registration assistance.
  - Allow cadets will attend orientation and specified cadet training events.
  - Agree to apply credits earned at the host institution toward the home degree.
  - Generate official transcripts at the end of each semester for outgoing cadets.
  - Provide transportation to and from airports and a room with required cadet furnishings.

The UNG president’s and the ROCMA superintendent’s personal involvement reinforced the value of this partnership, and the international staffs in both institutions sustain a strong relationship, which ultimately benefits the cadets in both countries. This partnership was assessed in 2021 as exceptionally strong and has remained a priority since its inception.
Collaboration with the International Military Academic Forum

To expand its cooperation and outreach in professional military education and training opportunities, the GMP seeks membership in international military academy consortia including the International Symposium of Military Academies (ISOMA) and the International Military Academic Forum (iMAF). The iMAF is a "European initiative for the exchange of young officers inspired by Erasmus," and is a key ally and partner in cadet and faculty academic mobility, hosted by the military academies in Poland, Hungary, Romania, Austria, and the Czech Republic. Association with these organizations support UNG’s cadet cross-cultural development. The iMAF meets annually in Europe to expand and reinforce the existing cooperation in officer education among its member nations. A program under the iMAF is the Exchange of Military Young Officers (EMILYO), primary objective of which is

To harmonize the European Union Basic Officer Education and to increase interoperability, thus, to increase Europe’s security … EMILYO shall promote a European Security and Defence Culture, in terms of spreading the idea among the Officer Cadets and Students participating in the Basic Officer Education, that current and future challenges can be better managed together. This goes hand in hand with an education for the Union’s Common Security and Defence Policy (CSDP).

Several of UNG’s partnerships with foreign military academies were formed as a result of its association with iMAF, and several other pathways for collaboration in nearly every category of international military cadet education.

Cadet Semester Exchange with Foreign Military Academies

The Global Military Programs directorate has established semester exchange programs with several foreign military academies. Through memorandums of agreement, UNG cadets attend foreign military academies for a semester, and those military academies reciprocate by sending their cadets to UNG for a semester. The benefits of the military exchange program are obvious. Our cadets studying at foreign military academies are immersed in the culture and language of those academies. While foreign cadets fully participate in the Corps of Cadets, UNG
cadets are introduced to future officers from foreign countries and are, at the very least, familiarized with their cultures and languages: it brings reality to the notion of the value of cultural understanding development and internationalization for the U.S. Army’s future officers. As of 2021, Global Military Programs has developed formal exchange agreements with service academies in Poland, Taiwan, Hungary, Argentina, Romania, Latvia, Germany, Republic of Georgia, and Korea.

**Faculty Exchange with Foreign Military Academies**

Another function of the GMP directorate is to collaborate with foreign military academies and ministries of defense to invite military officers and faculty to instruct, guest lecture, conduct research and/or consult in disciplines such as cybersecurity, strategic and security studies, military science, and foreign language. In the area of research, the GMP coordinates with UNG faculty to support projects that align with foreign government initiative, and provides liaison with U.S. federal, state, and local agencies. Alternatively, the GMP seeks opportunities for UNG faculty and/or staff to conduct similar activities with foreign service academies.

**International Military Internships**

Another function of Global Military Programs is to develop and manage cadet internship opportunities with U.S. and foreign military and security organizations overseas, and in the U.S. Examples include internships with the School of the Western Hemisphere at Fort Benning, Georgia; North Atlantic Treaty Organization’s Defence College in Rome, Italy; Asia Pacific Center for Security Studies in Waikiki, Hawaii. These internships include activities such as the learning outcomes expected from the North Atlantic Treaty Organization’s school in Oberammergau, Germany:

- Understand the NATO administrative, operational, and organizational structure.
- Understand how NATO works jointly to manage operations within the European theatre.
- Work in a multi-national environment and alongside instructors and other foreign military personnel to broaden military cultural awareness and understanding.
Live and work in Germany; immerse in the German culture.

Internship programs help cadets further develop work-related skills, confidence in working in foreign military environments, expand their language skills, and acquire additional cross-cultural competencies.

Cadet Participation in International Conferences

Many foreign service academies host week-long international cadet conferences on their campuses, and UNG’s Global Military Programs directorate coordinates to send UNG cadets to these high impact educational events. One of many examples was the 2018 International Cadet Conference hosted by the National Defense Academy of Japan in Ryosei Kokubun. Cadets from approximately twenty-five military academies from all over the world participate in this annual conference, giving our cadets a diverse international experience. Cadets spend a week in the academy’s barracks, are escorted by Japanese cadets, and are encouraged to experience Japanese culture, including visits to national heritage sites. During the conference, cadets discuss topics such as United Nations peacekeeping and mission command. One UNG cadet wrote, “. . . being surrounded by so many people from different countries was eye-opening I learned so much just from talking to these people one on one [sic] These conferences are an extremely great learning experience regarding educational exposure as well as increasing global awareness.”

UNG cadets have participated in similar conferences in the Republic of Georgia, Latvia, Romania, and Poland.

Global Military Programs provides other opportunities to attend conferences that are not associated with military academies. One such event was the 2019 Model United Nations (UN) for college students in Menton, France, hosted by the Mediterranean College of Sciences Po.

World-class speakers addresses issues in the Middle East and Mediterranean. Undergraduate students “hone skills in diplomacy, negotiation, critical thinking, compromise, public speaking, writing, and research.” Another example is in the cyber field. A UNG cadet, a cadet from Spelman College in Atlanta (who was sponsored by UNG), and UNG computer science faculty member attended the 2019 North Atlantic Treaty Organization’s Annual
International Conference on Cyber Conflict (CyCon) in Tallin, Estonia. Participants heard from professionals in the field from many different countries speak about international cybersecurity challenges. The UNG cadet wrote that “this conference is probably the best broadening experience any cadet or aspiring information security specialist can take to really be exposed the realm of cybersecurity and see the perspectives of our NATO allies. Another benefit . . . is simply meeting the other attendants [sic] of the conference networking with U.S. personnel and NATO personnel. There are members from nearly every NATO member, country, and quite a few U.S. Military personnel ranging from Officers from Cyber command to West Point and Naval academy cadets.”

**Foreign Military Training**

The Global Military Programs directorate seeks opportunities for cadets to train with foreign countries’ military academies or militaries. For example, UNG cadets participated in an eleven-day trip to Poland in 2019 to participate in the 3d Annual Military Ski Patrol Competition in Szklarska, which was hosted by the Mountaineering Training Section of the General Kościuszko Military Academy of Land Forces (MULF) in cooperation with the Jednostka Wojskowa Komandosow Military Unit (a Polish military special operations unit). Upon arriving in Poland, UNG cadets were transported to the MULF, given a tour of the academy, and stayed the night. The next day, they traveled to Szklarska, checked into a hotel, and began training on tasks they would accomplish during the competition. The three-day competition took place in snow-covered mountainous terrain and involved cross-country skiing and mountain rescue tasks over a distance of forty kilometers. Military teams came from Italy, the Czech Republic, and Poland. After the competition, the cadets returned to the military academy and were escorted by Polish cadets to tour historical sites in Wroclaw.

**International Cadet Week**

The Global Military Programs directorate hosts an international cadet week (ICW) each November in conjunction with the U.S. International Education Week encouraged by the U.S. Departments of Education and State. The UNG ICW provides cadets from foreign military
academies with immersive experiences in American, U.S. military, and senior military college cultures. An incidental benefit of the experience is that it fosters personal relationships between UNG and foreign military academy cadets that may prove beneficial in the future if they reconnect later their military careers. Although the primary benefit of ICW is to strengthen relationships with UNG’s foreign military academy partners, inviting cadets from non-partner military academies creates an opportunity to explore the feasibility of expanding partnerships with other nations’ service academies. Past ICWs included cadets from Italy, Latvia, Poland, the Republic of Georgia, Japan, Brazil, Korea, and several other countries.

UNG ICW activities include cultural activities both on and off campus. International cadets live with UNG’s cadets in cadet residence halls and participate in activities such as attending classes; visiting the U.S. Army Maneuver Center of Excellence at Fort Benning, Georgia; visiting Atlanta, Georgia cultural sites; and participating in a military staff ride, which is a culminating event that focuses on the military leadership and tactical decision making during the U.S. Civil War Atlanta Campaign and the Chickamauga Battle in Chattanooga, Tennessee.

**International Academic Programs Modern and Classical Language Programs**

In the early 2000s, UNG offered bachelor’s degrees in Spanish and French, and minors in those languages plus German. UNG now offers bachelor’s degrees in Arabic, Chinese, French, Spanish, and Russian, and minors are offered in Arabic, Chinese, French, German, Italian, Japanese, Korean, and Russian. Other languages taught are Farsi, Portuguese, and Latin.27

UNG’s efforts to expand language opportunities for Cadets began in 2003 with an initiative to secure academic credit for cadets who were also National Guard soldiers who had completed language training at the Defense Language Institute Foreign Language Center (DLIFLC). Following a UNG faculty visit to DLIFLC in Monterey California, the university developed an articulation agreement for academic credit. With roughly one third of the Corps in the Guard, and many of those in specialties requiring critical language skills, this was an important first step.
Subsequently, discussions began on how to best move forward with expanding language offerings most pertinent to a military career. Chinese Mandarin was selected as the best choice due to its wide usefulness beyond the military. Then in 2007 the National Security Education Program (NSEP) fielded Project Global Officer (Project GO) that funded ROTC language programs. UNG was accepted into Project GO in 2008. Three years later, with a strong Mandarin program, UNG was selected by DoD to become an ROTC Chinese Flagship, the only one in the nation. In 2018 this was broadened to include all students and the institution became a regular NSEP Chinese Language Flagship. All these programs offered scholarships in addition to funding for faculty. Most recently, the DoD funded Cyber Institute includes language scholarships for 20 students in the cyber program.

Throughout this effort, the emphasis has been on providing opportunities in languages deemed critical to the Department of Defense, especially Chinese, Russian, and Arabic, progressively growing other critical languages such as Korean and Farsi in stages from initial offerings to a minor to a major. UNG’s efforts to expand capability have been exceptionally innovative with intensive summer language institutes targeted at freshmen, to required language immersion abroad for majors, and partnerships with other language instruction entities, such as the Goethe Institute. Opportunities continue to expand increasing UNG’s capacity and boosting our internationalization efforts more generally.

Degree Programs in International Affairs and Strategic and Security Studies

Two bachelor’s degree programs are popular with cadets at UNG: International Affairs and Strategic and Security Studies programs. The International Affairs degree establishes “a strong theoretical and analytical foundation in international relations,” and students experience both a study abroad and an internship as part of the program. Cadets in the major select a concentration in either North Africa and the Middle East, East Asia, Latin America, or Europe. The Strategic and Security Studies degree “program focuses on the theory and application of intelligence and military power to the construction of national defense policy” in which cadets are “introduced to various aspects of security and . . . have the opportunity to specialize in one of . . . five areas of concentration, including cybersecurity, intelligence, history, international affairs, language, or military science.” Cadets also complete a study abroad or internship for
the degree. In addition to majoring in these two degree program, cadets may also major in other fields of study while minoring in International Affairs or Strategic and Security Studies.

**Olmsted Foundation Funding**

The Cadet Military Program seeks funding to pay for cadets’ travel to international military program opportunities, thus providing an additional incentive for cadets to take advantage of these high impact educational programs. An important source of funding comes from the generosity of the George and Carol Olmsted Foundation, which offers an Overseas Travel and Cultural Immersion grant program for cadets at U.S. service academies and senior military colleges. Army cadets who desire to commission into the regular Army into branches that involve combat who exhibit superior leadership ability are eligible. Olmsted Foundation grant funding is managed by UNG’s Global Military Programs directorate and funds cadet travel and expenses to participate in short-duration trips to non-English-speaking countries to attend conferences or military training. Funds may also be used for overseas internships embedded in non-U.S. installations in non-English-speaking countries. In 2018, the Olmsted Foundation encouraged UNG to partner with Georgia State University’s Army ROTC program to fund cross-enrolled cadets from three Historically Black Colleges and Universities in Atlanta. Those cadets travel with UNG cadets and participate together in international experiences.

**Conclusion**

Graduates are UNG’s Corps of Cadets’ credentials. There are abundant examples of cadets who took advantage of the cultural understanding developmental coursework and co-curricular activities. A former male cadet who commissioned as an infantry lieutenant hailed from the Commonwealth of Virginia. The cadet earned bachelor’s degrees in International Affairs with a Middle East Concentration, Arabic, and History. The cadet studied abroad in the countries of Oman and Jordan and interned with the North Atlantic Treaty Organization’s defense college in Rome, Italy. The cadet attended international conferences in Romania and Poland. The cadet was a recipient of the Project Global Officer Scholarship. This cadet was an
example of a junior Army officer whose mission was to close with the enemy by means of fire and maneuver to defeat or capture him, or to repel his assault by fire, close combat, and counterattack. But this lieutenant’s application of force was tempered with an understanding of the strategic and cultural environment in which the platoon was operating: a competency of greatly significant value to his unit, allies, and the United States.

Another example is a former female cadet from the State of Georgia who earned a bachelor’s degree in Chinese with minors in military leadership and global leadership. The cadet participated in the Chinese Language Flagship program and became proficient in the Chinese language. The cadet studied abroad at the National Taiwan University and Beijing Union University and interned at a children’s museum in Beijing. Upon graduating, the cadet commissioned into the Army National Guard in the cyber branch. So, here was a lieutenant who was proficient in Chinese and whose mission was to conduct offensive and defensive cyber operations: a combination of unspeakable value to the U.S. national security effort.

One more example was a Black male cadet, also from the State of Georgia, who majored in Arabic with a minor in military leadership. He attended the Summer Language Institute for Arabic his freshman year. Later, he studied abroad in Morocco, and attended an international conference in Latvia. He commissioned as a regular Army officer in the quartermaster corps.

In all, the statistics demonstrate the emphasis the UNG Cadet Military program places on cadet cultural understanding. At the beginning of the fall 2020 semester, there were 738 Army ROTC cadets in the Corps of Cadets. Of those:

- Ninety were Strategic and Security Studies majors with concentrations in cyber, intelligence, history, international affairs, language, and military science;
- Thirty-eight were International Affairs majors with concentrations in Middle East, Europe, Asia, and Latin America;
- One was an East Asian Studies major;
- Twenty-five were Arabic, Chinese, and Russian language majors;
- Twenty-seven were Arabic, Chinese, Russian, German, Japanese,
Spanish, French, and Korean minors or concentrations;

- Twelve were enrolled in the intelligence minor; and
- Thirteen were enrolled in international affairs minors.

Seventeen percent of the Corps of Cadets were majoring in a cultural understanding developmental field of study, and many others were enrolled in related minors and concentrations. In academic year 2018-2019, seventy-seven cadets traveled to twenty-three different countries for cadet exchange, military-related internships, conferences, and other study abroad programs (this number was far less in 2019-2020 due to pandemic travel restrictions). Cultural understanding is also built into the Military Science curriculum, UNG’s general educational curriculum, and is absorbed by cadets interacting with foreign military academy exchange cadets. And since the Corps of Cadets is embedded in UNG’s civilian student population, cadets are exposed to the various diverse cultures that comprise the student body, including UNG’s undergraduate civilian international student population.

The University of North Georgia recognizes its role as a partner in Army pre-commissioning education to prepare cadets for effective global engagement as commissioned officers. Developing and managing the programs to support the Cadet Military Program cultural understanding developmental objective described herein requires a considerable amount of collaboration, coordination for incoming and outgoing cadet exchanges, and personal involvement in receiving and integrating international cadets into the Corps of Cadets each fall and spring semester. Creating an organizational structure staffed with former U.S. Army leaders who understand military culture has been of tremendous value in growing programs to develop cadet cultural competencies.

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Anthony “Tony” D. Fritchle is the Director of the University of North Georgia’s Global Military Programs Directorate. Lieutenant Colonel (Ret) Fritchle retired after more than 24 years in the U.S. Army as an infantry officer in 2012. He is a graduate of Armstrong Atlantic State University, holds a master’s degree from the Air Force Command and Staff College, and has completed work toward a doctorate in management. Colonel Fritchle served 15 of his 24+ years in airborne, air assault, mechanized and Ranger special operations and training units. He also served as an assistant professor of military science and adjutant at the University of North Georgia, and his last assignment prior to Army retirement was Professor of Military Science at the Georgia Institute of Technology (GaTech).

Billy E. Wells Jr. is the Senior Vice President for Leadership and Global Engagement at the University of North Georgia. Colonel (Ret) Wells graduated from Mississippi State University in 1975 as a Distinguished Military Graduate and was commissioned in the Regular Army as a Second Lieutenant of Infantry. He graduated from the Army War College and holds a master’s degree in education from Louisiana State University and a doctorate in higher education from Vanderbilt University. Colonel Wells’ Army assignments included service with the 82nd Airborne Division; the 7th Army and 1st Armored Division in Germany; the 75th Ranger Regiment and the infantry school at Ft. Benning, GA; the 101st Airborne Division at Ft. Campbell, Kentucky; the 25th Infantry Division in Hawaii; the 188th Infantry Brigade at Ft. Stewart, Georgia; the 1st Army at Ft. McPherson, Georgia; and Professor of Military Science at UNG. He retired from the Army in 2005 after a highly successful 30-year career in the infantry.

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The Curricular Architecture of the University Programs for the Forming and the Development of Tactical Level Military Leaders

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Abstract: The present paper brings to attention a set of good educational practices existing at the “Nicolae Bălcescu” Land Forces Academy of Sibiu, an institution that has been training the command officers of the Land Forces of the Romanian Army for over 100 years. During the recent decades, the academy has taken on the explicit mission of training military leaders. After successive transformations of the curricular architecture, a functional and flexible formula, supported by a set of measures, has been reached. The bachelor’s study programs are correlated with the military branches and specialties. The continuity and the consistency of the bachelor’s and master’s programs in the specialty of military leadership and organizational leadership, respectively, are ensured. The aim is to evaluate the leader potential of the future officers from their selection and then this should be acknowledged and developed during their studies at the academy, in the context of theoretical and practical training, but also by means of the hidden curriculum. The curricular compatibility of an entire semester of studies between five European military academies has been achieved, which facilitates the international mobilities of the students, of the teachers and of the military instructors. The transfer of knowledge and professional expertise is also done at inter-generational level, by coopting more and more valuable graduates of the academy to lead the platoons and to conduct the military training of students. Through these successful practices, which have been gradually perfected and have come to resonate in the set of values specific to the organizational culture of the institution, the academy responds to its mission of preparing the military leaders of tomorrow.

Keywords: Military Leadership; Military Academy Curriculum; Leader Potential; Leadership Competences.

Introduction

The Romanian Army has the “Nicolae Bălcescu” Land Forces Academy of Sibiu as one of its fundamental education institutions, which, with a history of over 17 decades, continues and concretizes the demarches specific to military education. The academy has assumed the mission of generating and transferring knowledge through the initial and continuous training, at university and postgraduate level, of officers for all the military branches/specialties belonging to
the land forces or for other internal and external beneficiaries. Through a diversified and attractive educational offer, the training of the future officers is ensured by the efficient combination of three main pillars: the academic training, the military training, and the physical training. The availability for prolonged intellectual, physical, and mental effort; ambition, dedication, and perseverance; the permanent accumulations; and the desire to surpass oneself are some of the defining strengths of those integrated in the formative process conducted during the studies at the Land Forces Academy. After having finished the studies, each graduate will be a good military specialist, a warrior, an organization leader, an educator, and a citizen who supports the nation.

It has always been considered that, from a formal point of view, any commander is a leader, but the desideratum of forming the officer as a military leader was explicitly formulated for the Romanian Army in 1995, by the decision of the Supreme Council of National Defense on the concept of reform of the military education. Afterwards, through reconsiderations, adaptations, and successive transformations in terms of educational philosophy and, implicitly, in terms of the concept of forming and of professional development of officers, a functional and flexible modality of correlating the bachelor’s study programs with the military branches and specialties has emerged and materialized, in accordance with the challenges of the ever-changing operational environment. This correlation allows for the optimal combination of the academic training of the future officers with their specialized military training. Thus, from 1995, the forming for the profession of officer began to be carried out at university level, initially by means of a single specialization (Management of Organization), and later, after 2003, through three specializations (Public Administration and Economic-Financial Management were added). The command officers are now formed by means of five undergraduate programs that are carried out concomitantly: Military Leadership for the Infantry, Reconnaissance, Paratroopers and Mountaineers branches/specializations; Management of Organization for Armor, Artillery and Missiles, Military Police, CBRN and Transportation; Economic-Financial Management for the Quartermaster branch, Accounting and Management Information Systems for Finance; Engineering and Management in the Field of Military Communications for the Signal branch.

The forming of officers as military leaders is, of course, an objective of all the university study programs, but the share of this objective in the assembly of all the projected educational finalities is correlated with the extent to which the role of instructor and tactical leader is
assigned and assumed for the exercise of the functions specific to each specialization within the military structures.

**Program Development**

Essentially, the conception of the program for the forming and the development of military leaders-officers is based on the postmodern leadership theories and concepts, on the formative models outlined in the practice of developing the leader competences, correlated and adapted to the demands of meeting the capabilities of cohesive military structures performing under conditions of intense effort, increased stress, uncertainty and risk. It is important to specify from the beginning that the program for forming military leaders at the Land Forces Academy is not to be mistaken with any of the bachelor’s or master’s degree programs offered by the institution, as it overlaps and transcends them. It is an abstract curricular construct, conceived at a level higher than the official curriculum of the study programs. For each class of students this program gradually proves its importance, coherence, and consistency over the years of study spent in the academy, as its role in coordinating and articulating the multiple components of the military education system in a convergent manner is becoming increasingly clear.

*The objectives of the program:* The main objective of the program for the forming and the development of leaders at the “Nicolae Bălcescu” Land Forces Academy of Sibiu is the development of personal, interpersonal, and professional competences of the future military leaders so that they will be able to exercise complex roles and responsibilities, and they will be able to assess themselves and to manage their personal and professional evolution. By integration into a systematic formative process, connected to the academic training process, the future leaders acquire the skills and the authority necessary, now and in the future, to exercise leadership in the military organization.

*Selection of future leaders:* The admission to the program is conditioned by exceeding, in the selection process, the standards of the psychological evaluation that includes, among others, as an eliminatory stage, the evaluation of the leader potential. Scales from the California Psychological Inventory (CPI™) are used: Dominance, Capacity for Status, Achievement via Independence, Intellectual Efficiency, Self-Acceptance, Empathy, etc. Moreover, for the evaluation of the leader potential, a situational test is applied during the final interview. The fact
that upon admission the candidates exceed the minimum accepted level of leader potential provides a solid support for their future cognitive, psychomotor, and affective-volitional acquisitions, which describe the resonant and authentic military leader.4

*Content and structure of the formative program:* In its development, the program entails the monitoring of the dynamics of the students’ leader potential and, at the same time, their periodical supplying with information on the level they have reached in the forming of leadership competences. This information gives the future leaders the opportunity to become aware of the strengths and weaknesses of their leadership style. Forming leaders implies gradual processual integration, by applying certain models, techniques, and procedures for personal and professional development, all of which having the effect of capitalizing on the leader potential, the development of leadership traits and competences, including through the identification of concrete benchmarks needed to outline a self-development program.

From a structural point of view, the program for the forming of military leaders includes three stages between which there is no strict, rigid delimitation, but rather overlapping, and even concomitance. In principle, the first stage corresponds to the first year of studies, being the stage of *identifying development needs*. During this stage, the establishment of the characteristic framework of the behavioral and attitudinal manifestations of students, the highlighting and the realization of strengths and weaknesses at individual level and the understanding of the needs and possibilities of personal development, materialized by outlining a personal development plan, are aimed at.

The second stage, the stage of *developing leadership competences*, takes place over three semesters and engages the students in an effort to assimilate theoretical and factual knowledge and to develop skills related to professional competences. The theoretical approaches, on the one hand, and the guided exercises, provided by the academic component, by the military training modules or by the practicum periods, on the other hand, substantiate, experiment, and capitalize on the proper understanding of the conditionings and implications induced by the deep mechanisms of the emergence of military leadership.

*Planning of further developments* represents the third stage of the program, and it usually takes place during the last academic semester. This stage is based on the mid-semester and final evaluations of the achievement of the objectives of the development of leadership competences.
By concretely identifying the future development needs and possibilities, the harmonization of one's own development desires with the manifest organizational needs is achieved.

Processes, instruments, resources, and responsibilities: The leadership potential, beyond the functional implications, is in a direct correlation with the learning process. This affirmation is based on the structure of the leader potential, explained by a structured set of qualities, abilities, and competences of leadership. Thus, the leader potential is the product and the expression of the qualities and behaviors of the leader, which are dependent on the personality and the character of the individual. The picture of the traits/qualities necessary for leadership highlights the fact that these can be learned. We can affirm that the leader potential is developed and improved throughout one’s life, including through social learning. The leader competences in the sphere of emotional intelligence, self-knowledge, self-control, self-awareness, and social awareness are educated, can be developed. Thus, in the process of forming and development of the military leader, learning is guided in a convergent way in the spectrum of these transversal competences, but also in that of the professional competences.

There is no doubt that learning, through all its forms, starting from the theoretical aspects to the empirical and practical-applicative acquisitions, represents a vital activity in the training and development program of the leader. The leader competences and the leader potential can be developed and shaped to achieve a high level of performance. Nevertheless, development is possible only through learning and the future leader must resort to all its forms, from academic learning with results mainly in the intellectual sphere, to practical learning, with mainly psychomotor results and to self-reflexive learning, with results in the attitudinal-value sphere. Thus, the relationship between leadership and the learning process is obvious. In order to develop his/her cognitive abilities, to widen his/her field of perspectives and to define himself/herself, the future leader must learn continuously, from all the possible sources: from academic sources, from the training process, from the social practice, from the social interrelations, by practicing, by putting into practice what he/she has learned, by reflecting on one’s own actions and on those of others, by analyzing negative examples, etc.

The systematic evaluation of the level of the students’ abilities, which complete their cognitive acquisitions, represents an important factor in the overall management of the leader forming program. Periodical psychological evaluations and permanent behavioral feedback
received from superiors and colleagues are meant to ensure a better self-understanding and an optimal interpersonal relationship, being correlated with continuous and summative evaluations made both within the academic component and within the military training one.

Together, they represent an effective tool for monitoring the level of success, the progress made during the leadership forming process. In this way, necessary and useful learning situations and exercises, applied in an organized manner or independently for the development of the targeted competences, can be created. The tutoring and mentoring activities in the academy, in order to facilitate the students’ understanding of the needs, possibilities and modalities of personal and professional development are based on this. At all these levels, the students are provided with guidance and support in the form of formative feedback. As one can notice, in the development and management of the formative process, multiple and diversified human resources are employed; these include the academic teaching staff, the military instructors, the subunit commanders, the tutors and mentors, and the corps of cadets, as well as the specialized structures that provide assistance and formative support. The involvement and formative support are quasi-collective, but the actual responsibility lies with the cadet. Obviously, the responsibility is also shared by the other actors involved with concrete tasks, including from the perspective of collegial relations.

Supporting the program through the scientific research activity: The scientific substantiation and the optimization of the formative process are supported by the scientific research structures (Research Centers), by faculties and departments or by the Military Training Center, by organizing ample scientific manifestations with national and international participation, by carrying out research projects and studies conducted by interdisciplinary teams, consisting of university teachers, along with external specialists and collaborators, in which both bachelor’s and master’s students are integrated. The topics of scientific research cover theoretical and practical areas of the substantiation and the exercise of military leadership in different contexts, the characteristics of successful leadership in the contemporary operational environment as well as concrete aspects of the process of forming and development of the military leader. The BSc papers and the master dissertations tackle the formative implications of the studied phenomena and processes for each topic. The conclusions drawn are annually analyzed and subsequently capitalized in the curricular development.
Curriculum that Supports Development of Military Leaders

As we mentioned in the beginning, the process of forming military leaders does not coincide with the educational process carried out at the academy, because the formative process is broader, in the sense that it also includes influences exerted from the informal area, in the form of a multitude of messages and values of the organizational environment (organizational culture, organizational behavior, psychosocial climate). To the same extent, the results of the training are sequential materializations of the components of the training content, obtained through personal internalization. Given that the term “curriculum” is used in the specialized literature with a smaller or wider scope, we consider that the term “curriculum” is fully applicable to the leader forming process in its broad sense. This refers to the formative program as a set of instructive-educational demarches, having four basic components (finalities, contents, methods, means, results), with interactions between them. If the objective of forming the officer as a military leader is assumed by all the study programs that prepare tactical level command officers, then the curricular architecture we have in view actually represents a core curriculum of the academy, a common core that aims at the acquisition of the abilities to exercise the role of leader by all the students.

Conceptual and methodological substantiation: In the pedagogical literature of the last decades, the design of the objective- and content- centered education has undergone a conceptual and paradigmatic transformation, and the competences have taken the place of the objectives in education in general, and in professional development and forming in particular. An integrative concept, the competence has now become the element of reference both in the design and in the development of educational and professional forming programs, in their evaluation, as well as in the appraisal of social activities as a whole. Thus, in accordance with the educational system in which it is integrated, the Land Forces Academy has adopted the new paradigm of the education centered on the learner, on forming professional competences and on his/her personal development. We consider that we must underline the indisputable contribution of the current paradigm to the more direct anchoring of the formative processes in practice, in real life, in the sense of developing the psychic operative and actional structures of the students, which are necessary for the ability to use knowledge efficiently in one’s professional and personal life.
In addition to the very nuanced points of view on the adoption of *competences* as educational finalities, in the specialized literature there is a debate on the ways in which competences can be formed through appropriate training actions. From the multitude of meanings given to the concept of competence, for reasons that are easily understood, in the present study, the competence, as the main purpose of education, is considered as a multifunctional and multi-transferable set of knowledge, skills/abilities, and aptitudes needed in different situations. It is an ensemble structured in such a way so as to ensure transfer and applicability when operating with the contents of learning. In the new conceptual context, the learning outcomes become particularly relevant. They designate what the learner recognizes, understands, and can do at the end of the learning process. In the European Qualifications Framework, the anticipation of the *learning outcomes* is achieved in three categories, in the form of knowledge, abilities and, finally, competences. Therefore, the learning outcomes represent the set of knowledge, abilities and competences that a person has acquired and is able to demonstrate after completing the learning process.

In Romania, the finalities that are currently designed at the macro level for the training system of the forces fall within the classical paradigm. The future employer has formulated, rigorously and precisely, a series of realistic finalities for the training of future officers, finalities aimed at the constitutional mission of the army, in accordance with the existing possibilities and, at the same time, at the level of the national and Euro-Atlantic doctrinal requirements. Thus, the finalities of the different types and categories of training aim, on the one hand, at the acquisition by the future leaders of the *knowledge*, the forming, the development and the maintaining of the *skills* of warrior and specialist skills, and, on the other hand, the acquisition of psycho-moral and physical *qualities*. We point out that they do not explicitly refer to either competences or abilities. Nevertheless, the *abilities* would be more appropriate as training finalities because, as we have shown, they include other operating structures, in addition to the skills.

Moreover, considering the *competences* as finalities of the process of forming of military leaders ensures, through pedagogical derivation, the elaboration in the Land Forces Academy of a competitive and modern curricular construct, which can subordinate both the military and the academic training component. Furthermore, if the profession of officer is defined by competences, it acquires the same formal reference, in the same terms, as the other professions regulated on the labor market. We emphasize the fact that, as a whole, the formative system at
the academy has the competences as defining finalities for all the study programs.

From a methodological point of view, the academy has adopted the framework-methodology for designing professional and transversal skills, which is used in Romania, as part of the European Higher Education Area, explaining the knowledge and the abilities by means of different level descriptors, adequate for bachelor’s or master’s studies. Starting from this modality of detailing the competences, the demarche of designing the study programs generates the other curricular components that describe the formative process. Thus, after identifying the correlations between competences and content areas, the disciplines and the number of credits for each of them are established, and the curriculum and the discipline descriptions are elaborated. The didactic transposition of the competences by applying the didactic principles specific to the formative process ensures the design of various learning situations (with the help of appropriate didactic supports), which facilitate the formative of the competences. Curricular benchmarks of the formative of military leaders through the *Military Leadership* university bachelor’s program.

The mission of the program is the forming of qualified human resources (officers) able to effectively perform the command of maneuver subunits (Infantry, Mountaineers, Paratroopers, Reconnaissance) through university bachelor’s studies in the field of Military Sciences, Information and Public Order, with a duration of 3 years/180 transferable study credits. In order to fulfill this mission, the forming of the professional and social competences necessary for the future leaders to lead the maneuvering subunits, to prepare and to conduct military operations is ensured. At the same time, favorable premises are created for their career evolution and for access to the higher levels of leadership of the force structures.

Given the specifics of the military actions of the maneuvering subunits and their complexity, the finalities of the program were designed in the form of professional and transversal competences of the future leaders. The following competences were included in the category of *professional competences* (CP):

- CP1: Applying the principles of leadership in the organization;
- CP2: Identifying and applying managerial functions to meet the objectives of the organization;
- CP3: Efficiently managing tactical level military structures in conditions specific to the modern battlefield;
- CP4: Developing and capitalizing on structural and technical capabilities for the enhancement of military systems;
- CP5: The functional integration of the cadets in the activity of the general staff in peace time and in crisis/war situations; and
- CP6: Applying force training doctrinal and scientific requirements.

In addition to this, the transversal competences (CT) that are to be formed are also presented in detail as follows:

- CT1: Competently assuming and exercising the roles and tasks assigned in military organizational structures;
- CT2: Correlating the requirements of the leadership role with teamwork particularities; and
- CT3: Objectively self-assessing and meeting the need for continuous professional training, in accordance with the dynamics of doctrinal and specialized developments.

A series of capacities are added as finalities to these categories of competences as follows: the capacity to assume and to exercise the professional roles in different organizational structures, in the spirit of the norms and values of the organization; the capacity of being a leader attached to the professional ethics and deontology, an effective partner in the management system of organizations, of multinational organizations too, and the capacity to manage one’s own professional career in a functional way, in correlation with their own training needs and with the development facilities offered by organizations.

For illustration, we will further detail how CP1 is concretized in the curricular plan, which directly aims at the forming of the officer as a military leader, future commander of a tactical level structure and of a maneuvering subunit respectively. Thus, for CP1 (Application of the principles of leadership in the organization) the level descriptors in the form of knowledge (CP1.1 and CP1.2) and skills (CP1.3, CP1.4, CP1.5) were identified and formulated as follows:
• CP1.1: Description of concepts, theories, paradigms, and procedures used in leadership;

• CP1.2: Explaining and interpreting the leadership process using fundamental scientific knowledge;

• CP1.3: Application of fundamental concepts and theories of leadership to solve problems specific to the military organization;

• CP1.4: Adoption of leadership styles appropriate to the situational framework, contingent to the mission, to the objectives and to the tasks of the military structure; and

• CP1.5: Substantiation, design and the assuming of the leadership exercised in military tactical level structures.

In order to gradually reach these performance levels, the content areas that contribute to the formation of the respective competence have been identified. In the case of CP1, which we present in detail, an area of theoretical contents was identified—psychological theories, sociological theories, leadership theories, communication theories as well as an area of methodological contents—methodologies for the evaluation and self-evaluation of individual and group behaviors, motivational strategies, communication strategies, including in a language of international circulation. Most of the study disciplines that are covered by students contribute to the forming of CP1, the most consistent formative contribution coming from the following disciplines: Leadership Theories, Fundamentals of Leadership, Management of Leader Potential, Tactical Field Leadership, Military Psychosociology, Intercultural Communication, Military Organizational Behavior, Methods of Developing Resilience in the Military, etc.

Through the manner of designing the curriculum of the Military Leadership bachelor’s program, the compatibility of an entire semester of studies between five European military academies is ensured. This semester includes disciplines such as Cross-Cultural Communication, Comprehensive Approach, Law of Armed Conflict, Military Leadership, Interoperability, Cyber Security, and Cultural Awareness. By means of this, the international mobilities of the students, teachers and military instructors are facilitated, thus achieving internationalization both at academic level and at the practical military training level.
Particular attention is paid to capitalizing on the possibilities of competence correlation and interference. Thus, the CP1 competence regarding leadership is correlated with the CP2 competence so as to facilitate the path to leadership through management.\textsuperscript{14}

**Curricular Benchmarks of Leader Development**

In modern military and civilian organizational structures in the contemporary world, the need for authentic leaders is obvious, with a scientific understanding of the mechanisms and processes involved in the substantiation and the competent exercising of leadership. This need has inspired the continuation of the formative approaches exercised within the *Military Leadership* university bachelor’s study program by means of a program from the higher university cycle, of master's degree, with the specialization of *Organizational Leadership*. The access to the program is not conditioned by the graduation from the *Military Leadership* bachelor’s program, the master’s students can be both military and civilian.

The general objective of the program is the development of the capacity to integrate the scientific substantiation, the design, the implementation, and the evaluation of the strategy of organizational becoming and the exigencies of the development of a professional career as a leader in the organization in a systemic vision. In accordance with the same methodological curriculum design procedure, the following professional competences were established as finalities:

- CP1: Implementing, in an integrating vision, modern leadership theories and methods in organizations;
- CP2: Implementing leadership strategies in multinational organizational structures;
- CP3: Implementing strategies of positive influence on the organizational ethical behavior in modern organizations;
- CP4: Selecting, combining, and applying scientific research strategies and techniques in the field of leadership in modern organizations;
- CP5: Applying strategies for the managing of operations and functionality of
teams; and

- CP6: Proficiently selecting, combining, and using analysis, modeling and simulation tools and techniques of decision-making processes in the field of leadership.

As one can see, the center of all the competences is the leader and the leadership process. We exemplify through several disciplines that provide scientific substantiation and professionalism to those involved in exercising the role of leader or in the scientific investigation of leadership: Organizational Leadership Concepts and Theories, Military Leader Competencies, Leadership Styles, Influencing Methods and Techniques in Leadership, Forming and Developing the Team, Leader Development and Self-Development. These are supported by other useful fundamental disciplines: Theories about Modern Organizations, Social Processes and Organizational Behavior, Organizational Diagnosis and Development, Conflict Analysis and Crisis Management in Organizations, Asymmetric Conflict Management.

The fact that most of the master’s students are young officers in their first leadership positions in various military structures in the country is of great importance for ensuring the continuity and success of the program for the forming of military leaders. They have the opportunity to immediately apply at their workplace the knowledge and abilities acquired during the master’s program, so that the leadership competences formed while at the academy can be stabilized and honed in the real military professional context. Moreover, some of the most valuable graduates of the bachelor’s studies receive their first assignment as officers at the academy, as commanders of the cadet subunits and they are also master’s students. Thus, through a change of generations, the young leaders contribute directly to the forming of the future military leaders. An obvious effect of this practice is the perpetuation of the system of attitudes and values that define the military organizational culture and feed the hidden curriculum, which includes what is not explicitly taught, but is still learned through diffuse inculcation as a result of institutional realities and of the formal and informal interactions between members of the military academic community.
Conclusions

The forming and development of the military leader on the basis of the bachelor’s and master’s studies, through specific study programs, focused on leadership issues, represent a major advantage because they provide the future leader with a consistent scientific foundation of the demarches he/she undertakes in order to assume and exercise the role of leader in military structures. The continuation of the professional training through master's university studies in their specialty ensures the creation of a body of specialists able to integrate themselves in the military structures at operative or strategic level. Nevertheless, the need to individualize the formative process induces certain challenges. The obvious difficulty in the conduct of the programs consists in the difficult ensuring of the competent integration of all the actors involved in the development of the formative process, in the sense of measuring and focusing the educational act on the established finalities, on the real formative needs.

As one gains experience and through closer monitoring, the difficulties will certainly be overcome and the process of forming and developing the military leaders of tomorrow will be optimized and streamlined.

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Endnotes

Military and Police Cooperation in Visegrad Group
at Time of Security Changes

Jacek Dworzecki and Izabela Nowicka

Abstract: Cooperation among Visegard Group (V4) is of vital importance despite often different views on fundamental principles and national interests. The geographic, political, and economic link of the V4 Group is important for defense and security cooperation. The paper is an elaboration on the issue of the role cooperation of military and police in the security system of V4 time of security changes caused by the global phenomenon of the Covid-19 pandemic. The COVID-19 pandemic triggered a multifaceted crisis that went beyond public health issues, now affecting almost all dimensions of collective life, from economic to social, political, and cultural issues. This phenomenon has already changed our perception of the surrounding reality and of interpersonal interactions, both in the private and public dimension, in particular in the security dimension. In view of this, it is the fight against pandemics that currently represents the greatest challenge for the actions of various actors, including in particular specialised ones such as the police and the military. The analysis conducted for the purposes of this publication was based on the available literature on the subject, legal acts, media reports and several expert interviews with soldiers and civilian personnel of the armed forces as well as other persons working or serving in uniformed formations, who cooperated with soldiers in the framework of activities related to threats, in particular with COVID-19 pandemic. The role of directional research questions was to identify elements influencing the level of effectiveness of actions taken in the Visegrad Group countries in the context of military and police cooperation. The main hypothesis: Military and police cooperation plays an important role in the internal security system of the V4 country but its activities are hindered by organizational, legal, and technical drawbacks.

Introduction

The Visegrad Group (V4) is a regional form of cooperation of four Central European countries—Poland, Czech Republic, Slovakia, and Hungary—which are linked not only by the neighbourhood and similar geopolitical conditions, but also, above all, by common history, tradition, culture, and values.

The idea behind the creation of the V4 was to intensify cooperation in building democratic state structures and a free market economy, and, in the long run, to participate in the process of European integration. The date of its establishment is February 15, 1991. Since the formation of the Visegrad Group, most leaders and experts expected that due to similar situations in almost all areas of life in these countries, the cooperation of the V4 countries would naturally
develop in all fields, including security and defense. One of the most spectacular achievements of the Visegrad countries in this area is the creation of the Visegrad Combat Group. The establishment of a joint battle group within the framework of the European Union has strengthened the relationships of the V4 in terms of shaping security and defense policy and confirmed the sense of further cooperation in Central Europe. Another level of Visegrad cooperation highlighted in the „Long-term Vision for Deepening Defence Cooperation” are efforts to form multinational military units and to conduct activities with an international profile. The realisation of this idea is the creation of joint modular formations which can then be offered to the European Union and NATO as an instrument for implementing security and defense policy.

It must be remembered that the defense cooperation of the V4 is not free from the influence of particular national interests and the changes taking place in Central Europe. Some Central European states seem to be moving away from democracy and liberalism for various reasons, resulting in increased vulnerability to external influences and threats. The security of nations and states is a phenomenon that varies over time. Threats which correlate with security have accompanied man since the beginning of his existence. They arose exclusively from the forces of nature, but, with time, threats of a different nature began to emerge associated with the development of civilization, technological progress, and the demographic development of the population. They represent not only a sequence of changing states, but also a social process on an international scale in which functioning challenges and threats, public perceptions and concepts of their resolution, and state actions and interactions clash.

The main research hypothesis was adopted in the course of the study: Military and police cooperation plays an important role in the internal security system of the V4 countries but its activities are hindered by organizational, legal, and technical drawbacks.

Three research questions directly correlated with the above hypothesis were also adopted:

1. What organizational, legal, and technical problems may arise in connection with the taking of action by the armed forces and police of the V4 countries in the event of a threat?

2. Are the current legal regulations, which define the actions of the armed forces and the police in situations of epidemiological threats in Poland, the Czech Republic, Slovakia, and
Hungary, sufficient to undertake effective preventive, rescue or support activities for institutions statutorily established to combat this type of threats?

3. What was the extent and effectiveness of the actions taken by the armed forces and police of Slovakia, Poland, Hungary, and the Czech Republic in combating the global threat of the Covid-19 pandemic?

The diagnosis of the level of contemporary threats is carried out by specialised institutes and scientific centres. Analysis of the results of their work allows the following categories of current threats to be identified:

- military threats, i.e., those related to the possibility of a conflict on international grounds, which may endanger the security of the state mainly through military action;

- actions of sabotage or diversion groups supported by external entities, against critical infrastructure facilities, public transport or mass events, including with the use of chemical, biological or radioactive agents;

- non-military, man-made threats, e.g., terrorist attacks, contamination resulting from construction or communication disasters, sudden collapse of a country’s financial situation or on an international scale, migration, unemployment, the action of international criminal groups, etc. and the resulting social unrest; and

- non-military, natural threats, e.g., epidemics or natural disasters and the contamination caused by them, such as a threat to drinking water sources as a result of severe flooding.

A coronavirus pandemic is a security threat for which no country was prepared. The crisis that was caused by its emergence points to challenges that are not typically classified as armed security threats (use of force), but could nevertheless destabilize, if not significantly weaken, entire societies. The diagnoses of the phenomenon carried out allow us to understand security scenarios, including those related to hybrid threats and hybrid warfare, for which the armed forces or NATO are not the main factor responsible for security.

The police is the most important and often the most numerous (data for V4 below) organization ensuring security and public order in all V4 countries. However, this does not mean that in performing its tasks it should act alone and without cooperation with other entities. The
military is a natural partner of the police in many areas of security, even though the main task of the armed forces is to protect the state and society against external military threats.

The size of the different groups in the V4 countries is as follows:

**Police:**
- Poland: 103,000 officers;
- Czech Republic, 43,000 officers;
- Slovakia: 23,000 officers; and
- Hungary: 43,000 officers.

**Armed forces:**
- Poland: 135,000 soldiers;
- Czech Republic: 23,000 soldiers;
- Slovakia: 13,000 soldiers; and
- Hungary: 21,000 soldiers.

This stems from the fact that the challenges facing the armed forces are not limited, despite the previously indicated principle, to activities of a military nature. Practically all security strategies of the European Union member states currently in force contain guidelines for the armed forces to take action of a non-military nature as well.

When performing certain tasks related to ensuring security, support from the military seems indispensable, if only due to the lack of actual possibilities of counteracting a given threat by police officers. In the case of specific threats, the armed forces become an indispensable element of the measures taken, the best example of which were the initiatives implemented by the military in the fight against the COVID-19 pandemic.

**Legal Bases for Cooperation**

Undoubtedly, in the Visegrad Group of four Central European countries—Poland, the Czech Republic, Slovakia and Hungary—the most important legal acts allowing for the
involvement of the armed forces in the fight against the COVID-19 pandemic include the constitutions of these countries. They contain general instructions to take organized action to counter specific threats such as states of emergency (e.g., state of emergency, state of natural disaster, state of war) if ordinary constitutional measures prove insufficient.

In the Constitution of the Republic of Poland of April 2, 1997, Article 228(1) indicates that in the event of threats of an exceptional nature, an appropriate state of emergency may be imposed: martial law, state of emergency, or state of natural disaster. Similarly, in the Constitution of the Slovak Republic of September 1, 1992, Article 102(3) indicates the necessity for the state administration to take action in relation to threats arising from the occurrence of states of emergency. The Hungarian Constitution of April 25, 2011 describes states of emergency in great detail in the chapter on the special legal regime (Articles 48-54). Mention is made here of a state of national emergency in the event of, inter alia, a breach of national sovereignty, a state of emergency, a state of defense mobilization, an unexpected attack, and a state of emergency in the context of natural disasters and catastrophes. The Constitution of the Czech Republic of December 16, 1992 contains the fewest references to responding to situations that can be described as special threats. This deficit of regulations relating to states of emergency in the Czech Constitution, was supplemented in Act No. 110 of April 22, 1998 on Security of the Czech Republic.

In the V4 countries, the description of the nature and scope of actions taken by rescue services, police, or armed forces in connection with the occurrence of states of emergency is contained in laws and lower-level regulations (e.g., regulations and/or orders). Furthermore, the details of the implementation of rescue and relief actions are regulated by resolutions of the Council of Ministers and other executive authorities, the legislative authority (e.g., the president, the parliament), including, among others, ministries responsible for security (national, internal), health care, or environmental protection.

In Poland, during a state of natural disaster, the armed forces support local state administration bodies (voivodes and local governments), among others, in accordance with Article 18 of the Act of April 18, 2002 on the state of natural disaster. The condition for the introduction of the armed forces into operations is the impossibility of liquidating the threat by civilian rescue services, and the actions undertaken by the military component are carried out
exclusively in the area of the occurrence of a natural disaster. Soldiers remain under the command of their service superiors and perform tasks specified by the provincial governor.

On the territory of the Slovak Republic, the use of the military component in rescue operations in connection with the occurrence of a state of natural disaster is possible on the basis of Articles 4 and 5 of Act No. 227 of April 11, 2002 on state security in the time of war, martial law, state of emergency, and state of natural disaster, and on the basis of paragraph 4, points 2 and 4 of Act No. 321 of May 23, 2002 on the Armed Forces of the Slovak Republic. In their operations, the Slovak armed forces fully cooperate with the local state administration and local governments.

The Czech Armed Forces undertake rescue operations in connection with the occurrence of an emergency situation such as a state of natural disaster based, inter alia, on regulations arising from section 9, para. 1-5 of Act No 240 of June 28, 2000 on crisis management.

The basis for the actions of the Hungarian armed forces in the event of a state of disaster is Article 8, point 3 h and Article 48, point 1b and point 4 of the Hungarian Constitution of April 25, 2011. Czech and Hungarian soldiers undertake rescue and relief operations with coordination from the central and provincial emergency headquarters and in close cooperation with local authorities.

**Examples of Military and Police Cooperation**

In the era of the pandemic we have been facing since the beginning of 2020, the V4 countries have committed to exchange experiences in the area indicated in the research topic. The assessment of public awareness of the threat as well as the impact of COVID-19 on citizens’ sense of security is an important part of the effort to minimise the risk that the pandemic poses to the citizens of the V4 countries in all aspects of everyday life. As long as the social perception is that the surrounding phenomena have little negative impact on the existence of individuals, they feel safe.

That is why it is so important to work together efficiently to marginalise the risks of the actors described.
In the first year of the pandemic, the armed forces of Slovakia, Poland, Hungary, and the Czech Republic carried out activities on their own territory related to medical and logistical support, support of other state and local government rescue or police services, and implementation of other projects directly or indirectly related to the strategy of containment of the pandemic and limitation of its health and socio-economic consequences.

As part of activities undertaken by the Polish Armed Forces, military task groups were established in all provinces, whose role was to support the national health service within the framework of the national crisis management system. The actions of the Polish Armed Forces were conducted within the framework of two military operations under the cryptonym: Resilient Spring and Enduring Resilience.

The scope of tasks entrusted to individual types of the Polish Armed Forces in operations Resilient Spring and Enduring Resilience was very broad and included the following:

- Protection of state borders in cooperation with the border guard and the police (among others, tasks were carried out by the military police, 6th Airborne Brigade in Kraków, 1st and 5th Battalions of Podhale Rifles, 8th Koszalin Anti-Aircraft Regiment);
- Conducting jointly with the police activities for safety and public order in the form of patrols aimed at controlling the observance of quarantine by the society (among others, the tasks were carried out by soldiers from all posts of the Military Gendarmerie and the 6th Airborne Brigade in Krakow);
- Transport of food and personal protective equipment (among others, the tasks were carried out by soldiers from the logistics battalion of Warsaw Armoured Brigade; from 11th Lubuska Armoured Cavalry Division);
- Supplying food and medicines to people in quarantine and groups particularly exposed to infection (the tasks were carried out, among others, by soldiers from 1st Battalion of Podhale Rifles);
- Providing medical personnel of district hospitals throughout the country with protective equipment such as protective suits, visors, shoe protectors, disinfectant fluids, thermometers, respirators, and distribution of oxygen cylinders (tasks were carried out by
soldiers from the 12th Mechanized Brigade in Szczecin, 10th Silesian Brigade of Territorial Defense);

- Care for veterans and families of medics (tasks were undertaken by soldiers of the Territorial Defense Forces);

- Caring for residents of social welfare homes (tasks were carried out by soldiers of the Territorial Defence Forces);

- Carrying out tests for COVID-19, among others, in mobile swab collection points (tasks were carried out by personnel and soldiers from the Centre for Diagnostics and Combating Biological Threats in Puławy of the Military Institute of Hygiene and Epidemiology);

- Conducting an information campaign on the prevention of the spread of Sars-CoV-2 (tasks were carried out by soldiers of the Territorial Defence Forces);

- Providing psychological support over the phone and running telephone information points with regard to the organization of vaccinations (tasks were carried out by soldiers from the Training Centre of Chemical and Engineering Forces in Wrocław);

- -medical training (tasks were carried out by soldiers from the Military Medical Education Centre in Lodz);

- Evacuation of residents of social welfare homes in which infections occurred (tasks were carried out by Marines from the Naval Port Gdynia Headquarters, from the Divers and Scuba Divers Training Centre of the Polish Army, and from the 6th Radioelectronic Centre of the Navy in Gdynia);

- Evacuation by air of citizens of the Republic of Poland who, due to the global lockdown, could not reach the country on their own, as well as transport of personal protective equipment by air (tasks were carried out by soldiers of the 3rd Air Transport Wing of the Polish Air Force);

- Providing food and medicine to the elderly who required such assistance (tasks were carried out by soldiers from the Territorial Defence Forces);
- Decontamination of facilities, rooms, equipment and means of transport (among others, tasks performed by the 6th Chemical Battalion of the Air Force in Śrem);
- Implementation of vaccinations against SARS-CoV-2 (tasks were carried out by military personnel from the Foreign Mission Preparation Centre in Kielce);
- Production of protective masks with the use of military personnel and technical resources (tasks were carried out by soldiers from the 2nd Radioelectronic Centre in Przasnysz);
- Construction of a container field hospital, mobile field laboratories, field emergency rooms, and field decontamination points (among others, tasks were carried out by soldiers from 5th Chemical Regiment in Tarnowskie Góry);
- Support of regional blood donation and hemotherapy centers (blood was donated by soldiers from all branches of the army);
- Providing technical support for state administration and local governments in the field of launching remote services (tasks were carried out by soldiers from the Military University of Technology in Warsaw); and
- Supporting airport services, among other things, in the field of temperature measurement and collecting and sorting location cards of all passengers arriving in Poland (tasks were carried out by soldiers from the Territorial Defense Forces).

In addition to equipment available at the disposal of individual types of troops forming the Polish Armed Forces, i.e., the Territorial Defence Forces, the Land Forces, the Air Force, the Special Forces and the Navy, fourteen military hospitals and five centers of preventive medicine were also used in the fight against the pandemic. Within the framework of conducted activities connected with the second wave of the COVID-19 pandemic, 20,000 soldiers and military civilian personnel were involved, which constituted less than 15 percent of the Polish Armed Forces.

The Armed Forces of the Slovak Republic, which constitute the second (after the Police Corps) most numerous uniformed formation in the country, played an important role in the measures taken to combat the 2020 COVID-19 pandemic. As part of a nationwide effort under the code name Corona, all Slovak uniformed formations began implementing tasks aimed at
reducing the impact of the pandemic, which was the direct reason for declaring a state of disaster throughout the country.

An operations center was activated within the Slovak Armed Forces, which closely cooperated with the government crisis headquarters and coordinated the implementation of rescue and sanitary-epidemiological activities on the territory of the whole country around the clock. As part of Operation Corona, soldiers together with officers of other uniformed formations carried out many activities under four sub-operations with code names: Carousel, Umbrella, Courier, and Joint Responsibility.

The activities of sub-operation Parasol, in which 1,500 soldiers participated from mid-April to the end of May 2020 during the most intensive period, were aimed at supporting the Police Corps of the Slovak Republic in ensuring security and public order in Roma settlements, which were isolated from other localities due to the worsening epidemiological situation on their territory.

The operation codenamed Carousel, in which more than 200 soldiers participated, involved the support of the national health care system by military medical personnel under the Department of the Chief Medical Officer of the Armed Forces of the Slovak Republic. Among other things, Slovak soldiers and police officers in 177 Roma settlements collected swabs for examination and disinfected field emergency rooms. In addition, they carried out intensive information activities aimed at defusing social tension caused, inter alia, by rumours of deliberate infection of the inhabitants of these settlements in order to evict them from illegally occupied housing.

As part of Operation Courier, the Slovak Armed Forces, with the support of the police, carried out logistical tasks such as the transport of fuel for equipment used in sanitary-epidemiological operations and the transport of medical equipment and personal protective equipment, which arrived from abroad and were also distributed throughout the country from the central warehouses of state reserves.

Operations under the code name Joint Responsibility went down as the largest logistical operation in the history of the Armed Forces of the Slovak Republic. In these activities, the Ministry of Defence supported the Ministry of the Interior, as well as provincial offices and local governments. Approximately 5,000 swab collection points were organized throughout the
country as part of the nationwide testing of citizens for the Sars-CoV-2 virus. More than 5.3 million people were tested in the three phases of testing, representing 96 percent of the country’s population.

In addition to the above-mentioned sub-operations, the Armed Forces of the Slovak Republic also conducted a number of other activities within the framework of the fight against the COVID-19 pandemic:

- Together with the Police Corps, soldiers from ground army units carried out public security tasks at border crossings with the Czech Republic, Poland, Austria, and Hungary;
- Soldiers assisted in transporting medical supplies, food, and state reserves organized by the Police Corps across the country;
- Together with the Police Corps, soldiers from land army units and from the military police carried out activities for security and public order in the territory of towns and villages;
- Logistic units of the Slovak Armed Forces were responsible for the provisioning of three state quarantine centres and the distribution of drinking water in Roma settlements; and
- Soldiers from military police units carried out tasks of physical and epidemiological protection of facilities important for the smooth functioning of government offices.

During the most intensive period of the fight against the COVID-19 pandemic in Slovakia, 8,000 soldiers took part in the operations, which represented almost 60 percent of the country’s armed forces. In addition, police corps officers, firefighters, municipal police officers reporting to local authorities, members of state and community rescue organizations, and, of course, personnel from the Slovak health system took part in the operations.

The involvement of the Armed Forces of the Czech Republic in activities related to the COVID-19 pandemic was similar to that of Poland and Slovakia. Czech soldiers supported the National Integrated Protection System by cooperating with local state administration bodies and local government bodies. Activities of the armed forces in this area were locally coordinated by
provincial military staffs, with the whole activity supervised by the General Command of the Armed Forces of the Czech Republic.

Czech soldiers in Operation Eye and Operation Smart Quarantine supported the national health system by carrying out the activities listed below:

- Transported by air from other countries tests and individual protection means and medical equipment for hospitals and health care units;
- Together with the police, they carried out patrol and intervention tasks at border crossings in the context of observing regulations connected with the dynamically changing epidemiological situation by persons crossing the country (among others, tasks were carried out by soldiers from the 7th Mechanised Brigade in Hranice);
- Military medical personnel checked an average of 15,000 people a day at border crossings by, among other things, measuring body temperature and taking medical history;
- Military medical personnel and student-soldiers from the Faculty of Medicine of the Defence University in Brno supported national hospitals and health care facilities where patients infected with Sars-CoV-2 were treated;
- Throughout the country, military medical personnel and logistic services of the Czech Armed Forces organized test collection points for testing (among others, this task was carried out by the 153rd Engineering Battalion in Olomouc);
- Military logistic services were responsible for transporting medical supplies and equipment, medicines, and other items necessary for combating the pandemic throughout the country. In the course of the operations, the soldiers closely cooperated with the Administration of State Material Reserves;
- The Czech Air Force also transported people involved in road accidents to hospitals, supporting the Air Rescue, which was overloaded with tasks related to the pandemic;
• Soldiers from military police units together with the police protected facilities important for the proper functioning of government administration, including providing epidemiological protection and disinfection of these facilities;

• Soldiers from special ground units of the Czech armed forces served as drivers of Czech health care vehicles;

• Logistics services and military medical personnel built a hospital, mobile field laboratories and field emergency rooms;

• Ground troops helped care for residents of social welfare homes (including soldiers from the Military Academy in Vyškov);

• Soldiers from the units of reconnaissance and radio-electronic warfare support in Opava launched and operated together with the police call centers acting as telephone information points for people in contact with the infected and providing emergency psychological aid (among other tasks they performed);

• In the initial phase of combating the pandemic, civilian personnel and soldiers from logistic units, using their equipment and organizing fundraising for material, sewed protective masks and gloves for medical personnel and state service officers (among others, such activity was demonstrated by soldiers from the 533rd Drone Battalion in Prostějov);

• As part of mobile away teams, soldiers conducted tests on COVID-19 (including soldiers from 25 Missile and Air Defence Regiment in Strakonice);

• Scientists representing the Brno Defence University participated in research resulting in the production of more effective filters for protective masks for medical personnel dealing with the pandemic;

• Soldiers and police officers supported the Central Military Hospital in blood donation campaigns; and

• During the autumn 2020 elections for regional councils and the Senate, the Czech armed forces, together with the police secured polling stations, among other things, to ensure public compliance with pandemic-related regulations. In addition, soldiers
operated mobile voting stations called drive-in, where people retrieved and cast their ballot papers directly from their cars.

During the fight against the first and second waves of the pandemic, the Armed Forces of the Czech Republic deployed almost 15,000 soldiers on a multiple basis. Soldiers from logistics units used more than 300 trucks, 80 smaller vehicles, 10 buses, and also helicopters and transport planes belonging to the Czech Army Air Force every day.

The activity of the Hungarian armed forces in the activities related to the COVID-19 pandemic outbreak, was quantitatively much smaller compared to the other V4 countries. As of March 12, 2020, at the request of the Hungarian Ministry of the Interior, a total of 900 soldiers and military police officers were deployed for police support activities at the southern border crossings. In pandemic-related prevention, protection and assistance and rescue activities, the most involved formation was the Hungarian police with more than 40,000 officers. The military component supported the activities of the uniformed services under the authority of the Ministry of the Interior.

Soldiers, together with police officers, also conducted operations on the territory of petrol stations consisting in controlling the observance of epidemiological restrictions by, among others, Romanian and Bulgarian citizens travelling from western European countries. Moreover, Special Military Task Forces coordinated the return to the country of trucks belonging to the MOL concern, which got stuck on the territory of Italy. With the introduction of the curfew on March 27, 2020, by Government Decree No. 71/2020, the number of soldiers participating in prevention and patrol and intervention activities increased to 1,500.

Government Decree No 72/2020 of March 28, 2020, established a system of security surveillance by the army and police over the operation of hospitals and medical supply depots. The Minister of the Interior was responsible for overseeing the tasks imposed by Decree 72 on Hungary's two largest uniformed formations.

Their task was to protect transports with medical supplies, protect warehouses with equipment and medical supplies used in the fight against the pandemic, supervise the deployment and use of military equipment intended for activities such as sanitary-epidemiological protection of hospital facilities. The delegated officers could not decide on any issues related to the provision of medical assistance offered in these hospitals.
The Hungarian Armed Forces also carried out under the state of emergency declared by the government:

- Shipments of equipment and personal protective equipment for medical personnel, as well as food and other donations obtained through nationwide collections for the fight against the pandemic;
- Disinfection of nursing homes for the elderly and selected facilities where assistance was provided to those infected with the virus;
- Construction of field screening points and health checkpoints at entrances to government facilities
- Joint patrol and intervention activities with the police aimed at controlling citizens' compliance with sanitary-epidemiological regulations during the restrictions announced by the government;
- Administrative and logistical support for 93 hospitals located throughout the country; and
- Enhanced patrolling activities in the area of southern border crossings, to which an additional 1,200 soldiers were sent.

**Summary**

The main objective of the research, the results of which are presented in this paper, was to obtain an assessment and validity of the cooperation between the Army and the police. The authors claim that achieving this goal has both cognitive and practical value, as it allows for the study of military-police cooperation and, at the same time, gives space for the implementation of the best possible utilitarian solutions improving the effectiveness of military and police actions during security changes. The task for all countries of the Visegrad Group is to ensure a return to normality as soon as possible in all areas of functioning, i.e., political, economic, and social.

In order to build a proper assessment of the situation, so that the level of feeling of safety or awareness of threats is adequate to the circumstances, it is necessary, on the one hand, to provide adequate and sufficient, and therefore quantitatively and qualitatively effective
information on a given topic, and on the other hand, for the recipient to make a cognitive effort aimed at obtaining and then processing the obtained data.

**Endnotes**

5. J. Dworzecki, L. Kurilovská, M. Mamojka, Rozdział XIII. Sytuacja i rola sił zbrojnych w czasie pandemii, Routledge.
8. Konstytucja Węgier z dnia 25 kwietnia 2011 r. (Urzędowy Organ Publikacyjny nr 43 z 2011 r. z późniejszymi zmianami).
10. Ustawa nr 110 z dnia 22 kwietnia 1998 r. o bezpieczeństwie Republiki Czeskiej (Zbiór Ustaw Republiki Czeskiej nr 39 z 29 maja 1998 r. z późniejszymi zmianami).
12. Ustawa nr 227 z dnia 11 kwietnia 2002 r. o bezpieczeństwie państwa w czasie wojny, stanu wojennego, stanu wyjątkowego i stanu klęski żywiołowej (Zbiór ustaw nr 97 z 2002 r. z późniejszymi zmianami).
15. Konstytucja Węgier z dnia 25 kwietnia 2011 r. (Urzędowy Organ Publikacyjny nr 43 z 2011 r. z późniejszymi zmianami).
29. Informator Parlamentu Węgier nr 23 z dnia 27 kwietnia 2020 r. pt. Zastosowanie armii w przeciwdziałaniu koronawirusowi, opublikowany przez Dyrekcję Zbiorów Publicznych i
Edukacji Publicznej.


The Elusiveness of Logistical Culmination

Jennifer Telby

Abstract: Earlier studies of culmination have regarded logistics as an underlying factor of the culmination of operations. Utilizing Kress’s theory of responsiveness, only factors directly linked to culmination in the logistical organization are studied to improve the understanding of logistical culmination. A case study of Operation Desert Storm and Operation Iraqi Freedom indicates that the former closed the logistical gap and managed to provide a responsive logistics chain, while the latter, in spite of the scope of the preparations, reached logistical culmination. The study finds that an under-responsive chain may be more strongly linked to logistical culmination. Factors such as insufficient resources, miscommunication, decision-making and infrastructure play a vital role in forming as well as avoiding logistical culmination.

Introduction

Logistics is the spine of an organization and should therefore be a fundamental part of an organization’s strategy. Logistics has, however, been treated as separate from strategy for a long time, with a poor means of support as a consequence.¹ The U.S. has experience in marginalizing logistics, but despite this bank of experience and lessons taken, it has seldom led to lessons learned for subsequent operations, according to William Tuttle.² Views on logistics vary.³ What is seen as an enabling factor for operations by Tuttle stands in contrast to the Swedish doctrine perceiving it as an obstacle.⁴ Reverberating Tuttle’s concern for a problematic evolution of logistics where a revolution of technology has taken place but where no evolution of conceptual frameworks for the use and distribution of resources has followed.⁵ This study therefore aims to enhance our understanding of logistical culmination as a concept.

Review of the Field

Carl Von Clausewitz fathered the understanding of culmination in the nineteenth century. Human error forces an offensive into an adverse effort, resulting in an unplanned operational pause, at a perilous point, leaving your own troops vulnerable. Clausewitz’s solution: a planned strategic pause allowing troops to undergo necessary recharging and refueling to avoid
culmination.  

Milan Vego acknowledges that the concept has since evolved—that culmination is more complex in modern warfare. The lines between the tactical and strategic levels are now blurred, making measuring factors of culminating points more difficult. Colin Gray, however, concludes that culminating points are something historians point out in books since they are only discernible after an event has taken place.

Vego opposes Gray’s conclusion by explaining that culminating points can be found at all levels of war and are fundamental to our understanding of war, but that culmination is more easily discerned at lower levels of combat due to the complexity of implicating factors at the strategic level.

Vego claims that logistics play a vital part in the avoidance of culmination; lowering the rate of an attack to a more sustainable pace, as well as allowing reinforcements to reach units as the offensive progresses. Logistics is thereby crucial to maintain the initiative in combat and to push the culminating point forward in time.

Moshe Kress connects Clausewitz’s culminating point of battle with logistics in his theory of responsiveness. He writes that the logistical culminating point is found at an operational level and that it inevitably leads to the culmination of operations. Kress describes logistical culmination as a recessionary trend. At a certain point in time, the resources will be insufficient to satisfy the need, resulting in a steadily growing demand and the steady diminishment of resources. This in combination with a demoralization of the troops, mentally and physically, results in a culmination of the operation.

This study originates in this relationship between strategy and logistics, and their intertwinment in the phenomenon of culmination. The review of the field shows that culmination has not been examined solely within the logistics chain which may mean that several pivotal lessons for military organizations may have been overlooked. The research question is, therefore, What transpires for logistical culmination to occur? This leads to a sub-question: What does the relationship between too much materiel versus too little materiel in the chain look like?
Logistic Responsiveness

The outermost goal of operational logistics is, according to Kress, a good responsiveness. Logistical responsiveness is defined as the factors maintaining and sustaining the expediency of military units over time. The logistics chain is considered responsive if it can provide units with a mixture of resources, in the right amount, at the right time and in the right place. This is a balance of the following aspects: quantity, time, and place. If these are unbalanced, it may result in a logistical over-responsiveness or under-responsiveness.12

The quantity gap usually arises as a result of increasing demand and a shortage of supplies, or if the logistics units are unable to move the resources as fast as required. The complexity of predicting what resources, how many, and where they are needed in combination with time-consuming lead times can make the allocation of specific resources difficult, hence increasing the gap.13

The time gap is the amount of time it takes a resource to reach the unit, from the moment the need arises to the moment the unit receives it. This is a product of limitations in the operational theater as well as frictions on the battlefield that may result in unplanned pauses in logistics.14

Over-responsiveness is when too many resources reach the right place at the right time. This is problematic in a military organization because of its inherent inability to absorb overabundant resources due to a limited capacity. An over-responsiveness may also occur if the right material is in the right place but at the wrong time. This may also lead to the upholding of vital means of transportation until resources can be absorbed by their recipient.15

The consequence of these two actions are bottlenecks or what Göran Walldén would call choking points.16 Walldén claims that choking points may lead to culmination. Kress, however, dismisses over-responsiveness as a serious factor for logistical culmination.17

Under-responsiveness, on the other hand, is when the logistics response constitutes too little or too late. The gap between demand and available resources grows larger and will continue to do so if the logistics chain continues to be under-responsive. This may lead to logistical culmination and is, according to Kress, more acute than a logistical over-responsiveness since a logistical culmination eventually leads to an operational culmination.18 This gap is created by
three factors: consumption exceeds the capacity of the logistics chain, the operational area expands beyond the logistical reach, and when the accretion of units is faster than that of the logistical resources or units.19

Research Design

This study is a case study with a multiple-case design.20 The scope of the analysis is limited to logistical culmination and therefore strategy is not examined in the study. Strategy is, however, closely related to logistics which means that strategic decisions with a direct effect on logistics have been accounted for. This study is limited to the operational level of logistics in Operation Desert Shield/Desert Storm (DS) and Operation Iraqi Freedom (OIF). The qualitative aspects in planning at the operational level of logistics are unquantifiable and the main focus of this study.21 A qualitative content analysis of the two conflicts is made in order to look at the balance of the theory and to compare the outcome of the conflicts.

DS and OIF were selected because they took place in the same operational area against the same enemy by largely the same actors, the U.S. being the most prominent one. The difference between the operations is that the U.S. describes DS as a logistical success whilst the logistics in OIF is not described as a factor of success. They also showcase one unprepared, quickly established logistics chain and a second planned logistics response. This allows for an examination of how the preparations affected logistics. An analysis of how factors of logistical culmination acted in the two cases is therefore of interest.22

For DS, two secondary sources are used: Congressional Report; Conduct of the Persian Gulf War and So Many, So Much, So Far, So Fast.23 Both official reports written for Congress. In addition, Moving Mountains, by Lieutenant General William G. Pagonis, the director of American logistics, which provides a good insight into the operational level of logistics, is used.24

For OIF, On Point written by American officers and based on 119,000 documents, 2,300 interviews, and 69,000 photographs from the operation is used.25 In addition, the monograph, Sustainment of Army Forces in Operation Iraqi Freedom, Major Findings and Recommendations, was used as well.26 The latter is an evaluation made by the RAND Arroyo
Center’s Military Logistics Program on assignment for the U.S. Army and evaluates the American logistics during OIF. The monograph is based on interviews and material not otherwise available. The study was limited to the first three stages of OIF, from preparations starting in the autumn of 2001 to Bush’s ceasefire declaration on May 1, 2003.\textsuperscript{27}

The sources chosen are American since the object of the study is to examine logistical culmination within the American logistics chain and a triangulation of sources is made.\textsuperscript{28} The sources allow an explicit analysis of the factors that may subsequently be presented in a more quantitative manner.

The operationalization is created from Kress’s theoretical understanding of culmination in combination with practical aspects suggested in studies made by Walldén, Mårtensson, and Jessen.\textsuperscript{29} The reason is to avoid research bias and to grasp the entirety of the theory, thereby enhancing the concept validity.\textsuperscript{30} Seven factors are identified: Decisions, Infrastructure, External factors, Misunderstandings, Doctrine, Other, and Morale, and the analytical tool is made up of 21 claims. This is designed to see whether the logistics in these cases are responsive, and to what degree they are over- or under-responsive.

The results are divided into Yes, No, or Partly to decide whether a claim is true and thereby whether the factor had an impact or not. A factor must arise more than five times in the text for a yes; for partly, two to four times, and for a no, once or not at all. The results are presented in a graph. Thereafter, the sub-question will be addressed in the discussion.

**Results Desert Storm**

Decisions about prioritizing troops instead of logistics units were made resulting in over 40,000 troops being mobilized without a functioning logistics structure. An improvised logistics response was initially made up of four logisticians. There were several reasons for this. For example, doctrine dictated that logistics units should be attached to the corps, and since selected units were sent and not an entire corps, logisticians had to wait. Doctrine also dictated that host nation support was to provide the initial resources, but no agreements had been concluded with Saudi Arabia at the time.\textsuperscript{31}

The intelligence that fed decisions was also poor regarding the capacity of airports and
ports, leading to a clogging of resources. The new system of using containers made unpacking difficult and added to the strain of the lack of infrastructure and logistical personnel on site. This meant 28,000 containers had to be opened manually to list the contents, adding 40 percent to lead times.32

Transport was also a major concern, where a lack thereof led to troops being stranded at the airports.33 Heavy vehicles moved slowly in the operational area delaying transports further.34 Materiel remained stationary clogging the ports. The Americans had 112 heavy vehicles but an estimated demand of 1,000.35

The number of troops kept increasing and soon the air transport organization was unable to meet the demand of these troops.36 Fast-changing plans led to a lack of ammunition and the downgrading of priorities concerning spare parts resulted in a lack thereof.37

Infrastructure, for example, a road network, had to be built on site, delaying the replenishment of forward logistics sites due to delays in clogged ports. Fuel was the biggest concern.38

Air transportation was affected by poor documentation, a misuse of the prioritization system and a mistrust of the system, which led to the delay of highly prioritized materials, and, on January 21, the accumulation of orders had increased by 3,000 percent worldwide. Problematic packaging and the erroneous marking of containers led to shipment errors on a tactical level.39

The logistics in DS were found to fulfill Kress’s criteria for both over and under-responsiveness. Three main causes for this have been discovered. First, there were too few resources at the beginning of the operation. Second, there were misunderstandings regarding transport and the marking of materials, and lastly the infrastructure was inferior.

The initial response in DS shows an unresponsiveness because of the conditions created by the strategy. However, the response went from survival mode to becoming more and more capable and in the end providing the troops with the requested demands. The planning and building of forward logistics bases, the contribution of reserve troops and logistics units as well as an enhanced host nation support led to a turnaround of the logistics response from unresponsive to responsive without an operational pause.
Table 1. Results Desert Storm

<table>
<thead>
<tr>
<th>Factors of effect</th>
<th>Claim</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decisions</td>
<td>Decisions regarding the prioritization of resources resulted in an overabundance reaching the right place, hence creating bottlenecks.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Decisions resulted in resources reaching the right place too early, creating bottlenecks.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Too few logistics personnel on site.</td>
<td>3</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Infrastructure was limited, hence leading to bottlenecks.</td>
<td>4</td>
</tr>
<tr>
<td>External factors</td>
<td>External factors such as the weather and climate created bottlenecks.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Deficiencies in logistical resources created bottlenecks.</td>
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</tr>
<tr>
<td></td>
<td>Hostile activity effected logistics and led to bottlenecks.</td>
<td>0</td>
</tr>
<tr>
<td>Misunderstandings</td>
<td>Misunderstandings led to bottlenecks.</td>
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<tr>
<td>Doctrine</td>
<td>Doctrine was restrictive, creating bottlenecks.</td>
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</tr>
<tr>
<td>Other</td>
<td>Other factors explaining over-responsiveness.</td>
<td>2</td>
</tr>
<tr>
<td>Morale</td>
<td>Morale.</td>
<td>7</td>
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</tbody>
</table>

UNDER-RESPONSIVENESS
<table>
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<tr>
<th>Decisions</th>
<th>Decision-making led to a shortage of supplies.</th>
<th>7</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Decisions led to materiel being sent to the wrong location.</td>
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<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Infrastructure was limited with too little materiel on site.</td>
<td>3</td>
<td>Partly</td>
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<tr>
<td>External Factors</td>
<td>External factors such as the weather and climate affected logistics leading to delays or materiel not being distributed.</td>
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<td>Deficiencies in logistical resources led to shortages.</td>
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<td>Yes</td>
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<tr>
<td></td>
<td>Hostile activity effected logistics and led to shortages.</td>
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<tr>
<td>Misunderstandings</td>
<td>Misunderstandings led to shortages.</td>
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<td>Doctrine</td>
<td>Doctrine was restrictive for logistics, leading to shortages.</td>
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<td>Partly*</td>
</tr>
<tr>
<td>Other</td>
<td>Other factors explaining under-responsiveness.</td>
<td>4</td>
<td>Partly</td>
</tr>
</tbody>
</table>

**LOGISTIC-RESPONSIVENESS**

| A gap in time and quantity arises. | No |

*Partly noted here because doctrine as a whole affected logistics negatively.

**Results Operation Iraqi Freedom**

In OIF, only criteria for under-responsiveness were found. OIF’s running start was a decision made in favor of strategy. The operation started when the mobilization was ongoing, resulting in the initial logistical delay since forward logistics bases had not been set up yet. Hence, the operational area became too big for the logistics response. The logistic routes became long and vulnerable. Mobilization continued but the capacity of the logistics units remained under-dimensioned because of the growing operational area.

Communication between combat units and logistics units were aggravated by the distance and orders could not be placed during combat. Food, water, fuel, and ammunition were provided.
due to a modicum of planning before the start of the operations.\textsuperscript{42} This was, however, aggravated by the fact that a plan for distribution within the operational area had not been made and no one was in charge of the distribution except for the distribution of fuel which worked reasonably well.\textsuperscript{43}

Spare parts proved to be a challenging area with only 25 percent of 16,000 pre-stocked parts being of use due to budgetary problems and difficulties in providing new parts. Army reserves were made to cover five months, which was shorter than the actual acquisition time, resulting in shortages as fighting intensified.\textsuperscript{44} Inventory systems at the operational and strategic levels were not compatible leading to manual processing. Changes in the order of mobilization of units also led to the attachment of logistics units and combat units that were not specialized to use the same system.\textsuperscript{45} An accumulated need for repairs led to systems in use dropping from 90 percent to under 70 percent.\textsuperscript{46}

Decisions affecting mobilization were made and the prioritization of combat troops led to a lack of logistics units and resources. Air and sea transport were unable to adapt to the quick changes in mobilization which led to delays. This also meant that the logistics command was not fully functional until after the end of combat operations.\textsuperscript{47}

The lack of a head of distribution in the operational area led to unnecessary procedures for placing orders. Differences in joint and army doctrine also led to misunderstandings and to errors in supplies being shipped. Policy and strategic decisions also confined logistics to the use of specific host nations or transit sites that were inadequate. Their low capacity contributed to delays.\textsuperscript{48}

A lack of transport and an immature logistics chain with incomplete methods for distribution led to ineffectiveness and delays limiting the distribution of food, water, and ammunition as well as hindering the supply of spare parts. Transport was only able to meet 20 percent of demand and was further undermined by the decision regarding bottled water. 60 percent of dry cargo haul consisted of bottled water restricting loading abilities. Therefore, logistics units left supplies at division collecting points where maneuver units were forced to collect them.\textsuperscript{49} Other factors included an underestimation of the extent of the operation, thereby leading to a too small budget, and the fact that collaborative efforts fell through creating difficulties for the logistics response.\textsuperscript{50}
Preparations for OIF were made based on expanding infrastructure, enhancing command and control, and preparing for the distribution of resources in the area. In the autumn of 2002, preparations were deemed complete. In spite of this the distributional chain was chronically undermined. The running start left logistics trying to catch up. Consumption could be met at times but as the operation progressed not even this was the case. Water resources at units were cut in half, oil and lubricants could not be restocked, the distribution of ammunition was problematic and a levelling between units was inevitable. Combat units had to fill their medical supplies from field hospitals and the charge from Kuwait to Baghdad went without combat units receiving spare parts. In the summer of 2003, the combat units’ demand for food could barely be met.\textsuperscript{51}

Despite preparations and an unplanned operational pause the conclusion is that the logistics in OIF reached culmination and remained unresponsive for a number of reasons. The three main components were a lack of resources, misunderstandings, and poor communication between the levels of the logistics chain.

Table 2. Operation Iraqi Freedom

<table>
<thead>
<tr>
<th>OVER-RESPONSIVENESS</th>
<th>Factors of effect</th>
<th>Claim</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Decisions</td>
<td>Decisions regarding the prioritization of resources resulted in an overabundance reaching the right place, hence creating bottlenecks.</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decisions resulted in resources reaching the right place too early, creating bottlenecks.</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Infra-structure</td>
<td>Too few logistics personnel on site.</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Infrastructure was limited, hence leading to bottlenecks.</td>
<td>0</td>
</tr>
<tr>
<td>External factors</td>
<td><strong>Description</strong></td>
<td><strong>Count</strong></td>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------</td>
<td>-----------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td>External factors such as the weather and climate created bottlenecks.</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Deficiencies in logistical resources created bottlenecks.</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Hostile activity effected logistics and led to bottlenecks.</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>Misunderstandings</td>
<td>Misunderstandings led to bottlenecks.</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>Doctrine</td>
<td>Doctrine was restrictive, creating bottlenecks.</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>Other</td>
<td>Other factors explaining over-responsiveness.</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>Morale</td>
<td>Morale.</td>
<td>2</td>
<td>Partly</td>
</tr>
</tbody>
</table>

**UNDER-RESPONSIVENESS**

<table>
<thead>
<tr>
<th>Decisions</th>
<th><strong>Description</strong></th>
<th><strong>Count</strong></th>
<th><strong>Response</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Decision-making led to a shortage of supplies.</td>
<td>15</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Decisions led to materiel being sent to the wrong location.</td>
<td>8</td>
<td>Yes</td>
</tr>
<tr>
<td>Infra-structure</td>
<td>Infrastructure was limited with too little materiel on site.</td>
<td>2</td>
<td>Partly</td>
</tr>
<tr>
<td>External factors</td>
<td>External factors such as the weather and climate affected logistics leading to delays or materiel not being distributed.</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Deficiencies in logistical resources led to shortages.</td>
<td>18</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Hostile activity effected logistics and led to shortages.</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>Misunderstandings</td>
<td>Misunderstandings led to shortages.</td>
<td>12</td>
<td>Yes</td>
</tr>
<tr>
<td>Doctrine</td>
<td>Doctrine was restrictive for logistics, leading to shortages.</td>
<td>5</td>
<td>Yes</td>
</tr>
<tr>
<td>Other</td>
<td>Other factors explaining under-responsiveness.</td>
<td>9</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**LOGISTIC RESPONSIVENESS**

<table>
<thead>
<tr>
<th><strong>Description</strong></th>
<th><strong>Response</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A gap in time and quantity arises.</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Conclusions

Culmination in logistics is a complex area. It is also evident that the decisions and the intelligence that strategic planning is based on can be directly linked to the logistical consequences. All the factors that had an effect and were researched here, i.e., decisions, infrastructure, external factors, misunderstandings, and doctrine, had an impact on the logistical responsiveness in both cases. Another prominent factor that could be directly linked to responsiveness was host nation support.

Kress and Collins both stated that morale is important in culmination, and it seems to have played a role in DS where only positive remarks regarding morale have been found. In OIF, morale is seldomly commented, and just as often in a positive remark as in a negative one. In addition, OIF struggled with host nation support in a way that was not seen in DS, which could be due to the fact that DS had a mandate from the UN while OIF did not. What can be said about morale is that there was a slight difference and that one case reached logistical culmination while the other did not.

At first glance, it would seem as if the issues in DS recurred in OIF despite the immense preparations. There are, however, two factors that stand out. The first is OIF’s lack of a head of distribution in the operational area, standing in stark contrast to the distribution of fuel within the area, but foremost to DS. The second being that the infrastructure had been expanded which meant that bottlenecks did not occur to the same extent as in DS. One interpretation of this is that the lack of a plan for DS opened up doctrine and led to mission type tactics and the solving of problems on site. Faith in the plan in OIF may have made the holes in the plan less visible such as the lack of a head of distribution in the operational area, and the consequence of that was that the problems remained. OIF also lacked international support compared to DS which may have affected the host nation support received.

When determining what transpired for logistical culmination to occur, the results tell their own tale. Logistical culmination occurred as a combination of the factors researched, but foremost due to: Misunderstandings, a lack of resources, and poor communication between the levels within the logistics chain. Even though the factors behaved similarly but with different outcomes, an important factor which may have led to OIF reaching logistical culmination while DS did not, could have been the lack of a head of distribution in the operational area. What
stands out in both cases was the lack of transportation.

Kress seems to have been correct when he claimed that it is possible to make a direct link between under-responsiveness and logistical culmination if you look at the relationship between too much materiel versus too little materiel in the chain. Walldén, on the other hand, seems to have been right in claiming that over-responsiveness in an operational area may lead to bottlenecks which may in turn result in under-responsiveness in the area because of difficulties in accessing resources. This, however, does not seem to have as severe consequences as a general lack of resources.

The aim of the study is to enhance the understanding of logistical culmination and to see how this phenomenon arises. The study shows that the factors researched have an impact on logistical culmination, and that Kress’s theory describes the phenomenon well. Furthermore, it shows that an under-responsive chain may be more strongly linked to logistical culmination. In addition, it indicates that a balance between the state of overabundance and a lack of resources is desirable to avoid logistical culmination.

The cases studied are two good examples of problematic logistics chains. Both cases show the troubled relationship between logistics and strategy. They also highlight the optimization challenge of a learning organization as shown in the review of the field. Decisions made concerning the prioritization strategy had a negative effect on both conflicts and therefore require further exploration.

Case studies as a method facilitated an examination of this phenomenon by studying the factors involved. However, the scope of the study is limited and further research beyond the operational level is of interest to see where the origin of culmination lies.

This article is a first step in gaining an understanding of the variables that could be studied in the future to find the underlying mechanisms that cause logistical culmination. Kress’s theory is limited to logistical culmination while other theories use logistics as one of many factors for the culmination of operations and Kress’s theory shines a light on an aspect that has not really been studied before.

Through the eyes of logistical culmination, OIF’s logistics reached a culminating point. You might say that had the operation lasted longer, the logistical culmination may have led to a different outcome in the war since logistical culmination has a pivotal effect on operations and
dictates how operations can be carried out. The relationship between logistical culmination and the culmination of operations should therefore be explored further; for it is vital that logistical studies grasp the magnitude of logistical culmination to prepare for future conflicts.

**Lt. Jennifer Telby** began her military career in 2015 with basic military training at the armoured regiment P7 in the south of Sweden. After continued military training as a squad leader (OR5) for a fuel and ammunitions group, she worked as a drill sergeant for a year before starting Officers School at the Military Academy Karlberg, with logistics as a main interest. Today, she works as an instructor/platoon leader (OF1) for new recruits heading into logistical positions.

**Endnotes**


10. Ibid.


12. Ibid, 70.


14. Ibid.

15. Ibid, 72

16. Göran Walldén, *Logistisk Kulmination – En eller två sidor av myntet?* (D-uppsats,

18. Ibid, 72.


44. Peltz et al., *Sustainment of Army Forces in Operation Iraqi Freedom*, sxiv, 21, 90.

45. Ibid, 24, 27.

46. Ibid, 5, 74.


Military Women at the Escuela Militar de Cadetes ‘General José María Córdova’: Perceptions of Success

Carlos Andrés Díaz Irreño and William Guarnizo Medina

Abstract: This study provides a descriptive analysis of the variables that define the success of military women of the Escuela Militar de Cadetes “General José María Córdova,” according to the perception of female cadets. From a subjective perspective, it inquires on their sociodemographic and individual characteristics concerning success and their perceptions of determinants that intervene or not in women’s success, offering a general reflection that defines new lines of approach to advance in this area of knowledge. The data collection techniques used include documentary review, focus groups, and interviews involving the axes described.

Introduction

This document approaches subjectivity based on Cabrera’s (2014) fundamental question, what do subjects do? This question accounts for their practices and not their practices per se. It addresses how they traverse the social world, which leads to the compulsory formulation of the question: what do subjects do with what they are? These aspects approach their subjective world, individual histories, and collective constructions from their individualities. In other words, by the habitus collected from their family and academic education, and, ultimately, by what subjectively supports their specific way of seeing, being, and doing in the world.

Thus, the conceptual starting point of subjectivity, as addressed in this paper, is: how do subjects traverse the world with that which traverses them? Cabrera (2014) understands subjectivity as a sensory-perceptual framework structured from five axes: rituals, habitus, intersubjectivity, bodily alchemies, and modes of subjectivation. It is from these axes that the elements required to determine the subjective conditions that define the sense of being or not a successful individual are configured.

In the case of women, various social, economic, political, and environmental factors have framed their advancement toward the consolidation of successful life projects, all of them based on the consolidation of each individual’s subjective qualities and strengthened by their experiences. The paradigms of success have evolved significantly—women have gone from
performing activities related to domestic development to becoming agents of transformation in labor fields of great impact. In Latin America, including Colombia, women constitute 52 percent of the labor force (Atal et al., 2009) with a level of education that may have already surpassed men (Hertz et al., 2008). This change in the labor structure directly impacts how work and family/personal life is organized. In this sense, significant challenges have been established regarding the definition of a woman’s success as a personal stake in interaction with their context.

These changes are not foreign to military institutions. Since 1976, when women entered the administrative line, and with their entry into the armed forces in 2009, guidelines have been established for an institutional evolution based on strengthening the gender equity culture. This research places itself within recent, worldwide studies on military women, oriented toward studying the subjectivity of success.

Considering the studies carried out since the end of the twentieth century and the beginning of the twenty-first century on the growing participation of women in military scenarios. Moreover, the importance of advancing in the understanding of the subjective factors involved in the decision to choose military life associated with an idea of success, this study is relevant to the extent that it addresses a descriptive axis of analysis to characterize the success-defining variables of military women from a subjective perspective.

According to Ortner (2005) and Cabrera (2014), when inquiring about subjectivity, one must necessarily address, on the one hand, the interaction between social and cultural foundations that model, organize, and generate “structures of feeling.” On the other, the subjects’ internal states must be addressed: their modes of perception, affection, thought, desire, and fear, which encourage them to act. These can be observed as structures that shape the subject and lead the individual to develop one or another way of doing (Cabrera, 2014). Thus, the subjectivity of success investigates the interaction between the social and individual and success. In other words, it concerns what supports what success is for female military cadets and what it is to be a successful woman that ultimately leads them to develop a way of seeing the world and acting in it.

Methodologically, this study used a descriptive qualitative approach through focus groups, semi-structured interviews, and life stories. Thirty women, students at the Escuela
Militar de Cadetes “General José María Córdova” (ESMIC) participated in the first two techniques and four of them in the third.

The focus group and the life stories sought to identify the milestones that, from the participants’ perception, determine the representative qualities of a successful woman. These interviews also were used to inquire about the female cadets’ socio-demographic aspects. The recognition of their experiences is a component of analysis to move toward understanding the determining elements intervening in the interviewees’ subjectivities concerning the success of the military woman. Following this introduction, a brief balance will be presented of how the subject of study, military women, has been construed in research in Colombia and Latin America. Then, a detailed conceptualization will also be presented of the approach used to the study subject, followed by the analysis and results, and finally, the study’s conclusions.

Value System and Individuality

The axiological understanding of human beings’ values is the foundation of life in all its dimensions. Thus, in this first look, the human being is contemplated in a triple dimension: individual, social, and cultural. In this research, the analysis is focused on the individual dimension, referring to how individuals acquire their distinctive characteristics before themselves and others because, despite the similarities among humans, the differences are no less so.

From this same perspective, this study considers individual values related to the body, reason, affection, and human uniqueness: individual, moral, and aesthetic (Gonzalez and Diaz, 2017).

Following Gervilla’s (2008) definition, the following typology is presented:

- **Body values** are a set of desired or desirable qualities whose core is a person’s body or living matter in terms of hygiene, health, food, drink, rest, and movement. The primary values directly affect the animal-man with such urgency that their absence leads to weakness and even death, like food, health, rest. The secondary ones are appropriate for the body only as an improvement of appearance or a subject of pleasure or dynamism, like fashion, sports, wine, beer, soft drinks, among many.
• **Intellectual values** are a set of values whose primary point of reference is rational human nature in terms of content, process, or result; in the personal, material, and institutional order. Some are of particular urgency for human structure, such as knowing how to read, write, or subsist (search for food or clothing). Although essential to living as human beings, others, are more secondary, including speculative knowledge, creativity, reflection, criticism, and science.

• **Affective values** are those whose content refers primarily to affective or sentimental actions among humans. Some are so urgent that their absence leads to psychic deficiencies, sometimes irreparable, such as the lack of maternal affection in the first ages of life. Others are needs, always desired and essential, but of lesser gravity in human development, such as friendship or falling in love.

• **Individual or emancipative values** are a set of values that primarily refer to the person’s singular and intimate aspects, as well as independence and autonomy, including freedom, autonomy, intimacy, and independence.

• **Aesthetic values** are those that are desired or desirable because of their beauty in one or some of their artistic manifestations, like literature, music, painting, and sculpture.

• **Moral values** deal with ethical evaluation, that is, the goodness or malice of human actions in pursuing an end or task. They affect the person’s most profound intimacy and dignity, entering the individual’s personal and social action sphere. Among others, moral values include truth, honesty, justice, and honesty.

**Women as Research Subjects: Participation, Recruitment, and Selection**

Studies on the role of military women have been addressed from different approaches, among which leadership, identity, and participation stand out. Reginaldo Jerquer Sousa’s (2018) study addresses the women’s association that supported the military dictatorship in Brazil between 1964 and 1985. The women involved in this study were not military personnel; their link to military institutions was through the support they offered the regime and their proclivity toward supporting the armed forces’ intervention in Curitiba. Cerqueira observed the phenomenon of women’s participation, focusing mainly on their religious, civic, and cultural motivations. Given her work’s historical character, the sources were mainly archive-based, and
the method was documentary analysis. This work, together with other research, revealed that the woman-military binomial has been approached from enunciative areas, where women have not been protagonists, or deserving of consequences for their involvement in military matters, as is the case of Guavita and Sanabria (2006); Rodríguez et al. (2015); Sandoval and Otálora (2015); Cabrera et al. (2016); Prado (2016); Gómez et al. (2016); Stanley (2017); and Antunes et al. (2020). Although Cerqueira focuses on the phenomenon of participation, what she seeks to establish are the women’s motivations. Our proposal aims to provide further involvedness and detail to the motivations from the study of subjectivity’s perspective.

Fernández-Osorio et al. (2018), created a database of the sociological profile of the student population of the Escuela Militar de Cadetes “General José María Córdova” in 2018. This research is the closest to the one presented in this article; it addresses the subject of study in the same institution we investigated. Although this study does not offer methodological or conceptual elements, its data significantly advances secondary sources. This work addresses women’s participation and its development in the ESMIC, measuring the students’ opinions and behaviors in four areas: equity, training, support, and competitiveness. It should be noted that this study was conducted, taking the subjects’ opinions into account.

Carvalho et al. (2012) studied nurse officers’ recruitment and selection process for the Female Auxiliary Corps of the Brazilian Navy Reserve between 1980 and 1981. This qualitative social-historical study described the selection process of nurse officers and analyzed the incorporation of the approved nurses’ military habitus (Bourdieu, 2007). The article used documents and four nurses’ testimonies to evidence that the selection process involved a stringent synthesis of resolves by the female officers that endorsed male power. The study emphasized the selection process, overlooking the socioeconomic and cultural characterization to explain the previous habitus that predisposed these women to follow a military career. Thus, the habitus incorporated, reaffirming male power, appears as the result of the institution’s imposition on the subject of study. The present article proposes a more active role for these women, studying what elements are present and how a subjectivity of success is configured and put into play.¹

The researchers’ use of the habitus concept is noteworthy because it is helpful for the proposed research. This concept aims to show how officers and noncommissioned officers have
incorporated structures of thought and practices based on their previous experiences to appropriate and give meaning to their new experiences (Capdevielle, 2011), making the habitus a subjectivity of success.

Some research focusing on military women study issues that are not primarily associated with developing their role within the institution. For instance, they are associated with their work or family situation (Gómez et al., 2016) or how they perceive any given phenomenon of male personnel, as in Ruydíaz et al. (2017), which studies the military women’s perception of vasectomy.

Recently, studies focusing specifically on military women have been developed in Colombia. This is the case of Camacho and Contreras (2012), Caicedo (2017), Camacho (2018), and Husain and Muñoz (2019). The latter is similar to this proposed work. It focuses directly on military women in military settings, in the same ESMIC. However, its emphasis is on military leadership. Differently, the work by Camacho and Contreras (2012), although focusing on military, female students at the ESMIC, proposes a Gender Equity Observatory for incorporation and follow-up process.

Lastly, Caicedo (2017) and Camacho (2018) conducted two studies published as a book on women in the ESMIC, which are noteworthy because they compile more than five years of research on military women.

In this sense, the proposal presented in this article provides a novel approach to the study of military women in Colombia and the world. It contributes to gender studies from the perception of success as a category of analysis.

Subjectivity

Subjectivity refers to two sets of interrelated elements. On the one hand, the socioculturally constituted elements of sensibility, senses, thoughts, and meanings constitute embodied ways of doing, thinking, and feeling (Cabrera, 2014). On the other hand, action, practice, and experience shape subjectivity’s vital and constitutive character. This interaction explains the question: what do subjects do with what they are?

Thus understood, subjectivity encompasses ritual, habitus, intersubjectivity, modes of
subjectivation, and physical alchemies. Rituals are scenarios where socialization shapes experience, determining the categorization of reality. Habitus is the predisposed structure of meaning. Intersubjectivity, according to Foucault (1995, 1996), shapes the subjects by how they relate to themselves, to others, and the social world. Modes of subjectivation are the practices that form the subject and construct what the subjects are. Lastly, physical alchemies are the expression of the transformations that subjectivity operates and what we do to achieve it in the matter, that is, in the body. Now, success is understood as a stage of individual realization and satisfaction as a potential, a development, and a goal. In short, success is an immanent characteristic of a human being. The results of the methodological development process presented in the introductory section are presented below.

Results and Analysis

Socio-demographic characterization: The women surveyed were born between 1987 and 2003. Thirty percent of them were born and grew up in large families until their teenage years, consisting of at least three members excluding themselves. The remaining 70 percent grew up in a nuclear family, consisting of themselves, their father, and their mother (Figure 1a). Interestingly, 100 percent of the women surveyed experienced a subsequent separation and lived with a different family member, primarily a grandfather or grandmother. This information marks a trend in the cadets’ habitus, consistent with their satisfaction regarding their present situation in the institution. The latter is their priority over forming a family, either because they do not consider this option in their lives or perceive that the effort and dedication to their career do not allow forming a family.
The precedence given to professional development in the Armed Forces over forming a family is reflected in the low prevalence of women with children or a partner in the surveyed population. Thus, 97.5 percent of the female cadets had no children, while the remaining 2.3 percent had only one (Figure 1b); 87.5 percent did not have a partner, while the other 12.5 percent reported having one. Although some of the cadets considered starting a family, they considered it a distant alternative. In general, the cadets openly rejected this option because they consider that motherhood is not compatible with the life model they aspire to, where their military career is of the utmost importance.

Similarly, we inquired about characteristics associated with maintaining the household during the cadets’ childhood. The responses indicated that the household provider during childhood and adolescence was mainly the father and mother (75 percent), only the father (20 percent), or another person (5 percent) (Figure 1c). In 70 percent of the cases, the cadet and her mother performed the domestic activities during childhood and adolescence. In 20 percent, they
were performed only by the mother, 10 percent by a domestic employee, and the remaining 10 percent by another person. In no case did the father participate in the housework.

The dynamics described above, in which the paternal figure is mainly the provider, but is not involved in domestic activities, is far from the female cadets’ current situation at the time of the interview. Two perspectives could explain this situation, complementary to the purposes of this study. One is the military career as an option for personal success; the other is the growing trend of women’s participation in scenarios in which they were previously absent. On the one hand, the military career has an intrinsic rigor and a high level of time and energy investment, linked to the desire for success and professional development. On the other, the military career is viewed as a means for female cadets to break the restrictive dynamics of women’s labor in the home. On the contrary, it is associated with scenarios that were previously almost exclusively masculine.

The desire for success can be associated with multiple factors; however, in the surveyed cadets’ particular case, we inquired about the influence of their family in their decision and their socioeconomic stratum. Regarding the latter, 57.5 percent of the respondents stated that their family was located in socioeconomic stratum three during their childhood and adolescence; 30 percent were located in stratum two, 8 percent in stratum four, and 4.5 percent in stratum five (Figure 1d). In 85 percent of the cases, a member of the cadets’ family was part of the military. The remaining 15 percent did not have this figure. Of this 85 percent, taken for the time as a whole, 73 percent perceived that this military family member influenced their decision to pursue a military career; the remaining 27 percent did not. Together, these results indicate synergy between social standing and having a military figure in the family with a military vocation. It could be that belonging to socioeconomic strata 2 and 3 implies a yearning for economic and social improvement, stimulated by the immediacy to the National Army through a close relative, determined the decision to opt for a military career.

Another factor surveyed, which may be decisively associated with the vocation of the interviewed cadets, was physical performance. One hundred percent of the cadets reported high or superior performance in sports or physical education during childhood and adolescence. This result is significant considering that socially, female disadvantage in the sports field has been naturalized (Young, 1990; Moreno, 2011). In this sense, the motivation of the interviewed cadets
regarding their military vocation is favored by an intrinsic advantage associated with their
physical performance.

**Being a successful woman: perceptions:** Thirty semi-structured interviews were
conducted to identify the determining elements in the female cadets’ subjectivities regarding
their success in the institution. These involved the main characteristics assigned to women in
three developmental stages of their human life cycle, childhood, adolescence, and early
adulthood.

From this perspective, it is assumed that contextual models are more appropriate for
studying life trajectories, given that these are increasingly atypical (Degirmencioglu, 2000).
Hence, the convenience of analyzing the influence that historical and social variables have on the
lives of different generations (Ruíz and Baldivieso, 2002).

Some authors propose three sets of factors that influence the life cycle course: age-related
social expectations, historical influences, and unique personal events. The first two types of
influences are considered normative, influencing social identity formation in terms of belonging
to a society. The latter (non-normative) are not general; instead of an individual nature.
However, they also impact the individuals’ life cycle. All these influences interact with each
other, have cumulative effects, and can vary over time (Baltes, 1983 cited by Ruíz and
Baldivieso, 2002).

The definition of historical and social variables determining the human life cycle
configured an axis of analysis for this study to categorize the answers obtained in response to the
perceived characteristics that a child should have if born and raised during the same period.
According to the results obtained (Table 1), it can be said that the historical variables in the case of women were in categories related to individual values. That is, those that refer primarily to the person’s singular and intimate aspect and their independence and autonomy, including order, honesty, and femininity, among others. The results also reflected a greater number of characteristics associated with women than men within the social variables, especially regarding non-normative social variables that indicate compliance and a duty to be at the social level.

The normative social variables were similar for men and women. However, in the interviews, the female cadets mentioned that their upbringing and the characteristics required of them were not substantially different from those required of a boy. The main distinction mentioned involved the physical demands on boys or the patience and positive thinking on girls.

The definition of what constitutes success in a professional or personal environment is
subject to different elements. Dyke and Murphy (2006) found that success and job satisfaction in women yield varied results. Men preferred material success when comparing definitions of success between successful men and women and relating them to satisfaction, while women found finding a *balance* more important. However, when the femalecadets were asked what characteristics women have, or should have, to be considered successful, they responded using the keywords shown in the following figure.

![Word cloud on perceptions of characteristics of a) successful and b) unsuccessful women](image)

**Figure 2.** Word cloud on perceptions of characteristics of a) successful and b) unsuccessful women

These women perceive that success is mainly related to dedication, concentration, transparency, persistence, simplicity, and efficiency, categories framed in the personal and work environment. The categories in Figure 2 show the importance of balance for the interviewees in successful women and its fragility for unsuccessful women, the latter characterized by disorganization, arrogance, irresponsibility, and laziness.

Although the cadets were clear on their personal development and not wanting to start a family or be mothers, they also categorized this aspect as one of the greatest sacrifices they have to make in their military career. They claimed that “missing their family life” was one of their main challenges.

In this sense, from the interviewees’ perception, the configuration of subjectivities as successful military women involves aspects developed from an initial life cycle stage (as children and adolescents). It is configured in adulthood with the strengthening of values related to dedication, transparency, and concentration to achieve a balance between professional success and family life.
Conclusion

The female cadets’ prioritization of their military career over having a family is configured from their personal experiences; thus, they do not consider motherhood an option compatible with the life model that their military career implies. Given their desire to achieve professional success in the National Army and the fact that female performance scenarios are increasingly broader, the cadets’ current lifestyle differs significantly from their childhood, where the paternal figure was uninvolved in domestic activities and mainly a provider. This motivation results from the synergy between the desire for economic improvement and the influence/presence of a family member in the military forces, favored by an intrinsic advantage associated with the female cadets’ high physical performance.

In summary, the subjectivity of success of the Escuela Militar de Cadetes “General José María Córdova” students is directly related to their work and personal goals. At this level, they recognize the challenges of defining a military career as a life project.

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References


**Endnote**

1. In methodological terms, this study sheds light on the process we developed here. As shown in this proposal’s methodology, we opted for the use of life history. However, we consider that the sample used by the cited article is unrepresentative to support its conclusions. Therefore, although only a few life histories can be carried out, the work must be complemented with structured interviews and surveys to inform us resonantly on the data we require.
Correlations between Academic Literacy and Second Language Learning

Timóteo Salgado Pereira Pinto

Abstract: This article, from a conceptual learning perspective, intends to investigate some of the correlations between the mother language literacy and the learning process of a foreign language. The theory of critical literacy and the propositions of divergent behavior between oral and written Portuguese are taken as assumptions. Based on these theoretical premises, and by reviewing the production of other researchers, it is understood that it will be possible to establish a line of understanding about some relevant factors in the process of learning Spanish as a foreign language by Brazilian students. In order to reach its goals, the research was developed based on current Military Academy of Agulhas Negras (AMAN) disciplines’ evaluations and other researchers’ theoretical interpretations. In summary, the present study intends to understand if the level of literacy of the learner is real and relevant towards a different systematization of thought. In this case, individuals with higher education, native speakers of Brazilian Portuguese and Spanish language learners.

Keywords: Literacy; Brazilian Portuguese; Spanish Language.

Introduction

The present study comes from this researcher’s persistent pondering and intends to study the existing correlations between mother language literacy and the process of second language acquisition (SLA). It is commonly believed that, in theory, an apprentice who is erudite in its mother tongue will be in better conditions of going through the SLA process than an apprentice who is not that well literate. To be a little bit more specific, there is also the idea that the proximity between the Portuguese and Spanish language is an element that makes it much easier for Brazilian students to learn Spanish as Foreign Language (SFL).

The present research studied a group of cadets from Agulhas Negras Military Academy, in Brazil (AMAN - Academia Militar das Agulhas Negras). AMAN is a university-level institution that forms combat officers for the Brazilian Army’s warlike line and graduates them with a military science degree. The mentioned institution has a student department of about 1,600 cadets.
The Military Science Program has a duration of 5 years, in which the student learns both technical subjects and academic subjects related to humanities and exact sciences. Yearly, about four hundred new officers graduate from AMAN.

As a requirement to enter this graduation program, between many others, students must prove basic knowledge of English, which are assessed by public organizations. Throughout the course, together with language subjects, their mother tongue (Brazilian Portuguese) and two other foreign languages (English and Spanish) are mandatory. The foreign languages’ pedagogical path is traced in order that the student can start from a basic level and develop to the intermediate level.

In 2021, the Brazilian Army has been appreciated regarding foreign language learning, considering even the possibility of establishing a level of proficiency of one or two up-to-date foreign languages that would be a requirement for graduation of the whole course. Although it is not yet a requirement for their graduation, the goal is that the cadets become certified, in level B1, by the Common European Framework of Reference for Languages (CEFR) until their last year in the program.

Assuming that well-educated people present easier comprehension of various linguistic systems, this investigation’s goal was to explore the existence and strength of relevant relations between Brazilian Portuguese (BP) literacy and the learning of the Spanish language (SL). To do so, a theoretical review of the process of learning a second language was done from a conceptual perspective.

Concepts concerning what is understood as academic literacy were reviewed, as well as the researcher’s observations about the difference between spoken and written Brazilian Portuguese. After that, academic results on language subjects (Portuguese, English and Spanish) obtained from the researched group were collected in order to statistically analyze the results presented by cadets’ results in different subjects. Pearson’s correlations were the method used to deal with statistical data, in order to confirm or disprove the research’s hypothesis.

The existence of intercomprehension between languages of same origin is notable. This was a theme studied at Aarhus University, in Denmark, and was published in Houaiss’ Comparative Grammar – Four Roman Languages. What Britto (2010) questioned was that with previous simple learning and keeping the highest cultural level as possible, it is possible to
achieve a good comprehension level between speakers of same-origin languages.

Nonetheless, Brazilians find the Brazilian Portuguese and the Spanish language very similar (Fanjul and González, 2014), which usually appears as untrue. It is known that learning a new language is not only about learning words (Negueruela, 2010), therefore it is understandable that the linguistic systematization of mother tongue takes up a very important role in the process of learning a new language (Negueruela, 2010). That can be justified by the fact that, initially, the student tends to express itself in the foreign language by using structures learnt in its mother tongue (Negueruela, 2010). It is also notable that many difficulties in comprehending the new language are many times due to the inability to understand a distinct structure existent in the language being learnt (Negueruela, 2010).

The present research is justified by the increasing questioning and theoretical evolution of the best way to teach a foreign language. The study intends to investigate the possibility of existing a strong connection between high literacy levels and almost effortlessness in ASL. Assuming that Brazilian Portuguese literacy is used to transpose mental metaphors in order to manage the target language while in the learning process.

It is considered that new hypothesis regarding contact and dissonance between Brazilian Portuguese and Spanish language will be able to develop throughout the methodological assumptions here suggested. This research has started from a comparative perspective of the performance in languages subjects. In order to understand the terms “literacy” and “literacies,” the denomination of Souza (2011) was used. According to the author, teaching literacy is the process of mediating the process throughout which a human being develops and interacts with its social environment.

It is believed that the present research will contribute to other academic researches that are investigating the acquirement and learning of languages. It is believed that this research and the increase of researches in this field will be able to fund grounds to improve teaching practices.

The general goal of this study is to ponder on the existence of correlations between Brazilian Portuguese and the Spanish language in the learning process of a target language based on the learning perspectives of concepts (Negueruela and Lantolf, 2012) and the theory of critical literacy (Souza, 2015).
Apart from that, a specific goal is presented: Consider the dissonance between Brazilian Portuguese and its oral and written forms and the influence that this has on the learning process of the Spanish language.

**Theoretical Frame of Reference**

This part will present three theoretical foundations to justify the present research. First, we will deal with the mental conceptions and mind metaphors (Negueruela, 2010). After that, concepts of the theory of literacy, according to Souza (2011) will be exploited. Lastly, this unit will end with the addressing of the Kato’s (2005) and Avelar’s (2006) observations on the divergent behavior between written and spoken Brazilian Portuguese.

It is believed that the comprehension of the fundamentals mentioned will make it possible to establish a train of thought to guide us into understanding the subject studied and the formal domain of the Brazilian Portuguese language from the perspective of the cadets of AMAN.

**1. Conceptual Learning and Thinking Through Metaphors**

“The object of knowledge does not have a pure essence out of the approach which forms its basis. As a result, we think that aspects of what really defines "a language" overshadows can be enlightened by the comparison with another definition.” (Fanjul and Gonzalez, 2014)

Language is the foundation of our thoughts (Negueruela, 2010). It is through language that humans organize the way they think. In other words, the systematization of a language is part of the many elements that influence the way humans think. That being said, language is used to represent reality and is part of the process of negotiating definitions. Negueruela (2010), mentioning many researchers (Ressy, 1979; Lakoff and Johnson, 1980; Gibbs, 1994; Stenberg, 1990; among others) points out that the human mind has been determined through metaphors that try to explain its complexity. Such metaphors, pointed out by Negueruela, are tools created by humans to mediate their relationship with the world (2010).

Negueruela (2010) points out the importance of the concept process in the comprehension process of different linguistic functioning. The author, when applying these ideas into the teaching of LE, insists that it is necessary to create functioning concepts in order to understand
the behavior of the target language. In a brief way, when the concept of linguistic functioning is comprehended, the way of organizing a tool becomes the same one capable of managing it.

This approach leads us to partially imply that the more conscient of the functioning of linguistic processes as a thinking tool, better will be the student’s condition to go through arrangements, use allusions and metaphors, conceptualize, restructure the way of thinking and understanding the way others think, now through LE.²

By addressing a specific case of connection between PB and LE, Fanjul and Gonzalez (2014) assure that both languages approach and move away from each other, alternating between points of contact and on opposite points; not only due to the definition of words, but specially by its functioning. The same authors (Fanjul and Gonzalez, 2014) when speaking of researched objects’ definitions note that any scientific approach, linguistic or not, is a cutout. Thus, it would not be possible to envision the utter truth. Therefore, a linguistic study is not only a cutout, but a controlled point of view about verbal and its semiotics.

Therefore, when meaning to study languages or, in what is the case of this specific research, investigate the relations between mother tongue and a second language learnt, it is considered the study of a cutout as a structure of thought transforming itself when receiving information from another possible systematization. Language gains its character as part of national identity since it is embedded in the way humans think and express themselves (Clavet, 1996; and Fanjul and Gonzalez, 2014). In other ways, it is asserting that teaching a foreign language is part of its culture, history and identity is taught with it. It is notable that the teaching of languages can be transformative to personal identity in the same way that it is learnt from the already built-up identity.

Speaking of the functioning relations between languages in contact, Castro (2002, and Terra, 2009) states in his work from a Vygotsky perspective that language students broadly use their mother tongue’s grammar system as backup to interpret and break the LE code. Comprehending the functioning way is also an issue questioned by Fanjul and Gonzalez (2014). These authors affirm that the assumption of the methodological principle of contrast and functioning points out genuine inconsistencies on the level of meaning and definition between PB and LE.

Besides the assertive stating that language is the main tool of mediation between man and
reality (Negueruela, 2010), it is possible to assume that apprentices will access knowledge in PB and LE to find meaning (Morin, 2015). Therefore, the development of a new mediation tool by use of thoughts (LE) will happen in a non-linear form (Santana, 2015) mediated by the pre-existent tool, which in the case of this study is the PB.

The French philosopher Edgar Morin develops a philosophical epistemology that emphasizes the need to face the phenomena in an unsimple way; a need to accept any possible contradictions and fight the simplifying thought. Many authors such as Oliveira and Paiva (2005),

Bruno (2005) and Santana (2015) have been studying Morin’s thoughts in order to impose such concepts when comprehending the process of learning/teaching languages. Such researches encounter literacy, which does not have emphasis in language as a strict rules system but in definitions.

In his work, Bruno (2006) sustains that learning doesn’t happen in a linear and rising way but quite the opposite, the person interacts simultaneously between the presumed layers of learning: morphology, syntaxis, semantics, pragmatics, and speech.

It is understood that as language is a priority tool for the relation between humankind and the world, it takes action on the identity and transformations of an individual. Therefore, it is believed that there are open doors to study the way a being moves itself and its thoughts in the complex web that is the learning of a foreign language, especially with two languages that appear so close but also so distant.

Moreover, it is believed that comprehending some phenomenon through which negotiating definitions goes from one language to the other is important. Once again returning to the initial hypothesis that individuals with higher literacy levels will, in theory, be more capable of absorbing new mental representation maps in LE, even if in a complex and nonlinear maze.

2. Literacy

The present research follows the literacy concept from Souza (2011). The author describes the interpretive process applied for language in which the negotiation of meaning takes place, since Saussure (2000) well-defined the sign as arbitrary. The individual’s sociocultural
The prevailing use of the term **literacy** that appears in the Brazilian educational context substitutes the word in Portuguese **alfabetismo**, with same meaning but that is more similar to scholar education, which refers to phenomenon linked to its historical aspects (Buzato *apud* Souza, 2011). When in plural form, “literacies” refers to the different practices and technologies used in the process of negotiating sociocultural definitions.

The use of the term "to letter" instead of any other Portuguese variations shows a different perspective of the process, since the meaning of lettering goes way past only teaching someone how to read or write. According to Souza (2011), lettering is the mediation process through which a person develops and interacts with its social environment: the world.

In order to support the definitions of the term literacy we recall that the definition is not in the words, but in the meanings assigned to it (Bakhtin [1929]/Voloshinov [1981], and Souza, 2011). Therefore, the recurrent use of the word and in different contexts of the word literacy does not always mean they will have the same definition. In a way, it is also possible to observe the use of the word with meanings getting more and more similar to the word **alfabetização** (educational knowledge).

In order to distinguish and place the concept beforehand, the term used is critical literacy (Brasil, 2006). In this term, the word “critical” adds the meaning of criteria, giving thorough thinking into the negotiation of definitions. The present research is based in critical literacies, so the use of academic criteria was chosen in order to quantify the literacy level and ponder the possibility of correlations between mother tongue and foreign language in the learning process.

### 3. Divergent Behaviors—Brazilian Portuguese Spoken and Written

Brazilian Portuguese carries in it a series of particularities that defines it as a language different from the European Portuguese. As claimed by Fanjul and Gonzalez (2014), more than just a simple variation of the Portuguese language, Brazilian Portuguese presents heterogeneous characteristics of linguistic functioning when compared to European Portuguese (EP).

One of the characteristics of BP is the fact that the spoken language seems to have a different type of grammar from the language taught in the educational system (Avelar, 2006),
which can be noticed in written and formal language. In his work analyzing grammar, competition and patterns with the verbs have and exist, Juanito Avelar (2006) gets support from Kato (2005) and argues that in the case of PB speakers, the learning process of the written language happens in the same way as the ones observed in the learning process of a second language. At another point in the same work, he states that:

“If we observe that in Brazil the written language tends to have as target or earlier stages of the language or the European Portuguese form (even though the final result is neither one or the other, as highlighted in Kato, 2005), it becomes easy to imagine the reason why exist is dominant and have has the tendency to be suppressed by the written language.” (Avelar, 2006)

There is no instrument as specific as the variations between have and exist being used in this research. Nevertheless, we believe it is possible to build on conceptions placed by Kato (2005, and Avelar, 2006) that in Brazil today there are latent differences between the Brazilian Portuguese naturally acquired in a biological way (oral) and the Brazilian Portuguese learnt in school and that will be used mostly for writing. Using words from Kato (2005), we can see that:

“Unlike in Portugal, Brazil has the speaking "grammar" and the written "grammar", which are so different that the learning process may seem like the one of a second language. This case is a little bit more problematic because there is no comparative research between the linguistic knowledge that a child brings to school and the knowledge from contemporary literates. Such comparison could help the school in its literacy duty” (Kato, 2005)

The work done by Avelar (2006) addresses the relations between written and spoken PB. Speaking specifically of difficulties encountered by Brazilian students of LE, Celada (2002, and Faujul and Gonzalez, 2014) exposes challenges that a Brazilian who studies LE has to face, as we can see:

“While in the learning process of the Spanish language the material functioning of this language in speech affects Brazilians by the constitute contradiction that its subjectivity withstands for taking in the non-continuation between writing and speaking that was created in Brazil as a fundamental effect of a colonisation process” (Celada and Fanjul and Gonzalez, 2014)
All in all, what we partially imply from the work of Kato (2005), Avelar (2006), Fanjul and Gonzalez (2014) is that the more literate Brazilian will probably have broader and maybe even more diverse linguistic resources than the PB speaker that is less literate. This is due to the distinct bias held in each strand of PB, oral or written, being used as a tool of thought.

Survey Methodology and Data Analysis

The first step of this research was to gather simultaneous studies through scientific articles and published books. The reading and indexing the pieces used as reference was done at this stage.

After the stage of theoretical basis, data collecting started. In order to quantify the level of literacy, academic results presented by the surveyed public was used. Academic performance grades from the language subjects at AMAN (Portuguese, Spanish and English) were collected and noted. Although the studies of relations with the English language were not part of the goal, the language was included in order to shade conclusions when considering the apparent proximity between the functionings of PB and LE.

The criteria used was that all individuals must have had done the same exams. The grades included in the mentioned criteria were from subjects attended in 2018 and 2019. Therefore, after crossing data the sample maintained 394 individuals with valid data for the survey.

Of all the collected data, the distribution of grade frequency can be checked first. The grades in Spanish came out very close to what is considered normal (Field, 2009) and with a 7.91 mode. This can be observed in Image 1. On the other hand, academic results in Portuguese show a 7.55 mode and can be observed in Image 2.
By analyzing in a simple way, it is believed that such data validate the use of the measurement criteria for academic literacy. Such perception is confirmed by the public’s
behavior presented in both evaluations. The mode shows itself very close to the arithmetic average and in both cases there are more results in the same range of grades and with a variation considered as natural (Field, 2009).

“Pearson correlation” was applied to the remaining data of the 394 individuals (Field, 2009). Data processing led us to the following results:

![Pearson correlation table](image)

**Image 3. Pearson correlation applied to data of the 3 languages subjects**

Data processing was done in order to verify the possibility of existing relations and in which level of importance and relevance. If on one hand we consider the results from 394 individuals, on the other the items used (the subjects) were the grades in regular Spanish, English and Portuguese courses.

As seen in Field (2009), “a correlation is a measurement of relations between linear and variables.” Therefore, it is clear that the present study does not seek a relation of cause and effect; it seeks covariants that can help clear some hypothesis.

The same author (Field, 2009) affirms that data obtained from performance tests are parametric and therefore Pearson’s correlation may be used. In addition, he clarifies that in a scale from 0,000 a 1,000 the values obtained will represent such level of force according to the following: values of 0,100 and 0,300 represent a small effect; between 0,300 and 0,500 represent medium effect; values over 0,500 represent large effect. Result number 1 will represent a perfect correlation. Another way to place this would be by saying that when one of the variables moves
when compared to its average, the other also moves with some level of force. In this article, the choice made was to use the following to classify force effect: weak, medium, and strong.

Enforcing what was placed by Field (2009) to the present study, what we can imply from the obtained tests is that there is a correlation of medium force between performances obtained from the subjects of Spanish language, English language, and Portuguese language. Notice that the relation established between Spanish language and English language to the public under research is of two foreign languages, therefore approaching a weak relation is understandable.

Another result to be examined is the level of significance. The level of significance expresses the possibility of an incidental result. The lower the result of p, higher the prospect of the result not being out of chance, therefore the probability of the correlation being true. In the specific case the data obtained was of all correlations having p<0.01, which shows high level of significance in between the variables and their force correlations.

**Final Considerations**

It is known that no research is absolute. Any survey is a cutout. The use of academic results was believed to be the most relevant to measure literacy of the target audience, thus collecting the data of the highest number of cadets as possible in a homogeneous form. Therefore, one of the objectives was to bring us the closest possible to what could be true.

During the research there was use of ideas from thought metaphors (Negueruela, 2010) of literacy (Souza, 2011). The ideas of intercomprehension (Brito et al., 2010) also helped put together the mindset for this study. Concepts of Fanjul and Gonzalez (2014) were fundamental for understanding the existence of similarities and inconsistencies between PB and LE.

The present research used the assumptions presented in other studies that seek a relation between literacy and learning a second language, from which we can mention Weinstein (1984), Souza (2011) and Terra (2009). Such sources trivialize the principle of concerns that led to this study. Recalling some important steps for our theoretical foundation, we believe that it is possible to affirm the existence of a relation between a level of academic literacy in Brazilian Portuguese and the learner’s performance in Spanish language.

It is important to highlight the “medium force” result found when linking Brazilian
Portuguese and Spanish languages. Such result stands out for being different from the popular concept of Spanish being an easy language for Brazilians to learn. This popular concepts approaches the ideas of intercomprehension, like the one suggested by Brito (2010).\textsuperscript{3} We understand, however, that the results show a reality seen from teaching practices, the one that shows differences in linguistic functioning (Fanjul and Gonzalez, 2014). It is very common for a teacher to come across difficulties which were believed inexistent in the learning of Spanish language in a classroom. It is also common for the perception of real difficulties to understand where and when Spanish behaves structurally different from Brazilian Portuguese.

Then how can we sustain the argument that an individual that is more literate in BP shows better results than a less literate? How can we affirm this considering that the systems function differently? What happens is that there is a smoldering divergence between spoken and written Brazilian Portuguese (Kato 2005; Avelar 2006).

Brazilian Portuguese in its written form is what is actually taught during school years. This version still keeps in it some relations with the archaic Portuguese and is a little more similar to the European Portuguese. If this insight is correct, we can come up with two other hypothesis: The first is that European Portuguese is more similar to the Spanish language, maybe even because of geographical proximity; the second is that written Brazilian Portuguese somehow has direct proximity to Spanish language. In both cases, the hypothesis could explain part of the reason for the survey’s results.

In fact, these hypothesis could have been studied in other researches. In summary, it is understood that Brazilian Portuguese has more similarities with the Spanish language when in its written than spoken form. Consequently, individuals with higher scholar level or with better writing ability in Brazilian Portuguese tend to have a faster and easier understanding of the terms of Spanish language functioning, meeting the concerns of the research.

Considering that this relation is true, it is believed that this work can lead to some consequences in teaching. Firstly, the teacher will be able to assume that some concepts of Brazilian Portuguese (mother tongue) should be dealt with in contrast or comparison to the Spanish language (target language). After that, the hypothesis brought up is that the Brazilian Portuguese language course curriculum can be changed in order to aim at relevant aspects that seek a literacy level able to help learn the Spanish language.\textsuperscript{4} A third possibility to use the
performance in Brazilian Portuguese as criteria to level students for Spanish language classes.5

Without intention or possibility to clarify all details of the relations between Brazilian Portuguese and the Spanish language, it is believed that at least the previously proposed targets can be reached, apart from raising new hypothesis of applicability for classroom teachers.

There is space for other researches that can study aspects in a more precise cut out that the one suggested in this study, as well as the possibility of applying this thinking to the English language in relation to Brazilian Portuguese. Finally, the role of the mother tongue is relevant in the process of learning a new language, according to the level of literacy that influences the capacity of establishing new connexions and linguistic systematizations.

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Endnotes

1. Cadet is the title given to students training to become an officer in the military.

2. In this present case, the Brazilian Portuguese.

3. Even if the popular concept is distorted and not exactly what the author mentions in his work.

4. Highly possible in an academic course.

5. Highly possible considering the situation at AMAN.
A Foundational Approach For Skill Retention

Francis G Murray and Sean M Murray

Introduction

Training of future officers presents unique challenges for initial military educational institutions, especially for procedural skill retention. With the continuing increase of new subject areas to address, such as ethical, cultural, and cyber topics, it is not practical to suggest military institutions add instructional requirements to their current scheduling load but rather use formal methods to modify current instructional techniques. Although officer training is continuously reviewed and improved, the current system does not adequately address the decay of skills for new officers after BOLC-A training is completed. The initial training of future officers has a unique characteristic since there is often a significant period of inactivity after receiving their commission and when the new officers start their active-duty training. Although the examples presented are in the context of Army officer training, the issues discussed apply to any military service for any country and has applicability to non-military domains such as education and medicine. Based on current research, this article will suggest methods that military academies can utilize to aid the retention of procedural knowledge of Army-designated Basic Officer Leaders Course (BOLC-A) Common Core Tasks. These methods include overlearning and attention activities during academy instruction and post-academy exportable training products that utilize spaced repetition and testing methods for reducing skill decay.

Initial Military Training

The United States Army Training and Doctrine Command (TRADOC) oversees training of Army forces and the development of operational doctrine. As a component of TRADOC, the U.S. Army Center for Initial Military Training (USACIMT) is responsible for all initial entry training. USACIMT approves new officer indoctrination and education prior to an officer’s first
unit assignment in the Basic Officer Leader Course (BOLC) that consists of two phases: the Pre/Direct Commission phase (BOLC-A), and the branch specific training (BOLC-B). BOLC-A training is conducted at the United States Military Academy (USMA), Reserve Officer Training (ROTC) training programs at civilian colleges, the Officer Candidate School (OSC), and a few direct commissioning programs such as for medical doctors. By having USACIMT approve each training program, the Army ensures each new officer has a standard set of competencies for all commissioning sources. Each training program is responsible for ensuring that a list of Common Core Tasks (CCTL) is trained according to UASCIMT standards. The Common Core Tasks consists of seventy tasks with nested layers of subtasks and are classified into four groups: Leadership and Army Professional, Mission Control, Operations, and Training. The tasks have varying levels of knowledge retrieval, cognitive, and perceptual-motor components.

Upon being commissioned, the new officer attends branch (e.g., Infantry, Armor, Signal, etc.) specific training upon entering active duty. In some cases, a task is simply introduced in BOLC-A and then train to proficiency in BOLC-B. Although this process provides consistent, standardized training before an officer’s first unit assignment, a delay commonly occurs between the end of BOLC-A and the beginning of BOLC-B training. This delay, often more than six months, is significant because the new officers do not have any official training resources to maintain proficiency in the BOLC-A Common Core tasks. The military academy/ROTC/OCS units are responsible for training up to graduation and commissioning. The individual Army branches are responsible for training when a new officer enters active duty. No organization has oversight for the period from commissioning to the first day of active duty. This issue could be addressed by a set of exportable training packages developed by BOLC-A institutions to promote skill retention of BOLC-A tasks.

The Issue of Skill Retention

The Army has consistently recognized the issue of skill decay, and mitigation methods are especially evident in aviation with currency requirements for flight time, night vision goggles, hoist operations, and risk assessments. And skill proficiency has always been a concern when mobilizing National Guard and Reserves units for active duty and preparing active duty units for deployments. The knowledge gained in addressing these concerns has a significant
importance when considering skill retention issues for initial military training of new officers.

An Institute of Defense Analyses report completed by Marshall J. Farr in 1986 provides a robust framework for assessing skill decay in the training of military cadets. He reviewed more than two decades of research relating to long-term retention over periods of nonuse. He identified the degree of overlearning, task complexity, retention interval, and testing/retrieval as key influences. He identified “instructional strategies (conditions of learning) which promote long term learning and do not have an adverse impact on learning.” This report highlighted the critical aspect of the problem to be addressed here: “There are occasions in all the military services when personnel who have just completed their training do not receive an opportunity to practice or use their new capabilities for weeks or months.”

A 1999 study by the Army Research Institute (ARI) summarized over 25 years of work on skill retention and expanded the scope of Farr’s 1986 report. The study provided methods for predicting skill decay depending on different types of skills and tasks. A 2013 educational monograph reviewed ten learning techniques in detail and provided recommendations about their relative utility. This work addressed general learning for students in the educational system and did not concentrate on procedural tasks, but many of its recommendations apply for military academies. The two highest recommended learning techniques, practice testing, and distributed practice, are consistent with recommendations from other studies.

Several medical studies focused on alternatives to the traditional teaching method in which a teacher describes and demonstrates a procedure, and afterward, the students practice. One alternative matched to the context of common core tasks is the teaching approach for the acquisition of procedural skills developed by Walker and Peyton. This method uses a four-step system of demonstration, deconstruction, comprehension, and performance. Peyton’s Step 3 has been identified as the most crucial part of the approach offering more benefit than a mere repetition of skills demonstration.

One study of emergency medical care showed a consistent rate of skill fade within emergency care, beginning around eight weeks and the highest decline at six months. This study identified that different instructional methods do not seem to reduce skill fade when used in isolation, suggesting multiple teaching methods with frequent retesting are required to ensure competency.
Military Tasks

The 1999 ARI study identified three abilities commonly required in military tasks:

(1) ability to retrieve from memory previously learned knowledge (job-related facts, rules, terminology, order of steps to be performed in a procedure, etc.),

(2) ability to combine incoming information, evaluate a situation, and decide among alternative courses of action, ability to execute the chosen action or procedural step in a sufficiently skilled manner.\[^9\]

The first ability, knowledge retrieval, is critical in most military tasks, often referred to as procedural tasks. The individual must remember job-related terms, rules, and task step sequences as they complete a task. The second ability is common in evaluating equipment malfunctions and tactical decisions and is referred to as cognitive tasks. The third ability is critical for perceptual-motor tasks that must be performed in time-sensitive conditions. Retention varies for these abilities since they are the function of different parts of the brain: verbal knowledge of knowledge retrieval is encoded in the neocortex, cognitive tasks are concentrated in the frontal lobe, and perceptual-motor tasks are primarily a function of the cerebellum. The retention of different military tasks is affected by what part of the brain is most active in the task. Research has shown that procedural tasks show the most significant skill decay due to the knowledge retrieval requirements. Failing to remember all components of a military task can have severe consequences.

One of the deadliest “friendly fire” incidents in recent U.S. military history occurred in Afghanistan in 2002 and involved the use of a global positioning system (GPS) by a U.S. soldier. The soldier provided coordinates displayed on the GPS for an airstrike involving a 2,000-lb satellite-guided bomb. Instead of hitting an enemy outpost as intended, the bomb landed on his own battalion command, injuring and killing many. While this soldier’s military training had taught him well that the GPS defaults to displaying its own location’s coordinates when its batteries are changed as he had just done, he used those coordinates anyway.\[^10\]

Knowledge retrieval consists of two different types of retrieval: recognition and recall. Recognition involves identifying a correct choice among alternatives and typically involves a slow rate of decay. Recall involves remembering a correct answer without options may show
more than 20 percent less performance than a recognition task after 28 weeks. The performance component of military tasks may be a discrete activity called a procedural task, a cognitive process, or a continuous activity such as tracking a target called a perceptual-motor task. Research has shown more loss of proficiency over time in procedural tasks than cognitive or perceptual-motor tasks. Service personnel recalled to active duty for Desert Storm showed less skill decay for perceptual-motor tasks than procedural.

An academic research paper focusing on the retention of critical combat skills of pilots suggests four task factors are essential for skill retention: complexity, demand, memory aids, and stress. Retention is good with complexity between five and nine steps but decreases as the number of steps increases and is very difficult if a task has 15 or more steps. Retention is more difficult if a task requires one correct sequence, and tasks with built-in feedback improved performance. Recall of no more than 4-8 memorized facts is desired as retention degrades as the number of items required to be recalled increases. It should not be surprising that the research has shown that demand processing large amounts of data is more susceptible to skill decay.

Memory aids, including checklists, labels, and mnemonic devices, greatly support skill retention. Conversely, performance decreases significantly with stress from task time limits, combat, or other safety considerations. Tests conducted with artificially imposed stress factors may be better indicators estimates of skill proficiency.

**BOLC—A Common Core Tasks**

Every aspiring Army officer is aware of the importance of preparing for active duty by being physically prepared and proficient in land navigation and marksmanship. These skills are necessary but not sufficient. The BOLC-A Common Core Tasks identities those skills that ensure a newly commissioned officer can excel during their initial Branch qualification.

At the highest-level tasks are simply layered levels of knowledge retrieval. Each task has associated Enabling Learning Objectives (ELO), with each ELO having associated performance measures that measure the learner’s ability to perform the ELO to the standard. Since the performance measures list a GO/NO GO criterion list, it is critical a person can remember each of the steps for completing a task. For example, Task 36. Identify Army Special Operations Forces
consists of seven knowledge retrieval subtasks for the Enabling Learning Objectives (ELOs). One of these, *ELO #7, Articulate the ARSOF Core Activities*, involves performance measures requiring retrieving a list of ten activity terms and their associated definitions. As mentioned earlier, knowledge retrieval tasks are most susceptible to skill decay.

Even tasks that are primarily cognitive or perceptual-motor activities are constructed at the first level as a nested list of retrieval requirements. Although it is listed as one task, the perceptual-motor task, *Task 66. Perform Hand-To-Hand Combat*, consists of nine ELO sessions, with each session requiring up to six techniques. And each technique requires multiple steps. For example, the *Straight Arm Bar from the Guard* technique requires five steps.

Fifty of these tasks are trained at the Academy/ROTC (BOLC-A) level, with the remaining trained on active duty (BOLC-B). While fifty tasks may not seem overwhelming, these numbers are misleading as each task may consist of several subtasks. For example, just one task, *Task 62. React To Chemical, Biological, Radiological, And Nuclear Attack/Hazard*, includes the following subtasks:

1. Maintain your assigned protective mask.
2. Perform protection steps using your assigned protective mask.
3. Conduct personal hydration while wearing your assigned protective mask.
4. Perform protection for yourself.
5. Conduct decontamination procedures for your skin.
6. Conduct decontamination of individual equipment.
7. Detect liquid chemical agents using M9 detector paper.
8. Identify liquid chemical agents using M8 paper.
9. Employ a marker kit for CBRN-contaminated areas.
10. React to a nuclear attack.
11. React to chemical or biological (CB) hazard.

Each subtask includes performance measures. For example, the *ELO #4 React To Chemical Or Biological (CB) Hazard*, includes these performance measures:
1. Identified automatic-masking criteria.
2. Protected self from C/B contamination.
3. Gave the alarm.
4. Took cover and moved at least 300 meters up-wind.
5. Decontaminated exposed skin as necessary.
7. Decontaminated individual equipment as necessary.
8. Notified the supervisor of any C/B hazard markers.
9. Continued the mission.

NOTE: In step 5, only the fact that the soldier decontaminates him or herself is evaluated. But to do this, the soldier must perform more steps. The actual conduct of decontamination is evaluated in Task 031-503-1013, which has the following performance steps:

1. Assume MOPP3.
2. Decontaminate skin using the M291 decontaminating kit.

This also includes one danger comment, four cautions, and one note.
   a. Decontaminate hands, face, and the inside of mask.
   b. Assume MOPP4.
   c. Remove the decontaminating powder.
3. Decontaminate equipment using the M295 decontaminating kit.
   a. Use the first mitt to decontaminate gloves.
   b. Use the second mitt to decontaminate LBE and accessories.
   c. Remove the decontaminating powder.
4. Dispose of hazardous waste materials.
   a. Dispose of uncontaminated hazardous waste materials.
      (1) Dispose of expended or unserviceable materials.
(2) Place used decontaminating materials in a sealed plastic bag.

b. Dispose of contaminated hazardous waste materials.

To put this into context for the consideration of knowledge retrieval, the examples above concerned one Common Core Task with one of eleven subtasks with each subtask having multiple performance measures, and finally, one performance measures refer to four performance steps with numerous notes of “Danger” and “Caution.” As a result, the problem for skill retention for the period between commissioning and entering active duty is not simply the retention of fifty tasks but the retention of fifty tasks, hundreds of subtasks, performance measures, cautions, and notes. The domain of common core tasks is where many of the tasks and subtasks each have characteristics that impede skill retention. These include having a large number of steps or fixed sequences, with no memory aids, and required to be performed in stressful conditions.

**Overlearning Reinforces Skill Retention**

Overlearning has long been recognized as a significant factor in skill retention. W.C.F. Krueger published an article on the effect of overlearning on retention in the Journal of Experimental Psychology in 1929.\(^{14}\) However, a survey of the research shows the term “overlearning” has been used in very different contexts in research studies. Overlearning involving a deep learning process provides better retention than just restudying the material, in the same manner, multiple times. One study used overlearning in the context of simply studying the same way over and over showed evidence that “overlearning” increased short-term retention but did not contribute to long term positive results.\(^{15}\) This study limited overlearning to be a product of additional study beyond that needed to demonstrate initial competence. This view is consistent with the conclusion suggested by Paul Pimsleu in 1967, who suggested concentrating repetition at the initial stage was counterproductive. For restudying, in the same manner, to be effective, it had to be spaced out over an extended period.\(^{16}\) Other studies have addressed overlearning as a different process. Rather than simply additional studying, some viewed overlearning as a product of employing multiple methods of instruction with an emphasis on a deeper understanding of the components of the initial presentation of the content. For example, Marshall J. Farr made the distinction between the strength of overlearning (i.e., continuing the
study after reaching a level of acceptable competence) and the quality of overlearning in which, instead of reviewing material already learned, the student gains a deeper understanding of the concepts involved. This enables new information to be added into his existing knowledge-representation structure so that it makes connections with a larger number of pre-existing memory structures.¹⁷

**Testing Improves Skill Retention**

A traditional view held that learning occurs during studying and testing assessed what has been learned. Research confirms that retrieval of information from memory during tests has often resulted in better learning and long-term retention than has studying.¹⁸

Learning is often considered complete when a student can produce the correct answer to a question. In our research, students in one condition learned foreign language vocabulary words in the standard paradigm of repeated study-test trials. In three other conditions, once a student had correctly produced the vocabulary item, it was repeatedly studied but dropped from further testing, repeatedly tested but dropped from further study, or dropped from both study and test. Repeated studying after learning had no effect on delayed recall, but repeated testing produced a large positive effect. In addition, students' predictions of their performance were uncorrelated with actual performance. The results demonstrate the critical role of retrieval practice in consolidating learning and show that even university students seem unaware of this fact.¹⁹

There is substantial evidence that the scheduling of testing is important, with immediate testing after studying having less of an impact on long-term retention than some delay followed by spaced retesting.¹⁹ Contrary to a traditional custom of providing feedback immediately after testing, research has shown delaying feedback may better promote long-term retention.

In an experiment involving cued recall of trivia facts, we directly tested several theories of feedback-timing effects and also examined the effects of restudy and retest trials following immediate and delayed feedback. Results were not consistent with theories assuming that the only function of feedback is to correct initial errors but instead supported a theoretical account assuming that delaying the feedback strengthens initially correct responses due to the spacing of encoding opportunities: Delaying feedback increased the probability of correct response
preservation on the final retention test but had minimal effect of error correction or error preservation probabilities. In a second experiment, the effects of varying the lags between study, test, and feedback trials during learning provide further support for the spacing hypothesis.\textsuperscript{21}

**Predicting Skill Decay**

In 1985, the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) developed a method, The User Decision Aid (UDA) model, for predicting how rapidly individual tasks will be forgotten over no-practice intervals of up to one year.\textsuperscript{22} The method has been used to identify what tasks are most likely to be forgotten, the ability to perform a task correctly after given intervals of no practice, and when and how often refresher training should be scheduled.

Developed using fifty-four military procedural tasks, a review of the model indicated it includes ten of the most important task-related factors for skill retention and has been found to have high validity and reliability.\textsuperscript{23} A survey of research for models of skill retention conducted by the Canadian Armed Forces in 2000 identified the UDA model as “…one of few approaches for which empirical research has been done to assess its applicability and practicality.”\textsuperscript{24} The UDA model involves first providing a numerical value for the answers to the following ten questions:\textsuperscript{25}

1. Are job or memory aids intended to be used?
2. How would you rate the quality of the job or memory aid?
3. How many steps are required?
4. Are the steps in the task required to be performed in a definite sequence?
5. Does the task have a built-in logic so that you can tell if you are doing it correctly?
6. Does the task have a time limit for its completion?
7. What are the mental or thinking requirements?
8. How many facts, terms, names, rules, or ideas must a soldier memorize?
9. How hard are the facts, terms, etc., to remember?
10. What are the motor skill demands?
The sum of those numerical values is then entered into a table provided that shows for a given interval of no activity what proportion of individuals will correctly perform the task.

Spaced Repetition for Promoting Skill Retention

Frequent repetitions are indispensable in promoting knowledge retrieval, and in 1913 Hermann Ebbinghaus identified its importance on learning.26 His work has been cited more than 5,000 times, and recent efforts have demonstrated clear evidence of the benefit of carefully scheduling and spacing repetition of study and review. Paul Pimsleur advocated the method of spaced repetition for foreign language learning but identified the importance of adequately scheduling the repetitions.27 Spaced repetition was identified as one of the most valuable techniques in a 2013 comprehensive review of learning strategies based on available research.28 In a 2019 study, researchers were able to show the benefits of a mobile application, Anki, that provided spaced repetition for students in a language course.29 Anki incorporates spaced repetition by feedback from the user about how well a card is known and the study history of the card and then uses an algorithm to calculate the time interval between card reviews. This application has been used in numerous studies relating to skill retention with positive results.

Spaced repetition applications, such as Mnemosyne, Synap, and Duolingo, have become increasingly popular.30 As these systems become more popular, more effective spaced repetition algorithms will be developed that offer more sophisticated monitoring and a greater degree of control.

Since spaced repetition has been shown to promote long-term retention and online learningsystems provide vast amounts of data, this area has seen a significant increase in research. Just since the beginning of 2021, Google Scholar shows 1,650 results for articles focusing on the topic. The research includes two main focus areas: model theoretical-based spacing logic and the validation in actual use. For example, one work mined data from spaced repetition application to establish the functional dependence of retention on reinforcement and delay; developed a stochastic model; proposed a queuing network model, along with a heuristic approximation that admits a tractable optimization problem for review scheduling; and finally, verifying a key qualitative prediction of our model: the existence of a sharp phase transition in learning outcomes upon increasing the rate of new item introductions.31
An alternative approach was developed that used a mathematical model in which student characteristics are presented as constraints on the schedule which spaces when new educational material and review indicated.\(^\text{32}\)

**Improving Skill Retention During Military Academy Instruction**

Many studies have shown that an individual’s attention during training has a significant impact on later skill retention. There is growing evidence that attention-focused techniques, such as mindfulness training, can directly promote skill retention. One study showed just 6 minutes of meditation produced a measurable change in student performance and other studies have indicated that the improved retention last for extended periods.\(^\text{33}\) Mindfulness training has been shown to improve the cognitive abilities of elite military forces.\(^\text{34}\) Additional evidence is shown by Fiebert and Mead, and Jha et al. (2017).\(^\text{35}\)

**Improving Skill Retention in the Inactive Period Prior to Active Duty**

Even before Covid-19 required a significant shift to distance learning, online learning has been widely adopted, and best practices are becoming evident. The infrastructure necessary to provide exported learning modules is becoming very effective and cost-efficient. One of the most important considerations for developing training modules for the inactive duty period is whether the common care task is simply knowledge retrieval activity or includes spatial/psychomotor skills. With the limited time and resources available, the most productive approaches are most likely providing online applications using spaced repetition practice, and the testing of BOLC-A Common Core Tasks that are primarily procedural with more difficult knowledge retrieval contexts.

**Conclusion**

Skill retention research is an established field that offers valuable insight to promote long-term proficiency of skills. Methods are available that can be utilized both during the period of BOLC-A instruction at an institution and the period of inactivity before active duty. Research indicates the most promising trends are the deeper learning approaches of overlearning, the
advantages shown for mindfulness and mediation, and spaced repetition techniques. For the period of inactivity, preventing skill decay may be best addressed by having the BOLC-A institutions produce online modules that provide a spaced repetition approach and utilize the latest research. Many free or low-cost spaced repetition applications already offer easy methods for importing content allowing content to be created with little or no cost or extensive labor. For example, the Common Core Task List provided by CIMT provide the sources needed for content and many applications provide importing content from spreadsheets.

Francis G. Murray, a retired military officer with a master’s degree in military history from Norwich University, has extensive experience in military instruction. After completing an initial assignment in the Republic of Korea following U.S Army Rotary Wing qualification, he served at the Aviation Center at Fort Rucker as an initial entry helicopter instructor pilot. He continued to serve as an instructor pilot in utility, air cavalry, and medevac units throughout his remaining career in the Army National Guard. A significant area of focus concerned skill retention in the use of night vision devices. In 2003, he was the lead instructor for the California Army National Guard for aviation mission planning systems. His civilian experience includes developing a simulator-based aviation system that provided an automated evaluation of instrument flying skills. Other experience includes research in the field of artificial intelligence-based decision aids for military applications with 12 years of research support with the U.S. Army’s Aeroflightdynamics Directorate at NASA Ames Research Center.

Sean M. Murray is a fourth-year Army ROTC cadet and will receive his commission in June 2021 as a second lieutenant and infantry officer upon graduation from Santa Clara University with a degree in political science. He has a 2nd Degree Black Belt in Mixed Martial Arts and continued his training in Muy Thai and Krav Maga styles. He has an interest in foreign languages with a focus on Arabic. He completed the Norwich University Future Leader Camp in 2014.

Endnotes
3. Farr, S-1.


12. Ibid, 8.


20. Karpicke and Roediger. 967.


‘Officers and Civilian Supervisors as Employers:’ The Path to a Training Program for All Officers and Civilian Supervisors in the Role of Employer in the Swedish Armed Forces

Maria Back-Nilsson

Abstract: The net-based concept “Officers and Civilian Supervisors in the Role of Employers” in the Swedish Armed Forces is a new approach for training and support to first line officers and civilian supervisors—enhancing their skills through a user-friendly and easily accessible blended learning strategy. In 2009, the Swedish Armed Forces cut back on conscription recruitment, and for the first time ever started to employ professional soldiers. This paradigm shift coincided with a vast transformation of the local Human Resources (HR) support system. The local HR departments in the regimental units were reduced by half and merged into a centralized, joint HR Centre (HRC) located in Stockholm. The new SAP-based business system with manager self-service (MSS) modules was implemented in parallel with the reorganization of the HR support system in order for the first line supervisors and officers to lead their subordinates in a restricted network without internet access. Not only were the hands-on practical responsibilities of the employer processes transferred as far as to the first line supervisors, who were very inexperienced and lacked basic training in employer skills and knowledge, but also the easily accessible in-person local support system was withdrawn at the same time. The first line supervisors, military officers and civilian managers alike, consisted of quite a large number of staff, all in need of training in basic employer skills such as work-related legal issues, the working environment and socio-organizational emphasis, payment terms, terms of leave, recruitment processes etc. At first, the urgent need for basic training was met through set courses in classrooms, but as the need for training proved to be greater than the available training facilities could handle, a new concept had to be introduced. The Management Training Unit at the Military Academy of Karlberg, which already had the task of providing classroom training, took on the challenge and created a net-based concept consisting of ten modules covering different topics within HR, the working environment, logistics, and finance and accounting. The concept includes a network of contacts in the units in the field as well as an Intranet-SharePoint solution. Since the first implementation of the concept five years ago, it has been developed and there is now also a more in-depth classroom course via the train-the-trainer program. This paper highlights the in-depth experiences of the project members when they set up the program at the very beginning; how they overcome problems in convincing their subject-matter experts to go online instead of providing classroom training, how they implemented the concept successfully and how this blended learning concept now provides support to supervisors and officers in the role of employer on a daily basis and is available to more than 3,000 first line officers and supervisors at different levels within the Swedish Armed Forces.
Background

In the last 15 years, the Swedish Armed Forces have experienced several major changes where the role of first line officers and supervisors as employers has been substantially affected on several levels. Between 2008 and 2013, there were three major changes that occurred at the same time, subsequently leading to a steep rise in the need for training for first line supervisors (military officers as well as civilian managers).

The major changes that were introduced at the same time are briefly described below:

- The reorganization of the HR structure which entailed that the Swedish Armed Forces centralized most of the HR function in an HR Centre (HRC). This led to the withdrawal of a great deal of the HR resources at the local level in the organizational and military units. Instead, two central HRC functions were created—“HR Direct” for employees and “The Managerial Line” for first line officers/supervisors who needed support in the management of employee data.

- The introduction of the business system SAP where “manager self-service” (MSS) entails that first line supervisors and officers themselves must approve or reject and manage data, for example, with regard to applications for leave, overtime, travel expenses etc., for employees in their direct employment.

- There was no conscription in 2009 and the focus was instead on employed soldiers in the units. The difference between employed soldiers and conscripted soldiers is that the former are covered by laws on the working environment, leave, parental insurance, daily allowances for military exercise, progress interviews, rehabilitation etc. First line supervisors and officers (mostly platoon captains) had never been forced to deal with such matters since they had been in charge of conscripted staff.

The major changes described above also constituted the background to the Supreme Commander Order regarding the role of an employer in the Swedish Armed Forces as from May 2013. The following is an extract:

“The Supreme Commander’s View of the Role of Employer

“I am addressing everyone in the role as both Commander and employer – regardless of level.
“In your role as an officer, or civilian supervisor, you have accepted and been entrusted with the responsibility to represent the Swedish Armed Forces as an employer. Representing the employer means carrying out an assignment imposed upon us by the Swedish Riksdag and Government.

“The Swedish Armed Forces is a constantly evolving organization which places new demands on the management, civilian supervisors and officers, as well as on the employees. As a supervisor or officer, you have a responsibility to lead your staff, the operations and change according to the new demands. You drive the organization forwards and create opportunities for the entire organization of the Swedish Armed Forces through your value-based and consequence-oriented leadership. A fundamental aspect is that you always act in such a way that the interests of the State are considered and the general public’s trust in the Swedish Armed Forces is upheld and reinforced.

“The application of this Supreme Commander Order together with my focus on the role of the Swedish Armed Forces as an employer lead to better preconditions to safeguard our finances for the long term and to map out the fundamental basis of being a supervisor/an officer in the Swedish Armed Forces of today and the future.”

With the help of the organizational structure of SAP, the business system used by the Swedish Armed Forces, these major changes to the role of the employer within the Swedish Armed Forces led to the identification of over 3,000 employees in a position that corresponds to first line officers and supervisors with a direct employer responsibility for subordinate staff.

Some of these officers or supervisors have had the role of employer earlier, but with access to local HR support in their own unit, and it was the very same HR officers who had access to and knowledge about the IT support system for travel expenses, overtime, applications for holiday/leave, leave to take care of sick children and parental leave, etc. However, all of a sudden, it was all the first line supervisors and officers with staff reporting directly to them that were supposed to deal with these matters on their own via the new manager self-support (MSS) IT-support system in SAP.

Since the SAP courses were usually only on learning to work in the system and not on the instruments such as the applicable laws and rules of operation, the change naturally resulted in a
large number of erroneous payments and rejections/approvals of leave on erroneous grounds since there was a lack of precise, straightforward training and easily accessible IT user support.

The local employer training courses at the units differed in nature and content, and when most of the local HR staff were transferred to the central HR function HRC, a knowledge vacuum arose which needed to be filled. In addition, the academic officer’s program at the Swedish Defence University only covers these subjects to a very limited extent and hence there was a huge need for additional training.

A Description of the WGNEW Project – How It Was Set up and Aims

This section describes how the project group was set up and how it started working on drawing up the training concept and program.

The Project Group and Scope of Subjects: The task of producing a new training program covering managerial skills and the running of a government agency was assigned to the Management Training Unit since it is responsible for all training on how to run a government agency and the operational management of the Swedish Armed Forces. The specialist functions at HRC and the parts of the Headquarters of the Swedish Armed Forces (HQ) responsible for operational management were assigned the task of providing expert knowledge in order to ensure the correct facts and legal framework were included in the training. Additional funding was provided during the development period in the form of a limited project budget by HQ HR Department, but the majority of the costs for the development of the course program were covered by the Management Training Unit’s budget for that period.2

First, a classroom concept was produced by the Management Training Unit at the Military Academy at Karlberg Palace in Solna, Sweden. These classroom courses called “Employer Representatives 1 and 2” were far from able to fill the knowledge vacuum that had arisen. The Management Training Unit was able to train approximately 20 participants per course, and the course ran four times a year.3 It was just not possible to provide training quickly for the 3,000 people identified as well as the over 200 new first line supervisor and officers every year.
A new broader training concept was thus needed and WGNEW (New Working Group for Employer Representatives) was set up. The task assigned to the project group by HQ HR Department consisted of producing a training program covering all aspects of employer duties and obligations. This in turn meant that all the subjects, where the Management Training Unit was responsible for the training, were covered and thus the project members for the different subject areas were allocated to the project spending 20% of their ordinary working time on the project.

Every project participant/course director from the Management Training Unit who were heads of subject were responsible both for their own topic and all contacts with experts from different parts of the Swedish Armed Forces. The aim was to ensure that the most up-to-date and correct material was used as a basis for each subject in the training program. Several of these experts later participated together with the project participants/course directors as subject-matter experts, fact checkers and in several films produced for the courses. The project group consisted of course directors and employees from the Management Training Unit responsible for their subject areas listed below:

- Project Management: Lilly Sjöblom;
- ADL/Net-based learning: Stefan Ragnebrink;
- SAP: Maria Back-Nilsson;
- Swedish Armed Forces Process Management: Christer Bergström;
- HR: Josefin Wittzell;
- Logistics: Anna-Karin Brorsson-Kinch;
- Leadership/Governance, Finance: Gunnar Johansson;
- Sustainable Environment: Hans Werneholm;
- Operational Safety/Working Environment: Hans Werneholm;

The Implementation of the Project During the Start-up Phase
This section constitutes a review of the allocation of work. It also includes a general description of the project’s work process and method.

**The Work Process and Method of the Project:** During the spring of 2014, a number of meetings were held with the HQ HR Department where the training needs were mapped out in greater detail. The aim of this series of meetings was to define the strategic orientation of a new employer’s course within the Swedish Armed Forces (WGNEW) to be distributed at the units to all civilian supervisors and officers in an employer role.

It was at this stage that the target group “first line supervisors and officers” was determined based on the fact that within the organization they were to be found at the lowest level of employer representatives in the business system SAP and who thus managed employees who reported directly to them using the Manager Self-Service function (SAP MSS).

The series of meetings started with the Management Training Unit presenting progress achievements of WGNEW and clarifying that the orientation of the training program was to reach a lowest level of necessary knowledge that all 3,000 supervisors and officers needed to be able to carry out their work in all subject areas of the Management Training Unit.

The HQ HR Department gave the following guidelines for the continued work:

- It is important to think ahead and train all civilian supervisors and officers to be forward-looking.
- The Management Training Unit must ensure that it receives a formal assignment from the HQ Training and Development Staff - Training Department. If not, it might be difficult to release funds from the units to support and provide training in the garrisons.
- That the Head of the Management Training Unit “leads and coordinates” is not enough according to the HQ HR Department; it is important that the formal assignment is given to the Management Training Unit.
- Purchase everything from external course providers as far as possible.
- Coordinate the program at the garrisons, approx. 6-7 sites to ensure sufficient skills are available to carry out the program.
• The HQ HR Department must travel round to the units before the introduction of new functions in the manager self-service system and needs WGNEW representatives to come along and inform about WGNEW.

• The HQ HR Department would like to be the reference group in the following stages of the project.

• The HQ HR Department would like the new training program to be as integrated as possible, i.e., with several topics merged into one and the same module, allowing directors to see the whole picture rather than the separate parts.

• The HQ HR Department proposes the following four HR modules:
  1) The role of the employer – including fundamental labour law (e.g., managerial prerogatives, obligations etc.), diversity, equal treatment, values etc.
  2) The working environment including operational safety.
  3) Pay formation, including progress interviews.
  4) Laws and agreements (used on a daily basis), e.g., leave, sick leave, working time etc.

• ALL modules shall provide an introduction to a subject and include fundamental rules and regulations, show where to find more information, e.g., via “the Sharepoint surface “Working in the Armed Forces” on Emilia (the intranet of the Swedish Armed Forces), and what support a supervisor, or an officer, might expect from the local HR department and the central HR function of the Swedish Armed Forces.

• A SharePoint collaboration workspace on Emilia is required where the supervisors and officers may raise questions directly with the experts after they have completed the program.

• A filmed introduction to the program is needed at the start of the program.

• The central HR function of the Armed Forces shall produce the contents of the modules.

The points above and the above-mentioned minutes indicate that the working group and the HQ HR Department were at this stage still working according to a classroom “Train-the-Trainer” concept where the course directors from the Management Training Unit trained the
unit’s operational experts in each topic, and where they would in turn bring the training to classrooms at the units, coordinated as per garrison.

The Creation of ADL Modules

This section gives a brief account of the background and context when the Management Training Unit (in 2014-2015) planned to proceed with digital production from different perspectives. It also includes a brief account of the operational mandate and resources required to start producing the Net-based training concept.

**Why Online Training as a First Choice?:** When the activities had been ongoing for a few months, in the spring of 2014, the project group realized that many of the topics had a direct bearing and were dependent on each other which became difficult to handle from a training perspective with a “Train-the-Trainer” concept.

In addition, there were also purely logistical problems where the enormous need led to insufficient numbers of supervisors and officers being trained quickly enough. There was also a risk that the use of the course material would vary between units and that it would therefore lose its uniform message.

Thus, the project group arrived at the conclusion that Net-based learning or Advanced Distributed Learning (ADL) as it was called in 2014, would be the most effective educational method in order to reach the greatest number of future users. In that way, it was also possible to produce clear and precise course material that was based on the correct information, conveyed a clear statement, and referred to the most recent legislation and operational legal framework available on Emilia. It was largely the following set up that was presented, and the name of the proposal was “Supervisors and Officers as Employers.”

However, the HQ HR Department held a different view which is indicated in the minutes from the meeting between the Management Training Unit’s project group WGNEW and the HQ HR Department in May 2014:

- Is everything going to be ADL? Is that the best method? The HQ HR Department are concerned that the training course will not be sufficiently in-depth and that it may be regarded as an imposition now that the Swedish Armed Forces are working to reduce the administration of supervisors and officers.
• There is a need to review the module “The Progress Interview” due to the new procedures that are in place for this interview. Slides are in the process of being produced to be sent to the units as part of the implementation. In addition, a methodology course for staff interviews conducted by supervisors or officers will be produced. The HQ HR Department wondered whether this part should be included in WGNEW instead of ADL?

• The HQ HR Department would like the general module “Supervisors and Officers in the Swedish Armed Forces” to be implemented in the units in a dialogue with the supervisors and officers. The view of the Management Training Unit is that such efforts may be added to the ADL module “Supervisors and Officers in the Swedish Armed Forces”, but that they in that case are not part of the assignment of the Management Training Unit or WGNEW. There followed a discussion about the HQ HR Department’s remit and the Management Training Unit’s remit, as well as interface and roles. The issue will be discussed internally within the HQ HR Department.

• The general views of the HQ HR Department are that:
  1) It is extremely important that there is a clear common thread that permeates the entire course. All the blocks and modules must be equally thorough.
  2) We must focus on the mindset. How should you think as a supervisor and an officer. Mindset is more important than facts and descriptions of procedures.
  3) It is important to explain the whys in every part of the course. Comprehension is vital.

• Apart from that, the HQ HR Department largely agrees with the contents of the other modules.

In the interview with Lilly Sjöblom, project leader for WGNEW, she remembers quite well how those present at the meetings at the HQ HR Department quite quickly realized that ADL/NBL was the best way of achieving the required effect. Great importance was placed on the idea that the training concept should include a consistent message, correct and precise wording in factual texts, references to legal texts in force, the latest versions of steering documents etc. This was something the established digital as well as ADL modules in both
portals of the Swedish Armed Forces were able to offer in the best possible way. The digital modules, or the ADL modules as they later developed into, could be published both on “SABA,” the learning portal on the restricted intranet of the Swedish Armed Forces with no internet access, but also via the Swedish Armed Forces’ online learning platform, “It’s learning.”

The constant access to the ADL courses and the links to the steering documents that were incorporated in the course material together with the ease with which the target group could gain access were the aspects that played a decisive role for the choice of method. In addition, it was possible to take the courses again if the need arose, which was a further positive factor. It was also possible to retrieve statistics concerning the use of the courses in order to be able to follow up the roll-out of the training program.

Another success factor was that all the members of the project group constantly emphasized that the online ADL Programme was a basic training course. If a more in-depth course was required in some of the subjects (e.g., labor law or rehab) those more in-depth courses would be developed as courses in the classroom, blended learning or as “Train-the-Trainer” courses.

Despite the fact that this approach with set ADL learning modules in SCORM format only entailed one-way communication without any direct teacher interaction, it was regarded as the most suitable training method. In particular bearing in mind the huge numbers of users, who were, what is more, geographically spread over the whole country.

Both Lilly Sjöblom and the former Head of the Management Training Unit, Lieutenant Colonel Roland von Bargen underlined the importance of the HQ HR Department’s turnaround concerning ADL as a decisive key to the success of the project. Lieutenant Colonel von Bargen was also given the task of continuing leading the WGNEW Training Programme as a part of the Management Training Unit’s overall assignment, which meant that the unit’s budget could largely be used for the project. This was a further key to success since there the production costs for the ADL courses could be covered because other activities had been cancelled due to a lack of staff. In addition, at this point in time, HQ had already prepared for the Management Training Unit to amalgamate the training section from the implementation project for the business system SAP, and thus a contributory budget was included at the end of the project in 2015-2016.
The Start of the Production Stage – Experiences from the Conclusion of Agreements with External Suppliers

This section gives a description of the questions that arose when agreements with external suppliers of digital training modules were concluded and it was time to move on to the production phase, and the subsequent consequences this had on the whole project.

The Start of the First Module and Problems with the Creation of the HR Modules:
For many years now, the Swedish Armed Forces have concluded agreements with external suppliers for the production of digital training modules. At the end of 2014 and the beginning of 2015, the procurement process for a new four-year agreement period was ongoing. This process was, however, stopped by the Swedish Armed Forces for legal reasons. Instead, an entirely new procurement process was started with much stricter requirement criteria, which in the best of worlds was to take about six months. Thus, this meant that the Swedish Armed Forces were formally without an agreement with an external supplier and that in practice the Management Training Unit was forced to complete the project that had already been started with the previous supplier “Clever Learning AB” but was not allowed to start any new productions that conceptually did not fit in with existing courses at the Management Training Unit.

Already in the early spring of 2015, the production of what eventually became the first two modules of the CSAG concept was started. The modules were “A General Course on the Logistics Processes in the Armed Forces” and “Signing for Procurement and Purchases.” That it was these two particular modules that were given the go ahead was due to the fact that you could argue that it was possible to add both the modules to the already existing logistics training concept. The production work was speeded up by the fact that the work on both these modules dealt to a large extent with factual aspects and that resources allocated for the experts and the composition were available from WGNEW and the Management Training Unit’s other staff.11

WGNEW held successive meetings with the HQ HR Department in 2014 and the beginning of 2015 and the orders from WGNEW entailed that the HRC was given the task of supporting the Management Training Unit with the production of the HR modules that had been ordered. It was now that the problems started in the cooperation between the Management Training Unit and the HRC’s experts who held HR expert knowledge in the project on the production of the modules in the HR area. The reason could primarily be found in a
misunderstanding concerning the depth and level of knowledge in the classroom lectures that the HRC’s experts held during the teacher-led temporary “role of employer courses” run by the Military Academy at Karlberg.

The HRC’s experts firmly opposed the fact that the ADL courses were unable to offset the dynamism and interaction provided by the classroom courses.

This attitude of the HRC’s experts did give way in the end, but not until the Head of the HRC had called a special meeting with the WGNEW project management and the Head of the Management Training Unit, Lieutenant Colonel von Bargen and been given a detailed explanation of the concept of basic and further courses that were to be developed at a later stage. However, when this finally happened, the collaboration problems had been ongoing for several months and hence this part of the project groups in WGNEW had not arrived at a formal starting point with any external supplier. And here was the Swedish Armed Forces, without an agreement and an ongoing new procurement process that would take at least six months.

No Agreement, but Still Some Production: In the spring of 2015 when there was no agreement, WGNEW’s work as well as that of its subgroups saw the light of day. This included collecting as much factual information as possible on what was now called the “lowest common denominator for first line supervisors and officers.” It was also during this period that the WGNEW project gradually changed its name to “Supervisors and Officers in the Role of Employer – Basic Course” (CSAG-G for short in the Swedish abbreviation).

Every CSAG-G project member/course director in charge of a subject held a series of meetings with each respective subject-matter expert with the aim of making the most of the period without an agreement as possible. It clearly emerged that every subject-matter expert and process owners from HQ naturally felt that a great deal more information than what was absolutely necessary should be included in the ADL courses. It was thus important to stick to the basic educational method of the entire concept. It was emphasized time and again how important it was to reduce the scope by half so that the total amount of time needed to complete the entire training program would not be too long.

New Supplier in Place – the ADL Modules Start Taking Shape: In September 2015 the new agreement with the external supplier “Lexicon Interactive AB” came into force and the production of the remaining CSAG-G courses was started one after the other at breakneck speed.
In the autumn of 2015, a new project leader as well as project coordinator for the entire training program CSAG-G was employed when Christina Högberg took over the coordinating responsibility of the production of all the ADL courses.

Soon after, a new, up-to-date graphical template package for the Swedish Armed Forces became available with the authoring tool “Lectora” thanks to the new supplier. Thus, there was a graphical difference since the newly released courses “General Overview of the Logistics Processes in the Swedish Armed Forces” and “Signing for Procurement and Purchases” were produced in the old graphical template that the previous supplier “Clever Learning AB” used. This was regarded as being less important, however, since what was most important was that the courses were coordinated in their overall context.

The new ADL project leaders from “Lexicon Interactive AB” and the CSAG-G working groups were still able to start working quickly and an intense production period got off the ground. During the autumn and winter of 2015/2016, in total eight entirely new ADL courses were produced and a further two were started.

In addition, the Swedish Work Environment Agency gave permission to use one of its courses on systematic work on health and safety, and even make certain technical adaptions so that it could be included in the “SABA” LMS on the internal restricted network of the Swedish Armed Forces as well as the online learning platform “It’s learning.”

A part of the educational set up of the ADL courses was the mix of how to perform maneuvers and use the SAP system with explanations concerning the background to certain laws and operational rules. URL links to the latest steering document on the topic were also added to ensure that it is always the most recent versions that are shown.

Further educational maneuvers for the officers and supervisors to learn how to find correct information about, for example, leave, reimbursement levels and rules that govern such decisions were incorporated into questions and simple exercises on the ADL courses. Hence, the answers were not given automatically. Instead, they went via the URL link leading to the regulation in question on Emilia.

**Information Day with Point of Contacts from the Units:** In tandem with the production of the ADL modules, channels within the Swedish Armed Forces were created to
ensure a successful launch of the training program. Already at an early stage, the project group understood the importance of involving key members of staff in the organizational and military units. The “Train-the-Trainer” concept that had been the idea from the beginning in 2014 became instead a network of contacts acting as “door openers” and “local super users” in 2015-2016. In this network, the military and organizational units across the country provided throughout the production process the sounding board that was needed to ensure that the ADL modules really included the right information in order to reach out to the target group.17

Before the launch in the spring of 2016, these contacts were also invited to attend an information day at the Military Academy at Karlberg. At that meeting, the final contents of the different ADL modules was presented as well as how to continue working in local managerial groups, at workplace meetings. It was also explained that the whole educational idea and point of the training concept had also been established within the highest ranks of the Swedish Armed Forces with the showing of the films with the Supreme Commander, General Michael Bydén, who opened and also ended the introductory and the closing modules of the training concept.18

The Supreme Commander, the Generals, and the Directors as Motivators

Since it was the Supreme Commander Order regarding the role of employer from 2013 that lay the foundations for the contents of the entire training program, it was no problem at all for him to be a “door opener/ice breaker” and motivator at the start and end of the ADL program.19 In the autumn of 2015, he requested a run through of the contents of the modules and was given a presentation of the course material that he could then show his immediate commander group to spread the importance of the training concept.20

The Supreme Commander’s words from the film in the introduction and final modules in the training program from the beginning of the 2016 are furthermore so personal and such good motivators for the importance of the contents that they still remain unchanged today in 2021.

When the Supreme Commander personally presented information about CSAG-G as the Future Training Programme and stressed how important it was for all officers and supervisors in an employer role to complete the training at a meeting of Unit Commanders at the end of 2015, at the same time that the HR Director also announced that he would participate in the ADL
modules, it was not difficult to encourage more generals and civilian directors from top management to participate and act as “ice breakers.”

This proved to be very important for the introduction courses and emphasized the importance of regarding the role of employer as part of the job of a supervisor or an officer in the organization of the Swedish Armed Forces. It became clear that managerial skills are not only about leadership skills, how good your tactical and strategic skills are or whether you are able to keep the budget under control.

Questions regarding the health and safety, labor law, pay scales and knowledge about laws and rules in a government agency are just as important when you have employees reporting to you in the organization. These were issues that had already been addressed in the Supreme Commander Order from 2013, but which had unfortunately encountered a great deal of resistance at the managerial levels within the Swedish Armed Forces.21

**Release and New Versions**

This section gives an account of the reactions from the military garrisons and the organizational units at the release and what the consequences were for this project as a whole.

**SharePoint Collaboration Workspace and Email Letter Box:** During the production of the entire training concept, one of the issues was the support for the ADL courses. First line officers and supervisors in the role as users of the courses needed further information about when updates were released and a letter box you could turn to with your questions or to report errors.

A product sheet with a brief description of every ADL module and also with a few photographs from the program was added to the training concept. This was to help the contacts to be able to quickly describe to first line officers and supervisors what the training concept entailed on, for example, Introduction Days at the military garrisons and organizational units.

A SharePoint workspace on Emilia was stipulated as a need already during the first meetings of the HQ HR Department in 2013 and was prepared to support the ADL concept with further information.22 Information about where the officers and supervisors could turn to at the local level was also needed and hence the list of contacts at the military garrisons and organizational units proved to be of great use.
Thus, all these functions were already ready when all the ADL courses were released as a coherent training concept on March 15, 2016.13

The Management Model and Updates: A password controlled Excel file in a closed SharePoint workspace on Emilia is also used as a way of keeping track of all the updates required for each module. Since it concerns facts such as laws, orders, and operational rules, all the ADL courses must in an ongoing, continuous fashion be reviewed and kept up-to-date.

Each project member/course director was assigned a continued responsibility after the release of the ADL concept, with the task of always keeping in touch with experts from HQ and HRC for each subject area. Similarly, the maneuvers in SAP needed to be filmed again when updates were made so that the up-to-date system management is shown. This model is still running with meetings every quarter and a joint update budget for all the modules.

When major changes need to be made (if an entire course needs to be updated or large parts), a special budget is set aside for that.

The contact network that was set up by the key persons in the organizational units and the military garrisons has continuously been kept up-to-date via the collaboration workspace. Members have also been invited to participate in six-monthly video conferences with the Management Training Unit where their views have been collected to enhance the quality over time. This is also something that continues to this day, in 2021.

One of the key success factors for the training concept has been the extensive administrative model for continuously keeping the information and contents in the ADL courses correct and up-to-date.14

The CSAG-G Programme Today, in the Year 2021

In this section, you will find a description of how the scope has grown as well as the experience gained by the Management Training Unit during the five years of the training concept.

Replacing Modules and New More In-depth Courses: With the major organizational changes within Logistics, which took place in June 2018, one of the oldest courses – “Signing for Procurement and Purchases” needed to be changed so much that it became obsolete. Instead, the
updated parts were merged and included in a larger update of the course “An Overview of the Logistics Process of the Swedish Armed Forces”. However, also that course became entirely out-of-date as regards content at the following major organizational change in 2019. Hence, it was taken out of the concept because of both out-of-date content and old software (Adobe Flash Player). In addition, the course from the Work Environment Agency that had been included in the training program earlier had to be removed since it was also made in Adobe Flash Player (the software was taken out of use at the end of 2020/beginning of 2021).

Hence, a few major updates are ongoing with the remaining CSAG-G Working Environment, and we are also producing an entirely new version of the logistics module to be launched in the autumn of 2021. Similarly, CSAG-G The Exterior Environment is undergoing a major update.

Over the years, a further three entirely new courses have been added, all of them in the HR block:


**Key Success Factors Identified:** The project group has during the last five years identified a number of factors that constitute preconditions if you are to succeed with the creation of a training concept such as this one and also maintaining it at a topical up-to-date level.

The mixture of subject-matter experts and project leaders for a coordinated production have been a precondition for being able to produce what we have delivered over the years. In addition, receiving support from the very highest ranks and top decisionmakers in the Swedish Armed Forces was a necessity from the very beginning and vital for the launch of the concept. Today, when the training concept is well-established within the organization, we have, however, gradually replaced the films with these “ice breakers” with more neutral imagery containing the same message. This has come naturally as the Generals and Directors have left their positions in the Swedish Armed Forces through retirement or many years abroad. Even as regards this aspect it is very important to keep the contents up-to-date since many of the users know who holds the highest positions in the Swedish Armed Forces.25.
Using contacts as “super users” “Points of Contacts” and holding regular progress meetings with those via video-tele conferences has been a very good way of spreading necessary information about updates etc.

The statistics compiled from both the learning portals has continuously shown that not only the first line officers and supervisors, but also other employees search for information about the subjects in question. One of the courses, “CSAG-G Equal Treatment” has also been regarded as vital that it has become a compulsory course for all in the Swedish Armed Forces regardless of whether they are permanent employees or conscripts (national service was reintroduced into Sweden in 2018).

User behavior also does not follow the pattern everyone involved expected at the beginning. Hence, the Management Training Unit which is the “owner of the Training Programme” is no longer as interested in knowing how many users are given the status “Pass” in the learning portals. The status “Registered for” or “Started” are now the most important statuses from our point of view – and we like to see one person with several registrations ongoing for the courses over time. Why, you may ask yourself - the answer is that the modules in their own right has also come to be seen as a user support function and not just a training program. Since many of the ADL modules show concrete maneuvers in the business system SAP and shows regulations that are not used very frequently by the officers and supervisors, they are able to quickly revise the information before they approve or reject transactions in SAP. They can also find facts regarding conditions or other laws and sections and quickly read up on what is happening currently in the area they are looking for information about. Here we also see that the embedded URL links to the steering documentation are used frequently.26

The most important lesson is, however, to constantly keep in touch with HQ, HRC and other expert functions within the Swedish Armed Forces as a whole and ensure that they feel a sense of responsibility for their subject-matter areas in the training program. We must also stress the importance of handing over during changes in positions between course directors and subject-matter experts and how vital that is to ensure there is no loss of quality. This contact is of vital importance to always be able to maintain an as up-to-date and topical function in the system as possible. The administrative procedure that has been set up with regular meetings and an annual budget are a definite precondition for this.27
Maria Back-Nilsson holds a degree of Master of Social Science in Corporate Finance, Marketing and Educational Pedagogy and is a qualified university teacher. She currently works as project manager of the Management Training Unit’s net-based learning productions, both in terms of updating existing productions as well as producing new ones. The main focus lies on integrating an extended amount of “Blended Learning” and enhance the pedagogic view in the forthcoming productions. Back-Nilsson has more than 20 years of experience from the Swedish Armed Forces and has previously been acting as a course director within the unit’s financial and logistic courses. She has also worked as a civilian-military instructor at the Swedish Armed Forces International Training Unit (SWEDINT) and have wide experience from both NATO- and EU-missions abroad.

Endnotes

1. HQ 03-05-2013 16 100 57233, Supreme Commander, *Supreme Commander Order – The Role of Employer in the Swedish Armed Forces*.


3. Minutes from a November 12, 2013, meeting on the development of the Employer Representative courses.

4. PowerPoint presentation, September 16, 2014, of the WGNEW project.

5. Minutes taken at meeting February 6, 2014, with the HQ HR Department by Josefin Wittzell.


7. Minutes from a meeting May 28, 2014; notes taken by Josefin Wittzell.

8. Interview with Lilly Sjöblom, March 17, 2021.


13. Ibid.


15. Interview, Ragnebrink, March 20, 2021.

16. Ibid.


19. HQ 03-05-2013 16 100 57233, Supreme Commander, *Supreme Commander Order – The Role of the Employer in the Armed Forces*.


22. Minutes taken at meeting February 6, 2014, with the HQ HR Department by Josefin Wittzell.


27. Ibid.
Femininity and Family in the Context of Military Women in the ‘General José María Córdova’ Military Academy in Colombia

William Guarnizo Medina and Carlos Andrés Díaz Irreño

Abstract: The first incorporation of women in general to the Colombian Army was in 1976; in 2010, the Military Academy started to incorporate women to become army officers (in combative branches), finally being able to reach the rank of general. The institution has seen a growth in female participation, while simultaneously witnessing continuous progress in the changing role of women in society. In this context, this research studies the social representations of femininity and family in female cadets from the “General José María Córdova” Military Academy and is characterized as a confirmatory and cross-sectional study. Our methodology consisted of focus groups, interviews, questionnaires, and life stories. This research allowed us to confront traditionally-accepted theses in the study of military women and to offer a vision where the representations of femininity and family are bastions of military women.

Introduction

This article is the product of ongoing work at ESMIC to study military women and to get to know the members of our institution better, with the objective of qualifying our work. The aforementioned research instruments collected both quantitative and qualitative data. To better understand our research problem, we privileged qualitative information over quantitative, thus prioritizing subjects’ voices. We also wished to understand the social representations with which they observe and act in the world.

The increase in women’s participation in different laboral spheres has, indeed, been reflected by a rise in women’s participation in armies all over the world (Camacho and Contreras, 2012:189). One of the most representative changes of these new times for military educational institutions (at least in Colombia) has been, on the one hand, the growing participation of women and, on the other hand, the development of a gradual progress in the professionalization of military women. However, despite all of this, the incorporation of women into the Colombian Armed Forces has been slow because, although women have been allowed in since 1976, it was only in 2009 that it became possible for women to incorporate into the different cadet schools in Colombia, through which they may attain the rank of general.
(Camacho, 2018). Most of the responsibility for their incorporation fell on the shoulders of the women themselves; they benefitted from and appropriated such spaces and scenarios of the military sphere with the awareness that such appropriation entails the responsibility of continuing to open spaces for other women. We confirmed as such when listening to the cadets, who affirmed that it was other women, also in the military, who allowed for them to pursue their careers. They also considered it their responsibility to perform excellently so that other women can continue their path.

As expected, the Colombian Army has been quite attentive, complying with national regulations and bringing them in line with different international resolutions. One of these is Resolution 1325 of 2000 (adopted by the UN Security Council), which aims to guarantee the political participation of women in conflict resolution. While women’s participation has obviously not been limited to this type, General Juan Pablo Rodríguez Barragán assures that women “have been moving on from simply having assisting roles to those of administrative and even operational management” (Camacho, 2018:12).

Thus, an educational and laboral scenario has been developing in military institutions whose spaces are increasingly being occupied by women, despite the difficulties that still exist, finding a correlation in as-yet incipient research. Thus far, research addressing military women in relation to their profession has focused mainly on studying issues such as leadership or participation, as in the case of Guavita and Sanabria (2006), Rodríguez (et al, 2015), Sandoval and Otálora (2015), Cabrera, Cuervo, Martínez, and Cabrera (2016), Prado (2016), Gómez, Hormigos and Pérez (2016), Stanley (2017), and Antunes, Lima, Andolhe, Bosi, and Lerch (2020). However, and perhaps due to the recent emergence and consolidation of military women as a subject of study, many areas remain to be understood. Although research to date has focused on their work performance, there are situations where reflection is still scarce, such as the situation of living, as a woman, in a traditionally masculine and masculinized institution, or the situation of living in an institution from a gender that has traditionally been relegated to domestic work and whose personal fulfilment has been associated with motherhood and the formation of a family. Our research has the purpose of contributing to the study of military women by investigating two areas for which little data exists: the military women in the context of family and femininity.
Studies based on the military family have focused on the study of the nuclear family and some differences experienced by men and women when balancing a military career and a family, as evidenced by an emblematic study on the subject, “Family and sticky earth in the Spanish armed forces” (“Familia y suelo pegajoso en las fuerzas armadas españolas,” Gómez, et al, 2016); studies on femininity in military scenarios have focused on criticizing the masculinization that apparently the army as an institution and military discipline would carry out on the subjectivity of women. One such emblematic case of the latter, an undergraduate thesis which gives an account of the scope of the penetration of this assumption is “The trajectory of women's habitus in the military institution” (“Trayectoria del habitus de la mujer en la institución military,” Dalgo, 2018). In addition to advancing in the research, the various inquiries conducted so far are building a subject of study that is being viewed from theoretical commonplaces, on which it is necessary to reflect in order to continue understanding the situation of military women in contemporaneity.

However, it is not only this lack of studies in the literature that motivated us to carry out this research. We consider that family and femininity constitute two research scenarios where the social contradictions in which women live in contemporary times are quite obvious. It is evident that the military woman is also a social being experiencing contradictions she debates daily in order to carry out her work. Women also find themselves surrounded by the traditional social demands on motherhood, the formation of a family and fulfilling the role of wife, in addition to their femininity being questioned due to the masculinization with which the institution is traditionally associated. Military women thus become an object of investigative curiosity and, indeed, the focus of the topics on which this research is focused.

Given that these are two sources of tension for women and, in this case, for military women, we decided to privilege their own accounts and, thus, our methodology and conceptual tools. In methodological terms, this research was carried out on a sample of thirty female cadets from the “General José María Córdova” Military Academy in Bogotá, Colombia, upon which focus groups, semi-structured interviews, questionnaires, and life stories were applied. Because the two aforementioned scenarios end up becoming unavoidable issues in the lives of military women, and to convey the data obtained through our research instruments, we will mainly use the concept of “social representations” according to the French historian Roger Chartier (2005) since, in addition, this concept allows us to assimilate the way in which the subjects of study
Brief Mention of Question of Women in the Military

Studies have recently been developed in Colombia that focus specifically on military women. This is the case of Camacho and Contreras (2012), Caicedo (2017), Camacho (2018) and Husain and Muñoz (2019). The latter is highly close to our work, as it focuses directly on military women in military settings, in the same ESMIC that we wish to study. However, its emphasis is placed on women’s leadership in the military, observing the way in which they are perceived. While Husain and Muñoz’ work (2019) focuses on military women as protagonists, the subject of leadership is such a broad area of study to deal with within the scope of our study, even if it would highlight the topic of military women as a subject of investigation. Husain and Muñoz’s work (2019) does, however, emphasize the how military women are seen by the general population and here we find common ground.

In the broader Colombian context, works by Caicedo (2017) and Camacho (2018) represent highly relevant investigations published in book length. Their importance lies in the fact that they bring together the expertise of several experts in the field, compiling the development of more than 5 years of research on military women. However, the subject we propose to investigate herein has not been raised in these works. The themes, sources and methods used in the research published in these two books are the same as those shared by other publications consulted, which we will comment on below.

Latin America

The research studies consulted have been grouped into two groups, mainly due to the subject matter studied, since the similarities are greater in terms of approaches, methodologies, and theoretical frameworks. We will mention both groups of publications, emphasizing those publications that especially helped to illuminate our course of research.

First, Carvalho, Franco, Almeida, and Silva (2012) studied the recruitment and selection process of nursing officers for the Brazilian Navy Reserve Female Auxiliary Corps between 1980 and 1981. A qualitative social-historical study, this work describes the selection process of
the nursing officers and analyses the incorporation of the military habitus (Bourdieu, 2007) by the approved nurses. The paper, published in 2012, used documents and testimonies from four nurses, and evidenced that the selection process contemplated a rigorous incorporation of determinations by the officers, that reaffirmed male power. We would like to clarify that this statement is a common denominator in the construction of the subject of study, “military woman,” and is part of the assumptions of much of the research. In this regard, although we believe that it is characteristic of all aspirants to incorporate habitus that increase their efficacy in the institution of their aspiration, whatever that may be, it should also be noted that the subjects are not empty containers that simply appropriate the habitus of their surroundings. This appropriation is productive—that is, it produces new meanings and even manages to update the meanings that the institution itself may have, so that it becomes a dialectical process. The study, in the end, emphasizes the selection process, leaving aside socioeconomic and cultural characterizations which would explain any previous habitus that may have predisposed these women to study a military career, so that the habitus they incorporate, which reaffirms male power, in addition, appears as the result of the imposition of the institution on the subject of study; while our research instead proposes an active role for these women. In methodological terms, the aforementioned study does shed light on the process we want to develop. As will be seen in the methodology of this proposal, we opted for the use of life stories. We do, however, consider that the sample used by Carvalho, Franco, Almeida, and Silva (2012) is unrepresentative enough to support its conclusions. For this reason, we considered that although we were able to record some life stories, it was necessary to complement them with structured interviews and surveys that could better inform us with the information we needed.¹

Second, Reginaldo Cerqueira Sousa (2018) addresses the association of women who supported the military dictatorship in Brazil between 1964 and 1985. The women studied in this research are not in the military; rather, their link to military institutions is taken for granted by the support they gave to the regime and by how inclined they were to support the intervention of armed forces in Curitiba. Here, Cerqueira observes the phenomenon of women's participation, focusing mainly on their religious, civic, and cultural motivations. Given the historical character of their work, Cerquira’s sources were mainly archival in nature, and their method that of documentary analysis. Along with other studies, this work allows us to observe that the woman-military binomial has been approached from enunciative places where women have not been
protagonists, or are deserving of consequences for having been involved in military affairs, as illustrated in Guavita and Sanabria (2006), Rodríguez (et al, 2015), Sandoval and Otálora (2015), Cabrera, Cuervo, Martínez, and Cabrera (2016), Prado (2016), Gómez, Hormigos, and Pérez (2016), Stanley (2017), and Antunes, Lima, Andolhe, Bosi, and Lerch (2020). Although Cerqueira focuses on the phenomenon of participation, what they seek is to establish the motivations behind women.

This closest piece of research to the one we propose is that of Fernández-Osorio, Latorre-Rojas, and Mayorga-Zarta (2018), who conducted a database of the sociological profile of the student population of the “General José María Córdova” Military Academy in 2018, since their research was carried out in the same institution as this article. Although their study does not offer methodological or conceptual elements for our work on the grounds that it is the construction of a sociological database, it does present an important advance that we take into account as secondary sources for this article, in terms of the data it provides.

This work addresses the participation of women and is responsible for determining the progress of female participation in ESMIC, measuring students’ opinions and behaviors in four areas: equality, preparation, support, and competitiveness. This study was conducted taking into account the opinion of the subject of study, with which we agree because, in addition to relevant documents, the best way to interpret subjects’ experiences is to give them a voice themselves.

Research that focuses on military women studies issues that are not primarily associated with the development of their role within the institution. For example, they are associated with their work or family situation (Gómez, Hormigos, and Pérez, 2016), or with the way they perceive one or other phenomenon of male personnel, as in the work of Ruydíaz, Fernández and Saldarriaga (2017), which studies the perception of vasectomy by military women.

**Conceptualization: ‘Matrices of Constructive Practices’**

The category of *representations* is a broad concept which emphasizes the mental structures and identity processes of the subject of the study. It covers psychological developments such as *collective representations* (Oscar Moscovici, 1979). Collective representations, as per Chartier’s perspective, are a concept that emphasizes the way a subject
observes the social world, the way in which they organize it and translate it into practices and meanings. That is why we chose this path. Indeed, military women have been addressed from this perspective, as per Fernandez and Latorre (2018).

We understand the category of collective representations as per Chartier’s perspective, mainly because the author portrays different discussions from social sciences in which we take sides, such as the discussion on passive and active cultural consumption, (we have previously commented on the passive and active appropriation of institutions by subjects). In addition, as the product of a large bibliographical review by the author in question, this category refers to and contains other categories that support it, such as Pierre Bourdieu’s habitus, which is useful for the purposes of this document, as it highlights the structures that have been structured in the subjects due to their upbringing, their education, or their interaction, and that end up structuring meanings and practices.

Collective representations are, in effect, a category that expresses the instance in which human beings perceive and classify the divisions of social organization, and from which we relate to the world, so that they result in “matrices of constructive practices of the social world itself” (Chartier, 2005:56). This poses a dialectical cycle between social reality and the individual, which translates into practices and meanings, so that this appropriation of the social world by its actors, this interaction between groups, institutions and subjects, ends up generating the practices of subjects’ daily life; this, without forgetting the intervention of the past, in the form of habitus, which is nothing more than the set of predispositions of the subject to which they are oriented thanks to their past: their family, their own education and their own interactions. Moreover, these practices and meanings, products of the interaction between the social world and the social individual, are not only a product, but are also producers, since they dismantle, renew, or update other practices and meanings, and even change institutions, thus forming a cycle: the dialectic of social representations. This is why this category is so useful.

According to Chartier, the notion of collective representations: “[Allows one] to better articulate (than the concept of mentality) three types of relationship with the social world: firstly, the work of classification and breakdown that produces the multiple intellectual configurations by which reality is contradictorily constructed by the different groups that make up a society; secondly, the practices that enable a social identity to be recognized, to show one's own way of
being in the world and to symbolically signify a status and a rank; thirdly, the institutionalized and objectified forms, through which the “representatives” (collective instances or singular individuals) visibly and perpetually mark the existence of the group, community or class” (Chartier, 2005: 56-57).²

This aforementioned category allows us to appreciate the incorporation of the social world in the mental schemes of groups and individuals, as well as its incidence in institutionalized and objectified practices and forms of existence. That is to say that the category of collective representations renders visible the flow of the social world through the individuals who break it down, while simultaneously using it to orient themselves. There are three main aspects of this process, as follows. First, the work of classification and disaggregation; second, the practices themselves; and third, the institutionalized and objectified forms of the “representatives.” These issues oriented our interpretation of the data on family and femininity towards a reconstruction of the meaning they have for the actor in question; the results and their respective analysis will be presented below.

Analysis of Results

The results obtained via the research instruments will be presented at the same time they are analyzed, for reasons of length and presentation.

We decided to divide this section into three, to address each of the spheres proposed by the category of social representations. This research was carried out in Bogotá, Colombia, in 2021, in the “General José María Córdova” Military Academy, a third-level institution which prepares future army officers of all branches, both men and women. The sample for this work consisted of thirty female cadets from the institution, all of whom were active students at the time this research was conducted. The fieldwork consisted of the following phases: Phase I) a focus group with the thirty female cadets, guided by a semi-structured interview; Phase III) a questionnaire, consisting of both multiple-choice and open-ended questions and Phase III), the collection of life stories from a select number of cadets.

While the focus group allowed for the collection of qualitative information on family, education, self-perception and projection, the questionnaire ensured the collection of quantitative
data on the same aspects. Four cadets that we considered representative of the sample size were selected from the group to share their life stories with the researchers, since what they had shared during the first two phases reflected situations common to most cadets in relation to family origin, educational, and motivational experiences. The four cadets were also chosen because of their manner of expressing themselves since the main methodological challenge of this work was to access the information, because the cadets had adopted a way of speaking that frequently resorted to precision, rudeness, and a lack of words, which we consider typical of military verbal communication.

The Work of Classification and Breakdown

The work of classification and breakdown refers to the way in which one organizes social reality. From this perspective, subjects interact with reality, mediated by their observations of it, which they organize and break down into groups. The multiple configurations referred to by the author refer to the midpoint of this situation, since they are before the work of classification, but after the appropriation of reality.

In this order of ideas, the distinction that the cadets make between themselves, non-military women, and military women who preceded them not only in the institution, but in the Army in general, makes sense. They greatly admire other women who integrate family life with their professions, such as wives and mothers, but despite this admiration, 97.5 percent of the sample do not have children, while the remaining 2.3 percent have only one child. Indeed, 87.5 percent of the initial focus group do not have a romantic partner, while the other 12.5 percent do. This correlates with a certain ascetic decision for life: These cadets understand that success in their profession comes from exclusive dedication to their vocation, or something similar: the conscious decision not to contemplate children in their future, and although they openly show their willingness to have a loving partner (who does not interrupt their responsibilities to their vocation), they categorically deny wanting to fulfil the role of a wife. From this sample of cadets, 70 percent were born and lived their childhood and adolescence with a family composed of a father, a mother and themselves, while the other 30 percent were born and lived their childhood and adolescence in a family composed of between three and six members (without counting themselves); 100 percent of the sample experienced a situation of separation from their parents.
or the nucleus of upbringing, which led them to live with another member of the family or with one of the original members of the household. This leads us to think that these women have found the perfect scenario in military asceticism, which appears to correspond to their desire not to repeat the same scenario of abandonment with their affirmation of loyalty to their profession.3

What the data allows us to do in this case is to assimilate the cadets’ projections regarding their families by analyzing their predispositions in terms of the figures presented. Perhaps without knowing it, the cadets are part of an “us” in terms of their current role, but this has deep roots that lead back to their upbringing, which is quite revealing.

As just mentioned, this strengthens the cadets’ sense of belonging to an “us” made up of themselves, since it reinforces the idea of a shared purpose or decision, which in turn leads them to reinforce their identity based on two points of reference: their predecessors and the institution. Since what is perceived as a common purpose is shared, it is understandable that the cadets’ discourse copiously references “the women who opened the way,” referring to other women who were in their place and “demonstrated that they could” which, according to the cadets, guaranteed that the institution would continue to allow women access to its ranks and this, we believe, enables us to infer the reaffirmation of their historical and institutional group identity.

**Practices That Lead to Social Identity Being Recognized**

According to Chartier (2012), certain practices allow us to recognize a social identity, since they exhibit an authentic way of being in the world, symbolically showing status or rank. In addition to what was explained in the previous section, let us take into account that for all childless cadets (97.5 percent of them), motherhood is neither a priority nor desirable. Some do not entirely disregard the option, considering it highly unlikely, but the majority openly rule out the option, because the model of life they desire is not compatible with motherhood. While this decision concerns a complex practice that passes mainly through corporeality, it is an incorporeal decision.

At the time of applying the research instruments, one of the most visible elements (whose apparent obviousness masks a profound reality) was the physical appearance of the cadets. They were all slim, athletic, and strong, with excellent body posture, and wore their uniforms with
great decorum. This is taken for granted when we observe cadets on a regular basis, but what we are actually witnessing is the staging of a body in common, an identitary body, since the rejection of motherhood, for 97.5 percent of the sample, becomes a practice that is expressed as an alchemy of the body (Cabrera, 2014), a transformation of the body that comes from military socialization and the appropriation of institutional values. In this way and contrary to the generalized thesis in prior studies on military women which affirm that the military institution imposes itself on women by masculinizing them, we are, on the other hand, in the presence of an unprecedented form of femininity: a non-maternal femininity in whose bodies security is expressed. This security is related to the fact that 100 percent of the thirty cadets had a high and superior performance in physical education in their childhood and adolescence. Female ineptitude in sports has been naturalized in our society (Young, 1990; Moreno, 2011). According to Moreno, female ineptitude in sport is characterized by having a break in the movement performed by a woman, where she observes that the relationship between intention and act is cut and separated. For both Moreno and Young, the deliberate orientation of the body towards things and space conditions and defines the relationship of the subject with the world, which translates itself into the way in which the female body conducts itself on the sports field, being especially revealing of its existence. It thus makes sense to encounter the creation of a disposition towards a career that implies physical effort in the outstanding physical aptitudes of cadets, evident from a school-going age, and even more: the configuration of a practice translated into bodily care with a view to the production of a body that exhibits resolute, unrestrained, effective, and safe movements.

In addition to this, and hand in hand with the cadets’ perception of their own femininity, we find that it resorts to various situational, institutional, and personal elements to make itself visible. The cadets perceive that their femininity is exercised in a space of interdiction in which both men and the (masculinized) institution determine what is expected of them. According to the cadets, everyday aspects of their lives, such as smiling, can be misinterpreted by men as a flirtatious gesture, to which they respond without hesitation by affirming the collective female identity, saying that that is a gesture of male immaturity, and that the way they behave, within the institutional parameters, does not have to extend into meanings that they have not attached to their actions. In contrast to the studies on military women consulted during the course of our research, we were able to note that the military women in this case have not suffered a process of
masculinization, nor that the institution constrains their femininity; on the contrary, where power is exercised, they find cracks to remain faithful to what they consider a woman should be, and the strength we see in them is not the masculinization of women in the military, but a strengthened femininity exercising its own power to exist in the best possible way in a space traditionally reserved for men.

For these women, femininity is associated with the traditional values of beauty and duty, but also with the empowerment that comes from feeling that with each successful or unsuccessful activity, they gain or lose spaces that they themselves have earned for their group; femininity, thus, becomes a dynamic element of the cadets’ group identity.

**Institutionalized and objectified forms**

The institutionalized and objectified forms of which Chartier (2012) speaks refer to the ways, actions, behaviors, practices, and customs that a group, in this case of women cadets, have instituted, objectified, and materialized, with the purpose of highlighting and ensuring the existence of the group.

In this sense, the very existence of military women is the most visible and effective institutionalized and objectified form through which they institute the group, highlighting it and making it last. This is expressed in the consciousness of the historical group they form since, as already mentioned, the cadets perceive the possibility with which they are currently pursuing their military careers is precisely due to the high degree of excellence with which their female predecessors performed in the institution; this, in turn, predisposes the conception of military practice they have and their own engagement of military practice, since they perceive that, in the same way, the level of performance of their work will or will not allow other women to be allowed enter military institutions.

Be that as it may, it cannot go unnoticed that the situation described above expresses the inequality with which institutions still perceive and treat women; although the work of their predecessors and their own work to ensure the existence of the group in the institution is held in high esteem by themselves as military women, the truth is that here underlies a practice with which women cadets have to relate daily and which consists of a constant warning that, if they
do not perform their work properly, it will interrupt the future access of other women cadets which, as can be understood, may function as a stimulus in the harsh environment of training and military discipline, but ultimately constitutes a space of pressure and uncertainty that, nevertheless, the women cadets have been able to appropriate in a productive way of meanings, turning it into something that enhances and perpetuates the existence of the group in the institution.

Conclusions

Local governments in Colombia assign a different social value to each residential property within their jurisdictions; there are six in total, ranging from one to six. These socioeconomic denominations exist for state statistical purposes, and supposedly designate the purchasing power of people within a certain neighborhood or building (one: extremely low; six: extremely high). These different social values, known as strata, are also used by private and public-service billing companies to determine how much their clients should pay, with those in residences with a value of one paying less than those with a value of two and so on.

One of the observations we were able to make when systematizing the quantitative data that the research instruments allowed us to collect was that: A total of 57.5 percent of the initial focus group stated that during their childhood and adolescence, their family was located in strata three, a socioeconomic denomination used in Colombia for statistical purposes by the government; another 30 percent were located in strata two, 8 percent in strata four, and 4.5 percent in strata five. In 85 percent of the cases, one or more of the close family members was or had been part of the military, while the remaining 15 percent lacked a direct military influence in the family. Taking this 85 percent as a whole, 73 percent perceive that this family member influenced their decision to have a military career, while the remaining 27 percent believe the opposite. This helps determine a pattern: the decision for a military career appears on the horizon of possibilities and is constituted as a type of power or similar: it is manifested as a habitus, as a structured structuring structure, guided by attitudes that were family characteristics of cadets. If, on one hand, the decision to join the army stemmed from the influence of a military member in the family, the remaining 27 percent who did not admit this influence, belonged to stratum two and three. The majority of the 73 percent who did have a military member in their family, self-
perceived that their decision to join the military came from family teachings of economic improvement and social mobility, characteristics of a middle class that places its desires for advancement in the careers of their children.  

What the present paper offers the reader is an interpretation that tries to reflect on the margins on what is usually studied when focusing on femininity, but especially on the family, by focusing mainly on the voice of the subject of study.

This study allowed us to conclude that, contrary to the usual thesis that the military institution exerts a masculinizing effect on military women, women have found scenarios, practices, and spaces where they have invented new and unique ways in which to illustrate their femininity, as well as highlight the existence of military women as a solid, historical community with a future within the Colombian Army.

Although the work conditions many women are confronted with these days correlates to that of the profession of military women, they are exposed to different scenarios of difficulty. What this study helps to corroborate is that the military profession is an effective and positive part of the work qualifications of women, the military institution constituting a scenario in which femininity has found a space of empowerment, at the same time accompanying an unprecedented type of women through their military training, women whose way of thinking and seeing the world are in tune with the demands of the twenty-first century.

Moreover, not only have military women had to adjust to the institution but, above all, thanks to what we mentioned as the dialectics of social representations, it can be noted that the struggles and constant work of several generations of military women have borne fruit, since they have ended up transforming the institution itself, modifying its selection, recruitment and entry regimes, its daily practices and even the perception of its most traditional members.

This research opens up a new line of studies on military women in Colombia. We were able to verify that the possibilities are varied and that, given that it is a subject of study in consolidation, future researchers will encounter the possibility of understanding different and complex social phenomena in military women, not only in the context of the Colombian national reality, but also in terms of regional and global understandings.
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Endnotes

1. It should be noted that, due to the very recent emergence of this research, there are still many veins of study to be developed; it is also noteworthy that most of the research conducted thus far deals with little variety in terms of topics studied, indicating that, from the outset, military women have been studied from the construction of both theoretical and methodological commonplaces.

2. In Spanish: “autoriza a articular, sin duda mejor que el concepto de mentalidad, tres modalidades de la relación con el mundo social: en primer lugar el trabajo de clasificación y desglose que produce las configuraciones intelectuales múltiples por las cuales la realidad está contradictoriamente construida por los distintos grupos que componen una sociedad; en segundo, las prácticas que tienden a hacer reconocer una identidad social, a exhibir una manera propia de ser en el mundo, significar en forma simbólica un status y un rango; tercero, las formas institucionalizadas y objetivadas gracias a las cuales los “representantes” (instancias colectivas o individuos singulares) marcan en forma visible y perpetuada la existencia del grupo, de la comunidad o de la clase (Chartier, 2005: 56-57).”

3. It should also be noted that, while for 75 percent of cadets, the main breadwinners during their childhood and adolescence were both father and mother; for 20 percent, the father alone provided for the household; and for 5 percent of cadets, it was someone else who took care of household expenses. In 70 percent of all cases, domestic activities in the home during the cadet’s childhood and adolescence were performed both by the cadet and her mother; in 20 percent of cases, by the mother alone; in 10 percent of cases, they were carried out by a domestic employee or housemaid, while the remaining 10 percent were performed by another person, leaving the father free from household chores.

The Resurfacing Struggle for Control over Water – An Imperative to Prepare Future Leaders to Deal with Climate Change

Arbenita Haxholli, Dritëro Bajrami, and Vegin Krelani

Abstract: Climate change has established itself as a central theme of the twenty-first century by impacting every aspect of the ecosystem and, consequently, human lives. The world status quo is being challenged: from the rising sea levels, wildfires to the frequent droughts and floods in various regions. While most conflicts among nations in the past centuries arose due to ideological, religious differences, and expansionary intentions, we witness water scarcity as the resurfacing affair between countries. This paper examines the need for a consolidated approach to address future junior military leaders' education about contemporary challenges such as climate change. The approach should encompass the current viewpoint of environmental challenges, the importance of leadership in addressing the matter, and the motive to inspire others. This paper uses secondary data collected from existing research articles and other academic sources. Qualitative research is the main foundation of this paper utilizing publications and papers from different relevant scholars to add a holistic perspective to this study. Data suggests that in the past decade, more than 285 conflicts worldwide involving casualties were related to water. Militaries of many countries have already identified the threat of climate change, consequently water scarcity, and are taking initial steps to integrate this matter into their doctrines. Nonetheless, this paper provides examples that climate change and water scarcity should be further integrated into young officers’ education to help create a better picture of the potential contemporary operational environment.

Introduction

Due to emerging conflicts between countries, the military's need for new leadership strategies has increased significantly. Leaders now should provide a sublime motive to inspire their subordinates to prepare and fight. In the most recent conflicts, leaders have inspired a soldier to fight for freedom, end others’ oppression, and neutralize threats that hinder peace, or prevent deviated ideologies from spreading. However, the current situation requires leaders to offer their soldiers a motive that emphasizes threats coming from climate change to other actors' appetites in the theater of war over a scarce resource.

The threats to global peace and security imposed by climate change are considered disputable, even for the most stubborn politicians of countries in the world. In 2011 after a
debate, United Nations Security Council (UNSC) released a Presidential Statement expressing concern that the “...adverse effects of climate change may, in the long run, aggravate certain existing threats to international peace and security.”

It took four years for the UNSC to recognize this issue, after strong opposition from China, Russia, and the Group of 77. The UNSC confirmed what was already widely known that climate change has negatively impacted most aspects of human life while increasing the hostilities among various groups of people worldwide. From the floods and droughts across the globe to the increasing sea levels (melting of the arctic ice) and reduced agriculture yields, climate change has raised the alarm for many countries to prepare for natural disasters and prevent water and food scarcity.

Not long after the UNSC recognized the issue, the world witnessed the political uprising in Syria and the rise of Islamic State of Iraq and Syria (ISIS), partially caused by the three-year drought that devastated the region. This event threatened the peace and security of that region and rose to a global level threat with a huge migration wave that also exported terrorist attacks, alerting for future conflicts of the same nature. The World Economic Forum’s Global Risk Report 2020 ranked “water crisis” as the fifth most significant global risk by impact, after climate action failure (first), biodiversity loss (third), and extreme weather (fourth) all of which led to the water crisis. For years, the annual reports from WEF have been suggesting that the conflict prevention efforts should address environmental issues, mainly climate change and its dangerous outcome: freshwater scarcity. The projections for global stability and peace for this century are not even mildly promising with the current rate of climate change. It is projected that by 2075 the number of people living in regions with chronic water shortage would be between three and seven billion. Another four to nine billion will be living in regions with high water stress. These numbers are nothing short of projecting complete anarchy around the globe. Analyzing the occurrences across the world, we observe that the military’s role as peace and stability ensuring institution has increased gradually with the possibility of climate change induced conflict occurrence. Such occurrences increase the need for reforms in military education of the decision- makers have become a necessity to adapt to the new peace-keeping demands.
Freshwater Scarcity: A Ticking Clock for Conflict Set Up By Climate Change

Considering the role that fresh water has in human lives and the ecosystem and the inability to substitute it with a different resource, conflicts over water have the tendency to be more severe. Climate change has particularly impacted the amount of fresh water in many regions, which has led to greater competition over it. Between 2010 and 2019, there have been a total of 466 documented conflicts over water, 285 of which involved casualties. This represents an increase of more than 100 percent compared to the period between 2000 and 2009. The rapid increase in the occurrence of conflicts over water and the fear that the magnitude of the conflicts will increase in the same trend, has led many security experts to advise their governments to take action. The Center for Naval Analyses, who represents a military advisory board consisted by a group of several dozen U.S. and British generals, have warned of the dangers posed by water stress and scarcity and advised the U.S. government to treat it as a matter of national security.

The spectrum of conflict caused by water stress is extensive, starting from civil unrest and instability, localized violence to terrorism, insurgencies and civil wars and state-on-state conflicts. This issue needs to be explored and understood through education. The possibility of participating in conflicts caused or related to freshwater scarcity, regardless of the actor’s role in the conflict, has increased significantly. Thus, militaries around the world should increase their efforts to equip their future leaders with a better understanding of the impact that water scarcity has on conflicts and instability around the globe.

The case of the Syrian civil war is a great example to illustrate how fast the conflict escalated from a civil unrest to a multi-dimensional war. People of Syria benefited from the agricultural fertility of their land. The fertility of the soil and the climate were beneficial for Syrian people’s welfare. Agriculture was the primary source of income for a considerable part of the Syria’s population. Since 1980, Syria has been hit by droughts three times, the last one being considered the worst in the last 900 years. This drought, which is attributed to accelerated climate change, has caused approximately 800,000 people of Syria to lose their source of income. In addition, most of the country's livestock perished. One and a half million people who worked their land had to move to the urban areas in search of new sources of income. The rest of the farmers who stayed behind, affected by hunger, harsh conditions, and a
weak welfare system, became a vulnerable target for terrorist groups, who initiated a recruitment campaign for Syria's drought affected population. Feeling unsatisfied with the government's lack of support, nationwide protests erupted, which later escalated into a civil war. A drought caused by environmental and climate change impact became the main cause for a large-scale migration, indiscriminate war, and a socio-economic issue. The consequences of the Syrian civil war, affected the majority of the Middle-East and Europe. One of the major challenges that Europe has faced in the last 40 years has been addressing the illegal migration mainly caused by the civil war in Syria. On the other hand, the rest of the Middle East region had to fight the Islamic State of Iraq and Syria, whose roots can be traced to the severe drought. A similar case can be observed in Nigeria after the severe drought that was exploited by Boko Haram.

From Conflict to Cooperation

In multiple instances the scarcity of natural resources has led to increases in cooperation and improvements in resource management. This is usually achieved through agreements, which have often survived even when countries were engaged in non-water related conflicts. Even though the role of the military in many countries does not involve drafting policies or projects to prevent conflict or move toward stabilization post-conflict, militaries often execute policies and projects planned by other institutions. That is because the military is sometimes the only institution prepared to undertake the dangers of implementing projects and policies in high-risk regions. In the Uruzgan province of Afghanistan, water issues had been the cause for instability, however, the involvement of the Royal Netherlands Army (RNA) in the region with an integrated strategy aiming to improve water management served as a tool to bring stability. A specifically designed strategy involving the Ministries of Foreign Affairs, Defense and Justice and Security of the Netherlands, which was implemented by the RNA proved to be very efficient in reducing causes for conflict. The province of Uruzgan was experiencing droughts and water scarcity during the RNA engagement (2006-2010), leading to poverty and further tribal fragmentation. These factors contributed to it being a fertile ground for insurgencies. The RNA managed to tackle the issue by creating a better irrigation system and opening wells. This initiative directly affected the region's overall stability by proving the means of increasing economic activity through agriculture. Additionally, the Royal Netherlands Army, through their
project, redirected farmer’s agriculture activity from the production of poppies (the plant used to produce opium) to the production of saffron, which mitigated the illicit economy and generated higher profits. While poppies were generally used to fund the Taliban forces, saffron helped in increasing the welfare of the locals.

The case of the Royal Netherlands Army in Uruzgan, illustrates that conflicts that generate or expand from water stress can provide the ground for cooperation and stability. However, this requires a great investment in understanding the operational environment and the scope of issue to implement projects that will potentially bring peace and stability. After the RNA left the region, other NATO members took over the region and continued to implement the same project. However, with slight changes in their strategy, the success in Uruzgan faded.

Despite the vast amounts of data that present climate change and water scarcity as the igniting component for many conflicts within a country and internationally, many militaries have failed to study or incorporate their research into their doctrinal publications. However, climate change has started to appear more and more as a theme in long-term security projections although the urgency of the matter is not receiving the proper attention. Some countries such as Germany, already consider climate change as a critical challenge for the National Security Policy and have advocated to make climate change a permanent fragment on the global security agenda. Similarly, Australia considers climate change to be one of the factors that will cause instability in the South Pacific region, which will require Australia to take the leading role for security and humanitarian assistance.

Major Salamanca of the U.S. Army, in her research, explored the doctrinal publications of the U.S. Army and other joint publications and concluded that there is not sufficient material to address climate change and water scarcity. These publications are very general and linear when it comes to helping and advising soldiers to cope with climate change and issues caused by it. The U.S. Army doctrinal publications recognize the issue of freshwater scarcity; however, they come short in elaborating the issue to the level of importance it has in shaping the operational environment. The majority of the burden in identifying and preparing soldiers for the operation environment involving climate change and water scarcity falls over the intelligence assessments of the respective institutions. However, the scope and the complexity of the issues caused by climate change require more preparation than the intelligence products can offer to the officers engaged in planning for operations involving water scarcity in some form.
The soldiers engaged in conflicts should be familiar with the issue and all the domains it encompasses. It can be argued that it is not the duty of the military to solve the problem of scarce natural resources. However, the military can do a great job mitigating the effects of natural resource scarcity that might trigger instability. Accordingly, soldiers should be prepared to anticipate the effects that natural resource scarcity has in conflicts and to isolate these effects from initiating or expanding conflicts.

New Challenges Require New Approaches to Education

“Education should implant a will and facility for learning. It should produce not learned but learning people. In times of change, learners inherit the earth while the learned are equipped to deal with a world that no longer exists” – Eric Hoffer

The need for changes on how the military addresses the issue of climate change is undeniable. The fact that water stress and scarcity caused by the rapid climate change is an unconventional security challenge increases the urgency for changes in the educational system of military leaders at all levels. It can be argued that this approach is more beneficial for senior officers at the operational and strategic level who serve as decision-makers. However, understanding the operational environment and the root of the problem is crucial for every soldier involved in the conflict.

The need for reforms and improvements is present in many militaries; however, we are going to focus and explore the United States military. The Joint Chiefs of Staff have identified the need to reform the Professional Military Education. Consequently they published their Vision and Guidance to address the reform. In dispersion through other findings they envision the military leaders to be able to recognize the military dimensions of future challenges, frame it to a policy level and to recommend viable options to address the challenge. Among other qualities they consider that the end state of changes in the Professional Military Education should be “graduates that possess critical and creative thinking skills, emotional intelligence, and effective written, verbal, and visual communications skills to support the development and implementation of strategies and complex operations.”

The vision of Joint Chiefs of Staff for the future military leaders and the qualities that
they should possess fit the profile of a military leader competent enough to plan and operate and adapt to conflicts caused by climate change. However, to achieve this end state there should be numerous interventions in the educational system. These reforms should take place at the pre-commissioning and junior officer programs since a strong foundation early in the career of military leaders provides a better ground for competence in the later years.

The first step of reformation should include Pre-Commissioning and Professional Military Education Institutions for Officers’ new curricula development. One of the many critiques to the current military education system is the tendency to prepare soldiers to fight the last war. When developing and revising the doctrine and curricula, previous conflicts are usually taken as a point of reference instead of the future forecasts. This can possibly be the reason why military doctrine of U.S. military is not very specific when it comes to issues such as climate change and water scarcity. Many higher education institutions have trouble preparing their graduates for the labor market because of outdated curriculums. In some cases, you can witness curricula older than 10 years still in use. Even if these curriculums were perfectly designed, the fast pace of change in all areas make them detached from the present and the future. When it comes to military institutions, the curricula should be future-oriented, with climate change as one of the key themes of it.

The second step of reformation should focus on the methodology of teaching. Climate change and water scarcity are non-traditional challenges, making it difficult for future leaders to seek advice and solutions based on experiences from their predecessors who once served in their positions. In addition, water has numerous uses which can affect conflicts differently and in a non-linear pattern. Thus, the unpredictability of climate change and water in conflict imposes the professional military education to encourage critical and creative thinking among its students.

They should involve various scenarios which should be treated by the students and provide creative solutions for each scenario. The fundamental imperative must be the diversity of thought. Rather than overloading students with textbook information and serving them solutions, these issues could be treated with tools such as war games. War games that relate to economics, international relations and law beyond the historical-based versions can help prepare leaders for the future challenges.

The third step of reformation should focus in reinforcing the values for which the new
officer generations, such as millennials and generation Z stand and channeling them into the military profession. Surveys have shown that climate change is considered to be the top challenge that the world faces among people between ages 18 and 25 years old. This does not come as a surprise considering their constant activism and mobilization to ask for climate action. If their ideal for climate action to stop and mitigate the effects of climate change is enforced within the military educational institutions, we would be witnessing highly motivated officers. When introduced to the military dimension of climate change, cadets and junior officers can concentrate their efforts in learning that the likelihood of armed violence, state collapse, and social strife in countries that suffer from scarce resources is a greater risk than species and habitat loss. Consistent activities that address climate change, such as conferences, symposiums and research, can impact in exploiting the climate action momentum of the young generation of officers. Furthermore, the necessity of introducing this topic in military educational institutions increases the need for this topic to be further developed in doctrinal publications. It only strengthens the need for a steady confrontation with this topic throughout an officer’s education and career in general.

Conclusion

Militaries worldwide have already taken their first steps to recognize the issue of climate change and water scarcity, and many of them have included them in their defense strategies. However, the world needs this issue to be addressed and institutions to be prepared to deal with it. In particular, preparing the human capital, the cadets, and junior officers, who are the future leaders, is one of the most important steps to address this issue sustainably. These soldiers who will directly confront the implications of climate change and water scarcity in conflicts should be aware of the magnitude and the nature of the problem. That is why militaries around the world should intervene in their military education. This non-traditional problem, characterized by unpredictability, should be matched with leaders who adapt fast, provide creative solutions, and think critically. Militaries need to increase the number of content that explores climate change and water scarcity in their curriculums. They should create conflict scenarios for students, simulate in-class conflicts and situations that involve this subject, and exploit the momentum of this generation z for climate action to prepare a generation of leaders that will adequately address
this matter. When cadets and young officers are encouraged to find the solutions in situations caused by climate change and observe how their peers react to similar scenarios, we can be confident that they will make the best decisions in real-life situations. Militaries should commit to this investment early in officers’ careers and provide rooted foundations for the future.

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Bioethics Education: A Necessity in the Education of the Military Leader

Pedro Antonio Montaña Mesa

Abstract: The interpretation of the meaning and conceptualization of bioethics within the educational process and the characterization of the integral formation of the Colombian Army officer, implies adopting a position in accordance with the contemporary demands that humanist education requires with full coherence between being, feeling and acting, as well as believing, thinking, saying and doing, and based on the study plans and the implementation of pedagogical work to face the problems that impact the ethical dilemmas of humanity, especially of the new generations. From the education in bioethics, the future officers could see the learning to learn strengthened, which implies learning to think, identifying their capacities, benefits and limitations in learning and achievement of competences impregnated with the elements of social bioethics, modifying with autonomy their formulation of judgments and be able to make better decisions to act with independence, justice, responsibility, and full freedom. Education in bioethics, as a set of inter, trans and multidisciplinary knowledge, represents a concept of profound implications in all professional branches including the professional of arms, which must integrate the knowledge of life sciences, science and military art and deontology regarding relations with the contemporary biotic, abiotic and human environment, and in this case that facilitate the exercise of command and leadership as an essential function of the Army officer, in benefit of the fulfillment of the constitutional mission.

Introduction

Higher Education Institutions (HEI), as promoters of development, research and innovation, in accordance with advances in science, should consider the implementation, through a comprehensive overview, of strategies that objectively contribute to humanistic training Comprehensive military professional, with an emphasis on the care and maintenance of quality of life conditions, with ethical, social, cultural and historical responsibility, which implies that the military academies review the teaching and learning of leadership to exercise a command based on comprehensive knowledge combined with experience, authority, example and demand with social responsibility, to achieve the conviction of subordinates in the fulfillment of the assigned missions.

It is then bioethics, as a global and complex academic discipline, which brings together inter-, trans-, and multidisciplinary knowledge, which must act and intervene in the solution of problems that impact life systems and the biological processes that originate and sustain them,
without causing damages to other equals and to the environment in which they survive and, on the contrary, must strive for the sustainable improvement of the quality of life in coexistence, not only with humanity, but also with all life systems for the survival of planetary life.

Education is intrinsic to the human being, as he progresses in his thinking, knowing, doing, and acting in community, facing the social, cultural, economic, political fields, among others, it evolves and develops, in accordance with the advances of science, for the welfare of society. Therefore, educational systems accompanied by pedagogical models are obliged to research, develop, evolve, and innovate, simultaneously with advances in science and technology, to achieve better learning processes and meet both the needs of society as of the human being as a person, professional, member of a family, member of the military institution, of a society and therefore of a species.

It should be remembered that throughout history, ethics has dealt with the human being as a moral and responsible citizen, through educational processes based on a series of principles, values, and norms that allow them to face life, performing in the best way possible. Society, while bioethics, in recent years, proposes in a broad, reflective, and critical way to address the relationships between biotic, abiotic, and human beings, in various settings where education has a great responsibility to train people of integrity, as professionals of excellence with a vision of success and exemplary committed citizens and entrepreneurs with social responsibility for the development required by the knowledge society, context to which military education should not deviate to train Army officers.

This document is the product of research framed in the subjective interpretation of reality within a particular context, from which the knowledge that arises from empirical sciences is valid and the data emerge from the plurality of methods and the adoption of investigative strategies characteristic of human action, where the qualitative prevails with an empirical analytical approach with a propositivist perspective, because the importance of evaluating reality in a scientific way is highlighted, through the analysis of the meaning and meaning of language.

Therefore, it contemplates four parts that, in their integrality and coherence, seek to enrich the need to educate today’s military leaders, facing the complex diversity of human beings, the multiplicity of situations and scenarios of military institutions and therefore the Urgent reinvention of educational tools, methodologies, and strategies that facilitate the learning
and acquisition of competent skills to exercise command and leadership for the collective benefit and fulfillment of the mission. A first part, where the antecedents seek to draw attention to what the human being is and its construction through education, to achieve the inspiration of values that enrich humanist training. The second part conceptualizes what the human being is and its integral formation in its different dimensions, where very significant arguments related to the need to educate permanently for the development of their potentialities are evidenced. The third part contains the training axes with their lines of educational action that would facilitate the nurturing of the humanistic training required to lead and exercise participatory command with effective results. In the fourth, education in bioethics allows us to reflect on the benefits it offers to strengthen learning to learn, which implies learning to think, identifying its capacities, benefits and limitations in learning and achievement of competences impregnated with the elements of social bioethics. and end with some conclusions that highlight the importance and significance of bioethics education in the training of new and renewed military leaders.

Background

The human being, as a rational being, since ancient times has been the central axis of society on which it develops and evolves; the family has been the basic unit; both family and society are responsible for educating and training the best sensitive, understanding, and reflective human beings with constructive critical thinking, autonomous with freedom and responsibility to face and emerge ahead in an increasingly complex world that is transformed by leaps and bounds on its own of the human and scientific sciences. Hence the great responsibility, to reinvent the training processes for future Army officers and especially those involved in training as military leaders. In the process of construction of an integral subject, the integration and integrality of human actions with educational actions must be considered, in the dimensions of being, knowing, doing, and living together, with the orientation of thinking as a central dimension, that acts as the center of gravity of the training process dependent on constant, continuous, efficient, and systematic educational action.

In military education, training and socialization are generated, in a scenario par excellence, to enrich the links between civilians and soldiers typical of a plural, global and diverse society within a democracy and a social state of law. Therefore, it must be
comprehensive and permanent, not only in the technical-military fields but also in their role as exemplary citizens, which implies emphasizing democratic ethics because they are the citizens to whom society has entrusted the mission of carrying arms legitimately to guarantee the fulfillment of the constitutional mission.

It is important to inspire values and beliefs, which generate attitudes and behaviors oriented towards a more humanistic conception with reflective, creative and critical constructive thinking that allow them to play their roles in a democratic society and within the particular institutional identity, based on the capacity for permanent learning where the speed of change and transformation requires new knowledge, a new pedagogy with innovative didactic strategies, administration, management and use of new information and communication technologies, which implies changes in the thinking and acting of the educational community, where the teacher, in addition to being the instructor and commander, must assume with example and authority the role of active, transformative and innovative trainer, being the student, cadet and ensign, the essential actor in the educational process.

The human being and comprehensive training

Man, as a human, personal and social being, is an original, authentic, and unique rational animal, endowed with reason, who thinks, has dignity and individual attributes, some innate and others learned, therefore, with the minimum conditions to know, analyze, assimilate, interpret, understand, and do, through educational action. In the course of humanity, Morin (2011) argues:

(…) Man, as a human being is at the same time a physical, biological, psychic, cultural, social, and historical being. It is this complex unity of human nature that is completely disintegrated in education across disciplines, and it is the one that has made it impossible to learn what it means to be human. It is necessary to restore it in such a way that each one, from wherever he is, becomes aware and aware at the same time of his complex identity and of his common identity with all other humans (p.14).

In this way, it has contributed to the construction of the man-society project in the different settings, which has also included great contributions to the conception and evolution of
the educational process, which conditions the orientation of education in the community, including activities, tasks, and responsibilities in the roles of the student, the teacher, and the institutional director.

Morin (2000) says:

The human is “a fully biological and cultural being that carries in itself this original uniduality” (p. 40), in the same way it ensures that: "Man only completes himself as a fully human being by and in culture. There is no culture without the human brain (biological apparatus endowed with abilities to act, perceive, know, and learn), and there is no spirit (mind, mind), that is, the capacity for consciousness and thought, without culture (p. 41).

For his part, Martínez (2009) maintains:

The human being, like all living beings, is not an aggregate of juxtaposed elements; it is an integrated whole that constitutes a dynamic supersystem, made up of many perfectly coordinated subsystems: physical, chemical, biological, psychological, social, cultural, ethical-moral, and spiritual subsystem. All together integrated constitute the personality and their lack of integration or coordination triggers pathological processes of different nature, organic, psychological, social or several together (p.1).

It is because of the above that training the human being with its full integral development has its complexity for families, institutions and even for societies, which is why it is required on the part of the human and social sciences, to take into account the times, situation, and social processes, leaving aside the unidimensional, simplistic, and univocal thinking of epistemological proposals, to visualize complex thinking as a perspective of relevance in a reconceptualized education.

Similarly, for Martínez (2009), the very concept of development referred to the human being, in the strict sense (as unfolding or unfolding) at the levels of physical, chemical, and biological structures and in a metaphorical sense when referring to the configuration of structures psychic, social, cultural, ethical, and spiritual or others of a higher level based on criteria, options and alternatives, sometimes of an ideological nature and even others of an ethical background.
Due to its breadth and complexity, this development has led multiple disciplines to pursue the study to try to unravel its complex reality and enigmatic nature.

By nature, human beings are born with genetic differences and grow up with personal distinctions due to experiences of their existence in the social framework, they are also different in race, gender, age, personality, beliefs, feelings, emotions, temperament, aptitudes, attitudes typical of those sociocultural and biopsychic conditions or, as Suárez (1987) puts it, “each man is original and different; no two personalities are the same” (p. 64). These differences cause diversity in the capacities of the learning rhythm, limit or sensitize knowledge, distort the meanings of knowledge, depending on the interests, means and resources, access opportunities, both of each individual human being, and of the society to which belongs, a situation that requires inter-, trans-, and multidisciplinary in educational action, taking into account the stage, structure, and social context of the students.

The General Dictionary of Human Sciences, by Thines and Lempereur (1975), expresses training as a goal of education. From the cognitive point of view, training is not reduced to a simple acquisition of certain knowledge once and for all, but rather an active use of the knowledge that the subject already possesses, as well as an active acquisition of new knowledge (learning to learn) and from the affective point of view, the training deals with the development of the individual’s total personality.

Although since ancient times there has been a development of the various philosophical positions, the human sciences, from the epistemological point of view, are the set of disciplines whose object is the study and analysis of the human being as a member of a species and a society, with a certain culture, of its manifestations and behaviors. It is in the twenty-first century, the challenges have increased in the plane of the integral formation of the human being in ethical, social, cultural, political, biological, environmental, citizen and technological contexts, all interrelated with each other, that concern today's society and the need to look back at the human sciences and have educational systems that, beyond technologies, advances, and discoveries, allow the formation of ethical and responsible people is felt. Acevedo (1995) reflected on the fact that:

We find in comprehensive training the point where a series of highly complex elements merge that in one way or another compromise both socioeconomic
and super structural aspects, around which a series of variables embedded in typical historicity are woven. of each nation. This fact in itself requires education to assume the responsibility that corresponds to it in the historical transition that is coming. (para. 19).

In this sense, the educational sciences, this set of disciplines (among which are anthropology, sociology, psychology, economics, history, and pedagogy) that study the aspects of education in different societies and cultures, and that describe, analyze, explain, and understand educational phenomena, in theory and practice. In fact, for Morin, knowing who we are “is inseparable from ‘where are we?,’ ‘Where do we come from?,’ ‘Where are we going?’ ” (cited in Zimmerman, 2013, p. 80).

In a general sense, comprehensive training refers to the construction of capacities, skills, knowledge, attitudes, and values within the framework of a set of personal potentialities, which are oriented to activities that tend to the technical and human appreciation of an organization as in this case of a military nature to exercise command and leadership. In this sense, integral human formation is understood as a continuous, permanent, and participatory process that offers the tools to develop harmoniously and consistently each and every one of the dimensions of the human being and within them the ethical project of life, which according to Tobón (2013), is:

The realization of the integral human formation that consists of the process by which the human being lives seeking his personal fulfillment in accordance with his vital growth needs and a certain vision of life, assuming the challenges and possibilities of the social, community, economic context, political, environmental, recreational, scientific, occupational, and artistic, in the present and in the future, with a strong ethical commitment based on the pursuit of universal values (p.38).

In the same way, it is clear for Tobón (2013) that integral human formation is not possible without ethical commitment, and that is why, within the ethical life project, it is required to comply with the following minimum training conditions integral:

- Have a peaceful coexistence based on human rights, respect and conflict resolution based on dialogue and agreement;
• Contribute to the social fabric through solidarity and cooperation;
• Carry out the occupational or work exercise with suitability and responsibility;
• Contribute to one's own quality of life and that of others; and
• Seek the balance, sustainability, and sustainability of the ecological environment in the homeland (p. 38).

According to Ruiz (2007):

Comprehensive training implies an intentional learning perspective, aimed at strengthening a responsible, ethical, critical, participatory, creative, supportive personality and with the ability to recognize and interact with their environment to build their cultural identity. It seeks to promote human growth through a process that supposes a multidimensional vision of the person and tends to develop aspects with emotional, intellectual, social, material, and ethical-value intelligence (p. 11)

[...] In comprehensive training, learning the professions implies not only the acquisition of specific knowledge and appropriate techniques for professional practice, but also requires the internalization of values, attitudes and forms of behavior that contribute to the student participate in the transformation and improvement of social conditions (p. 11).

Comprehensive training has also been conceived as:

(…) A continuous process of development of all the potentialities of the human being that guides them towards the search for their fullness, learning to be, learning to do, learning to learn, learning to undertake, and learning to live together (…) of the human being includes the development of the spirit, through culture; of the intellect through academic life; of feelings and emotions for coexistence and artistic life; physical integrity through sports and health guidance; and of social life through civic activities (p. 12).
Training Axes and Educational Lines of Action

The four axes considered to enrich integral human formation from a social and interdisciplinary bioethical perspective, as a result of the identification of theoretical references and with a view to making their thematic inclusion theoretically feasible at the curricular level, are:

1) The humanistic axis of integral formation,
2) The axis of exercise of command and leadership,
3) The axis of personal, professional, and institutional roles to play,
4) The axis of peace.

Based on the contribution to human development and its potential capacities in the field of life, as a transforming hegemonic discourse of the realities in the professional exercise of the military, which offers forms of intervention in the face of ethical problems and conflicts, these axes require some lines of educational action, some under the responsibility of the institution and others under the responsibility of the student.

The axes and their corresponding lines of educational action are:

1. Humanistic axis of integral training: The specific dimensions of humanism, integrality, and vocation in the “Military Being,” due to the joint responsibility that the graduate acquires at the end of the training process in the Military School with respect to the direction, conduction, and Guidance of a group of human beings to achieve common goals efficiently and effectively. Regarding this axis, the following lines of educational action are considered necessary:

   a. Institution responsibility:

   1) Educate the human being to form an exemplary citizen, committed to social bioethics and development in all fields of life, to face techno-scientific advances.

   2) Inspire respect and acceptance of others to neutralize discrimination or stigmatization due to human, ethnic, cultural, and social diversity.
b. Responsibility of the student:

1) Learn to be human, have and understand the conception of man as a social and historical subject contextualized in his environment and his way of life, being useful for himself and other members of society.

2) Understand with humility how others feel and think, put yourself in the shoes of other people, which implies being more open to collaborate, share, protect and relate to each other with respect, dignity, consideration, tolerance, and solidarity.

3) Respect life and fundamental freedoms, taking into account the equality of all human beings in dignity and rights to be treated with justice and equity.

2. Axis of the exercise of command and leadership: Due to the responsibility in the fulfillment of the mission and the well-being of their subordinates, also related to the constitutional mission of protecting the life, honor and assets of the nation that requires influencing the behavior of subordinates to achieve goals voluntarily and consciously. Regarding this axis, the following lines of educational action are considered necessary:

a. Institution responsibility:

1) Impart knowledge and experiences on command and leadership, with pedagogical strategies that ensure theoretical understanding and achievement of competencies for application in established roles.

2) Promote joint responsibility, collective cooperation and empathy for the respect, defense, promotion, and protection of human rights.

3) Inspire new forms of behavior, in accordance with the norms, principles and values that promote respect, tolerance, subordination and discipline, due to the influence of techno-scientific advances.

b. Responsibility of the student:

1) Influence, responsibly and voluntarily, before their subordinates to act as a team and achieve the goals, with the will, commitment, and desire to
succeed.

2) Exercise authority with respect, simplicity, and humility in search of conviction, admiration, and voluntary follow-up on the part of their subordinates.

3) Value through the empowerment of their subordinates and collaborators.

3. Axis of roles to play: In the exercise of their personal, professional, and institutional roles, it is a fundamental factor to make coherent, reflective, prudent, and effective decisions that facilitate their performance. Regarding this axis, the following lines of educational action are considered necessary:

a. Institution responsibility:

1) Contribute to the strengthening of the ethical commitment based on inspiration in universal values, to obtain a peaceful coexistence through conflict resolution, based on reflection, dialogue, conciliation agreement and the appropriate use of the advances of science and technology.

2) Participate in the construction of the students' social life project, as exemplary citizens, in accordance with their vital conditions and needs and their vision of life.

3) Act in a systemic way with ethics, to radiate the internalization and inspiration of values that, when applied, generate respect, protection and defense of life, justice, truth, cooperation, coexistence, freedom, dignity, and respect to human rights.

b. Responsibility of the student:

1) Acquire discipline with a sense of relevance, institutional commitment, and open, creative, and reflective thinking to make decisions and exercise leadership.

2) Carry out the occupational exercise with suitability and responsibility, promoting one's own quality of life and that of others.
4. Peace axis: Sustainability both in times of war and peace, understood as the condition for development and planetary survival, consisting of satisfying the needs of the current generation without sacrificing the ability of future generations to satisfy their own needs, in line with techno-scientific advances. Regarding this axis, the lines of educational action are as follows:

a. Institution responsibility:

1) Promote the interconnection between human beings and other life systems, the ecosystem, and the planetary environment, to promote social and cultural progress.

2) Promote conscious responsibility for the ecological, with the care and responsible use of natural resources and the ecosystem.

3) Inspire quality behaviors with values about nature, the ecosystem, the environment, the biosphere, and biodiversity.

b. Responsibility of the student:

1) Put into practice harmonious coexistence and respect for human and cultural diversity, for the collective benefit of society.

Bioethics Education

Apart from the different modalities of education, existing today, according to the moments and contexts, a priority aspect to take into account as a fundamental contribution to the integral formation of people, is that education must necessarily be “humanistic,” which implies that they must guarantee adequate preparation to continue their studies autonomously and permanently and at the same time must provide them with the essential ethical and bioethical principles for their coexistence in society, under the environment of consideration, tolerance, respect and solidarity in their relationship.

Humanistic education requires a broad, dynamic, and flexible educational process that encompasses all dimensions of being in its ethical, spiritual, cognitive, affective, communicative, aesthetic, corporal, sociopolitical dimensions, in addition to the still unconsolidated bioethics, to
turn it into active agent of their own development and transformation, which will generate at the same time that each one can contribute to the transformation of the society to which they all belong. For this reason, the characteristic learning should be meaningful learning through a dialogue pedagogy, which facilitates continuous learning according to its reality and context, with means, methods, techniques, methodologies, and strategies that allow integrating knowledge according to the personality of the individual. Each and every one as beings, in formation, in an open, natural and thoughtful way, to apply it correctly and in a timely manner, in everyday life, as citizens capable of living and protecting the community and the ecosystem necessary for their survival.

Within this multiplicity and complexity of the dilemmas of training with excellence appears bioethics, a term of Anglo-Saxon origin that, in the countries of Latin America and the Caribbean, was introduced in the late eighties and early nineties. In education, the introduction of bioethics as the set of inter, trans and multidisciplinary academic knowledge has been slow and discontinuous for the region, perhaps due to the lack of clarity about its epistemology. Indeed, the understanding of bioethics as an applied ethics tends to easily escape from institutional settings; as a discourse of importance and significance for decision-making related to respect for life and respect for the rights of the other; as a fundamental basis for moral maturity and individual responsibility for the consequences of one's actions against the sustainability and sustainability of the human species, the ecosystem and, in general, life at a global level. Based on all this, it can be considered that the way in which bioethics education is potentiated is through education with open, critical, and constructive reflection, democratic participation, and social responsibility.

Education in bioethics, as a set of inter, trans and multidisciplinary knowledge, represents a concept of profound implications in all professional branches including the professional of arms, which must integrate the knowledge of life sciences, science and military art and deontology regarding relationships with the contemporary biotic, abiotic, and human environment. Its important role guides the preparation and training of the human being to be human with integrity in favor of the conscious citizen exercise and the understanding of the life shared with all living species and the ecosystem necessary for its survival, the consolidation of peaceful coexistence and respect, the strengthening of family, institutional and patriotic values, the protection and defense of human rights, issues that guide the exercise of emotional
and participatory leadership mediated by autonomy, justice and equity in decision-making with social responsibility and an authentic integral human development with an open and reflective mind, assertiveness, kindness, cooperation and respectful of the collective well-being to face the multiple problems of social vulnerability, discrimination of all kinds, the generators of violence and the diversity of conflicts that these cause.

With this premise, the bioethical educational elements are described to support the inclusion of bioethics in the teaching and learning process as an improvement element within the pedagogical model established to train the Army officer, in the dimensions of being, of knowledge, of knowledge. doing and living together that revolve around thinking, with emphasis on the bioethical educational sense, in order to:

a. Enrich the training process and comprehensive humanistic development,

b. To enhance the capacities (attitudes, aptitudes, knowledge, abilities, and skills) of the students with respect to the specific dimensions of humanity, integrality, and military vocation,

c. Make the Army officer a person with full dignity to profess a transparent and competent participatory leadership that facilitates the exercise of command, the right decision-making and open, reflective and critical thinking, compared to his essential role as commander of a group of people at the service of the military institution, whose diversity of beliefs and cultures is reflected in the constant relationship with communities from different regions of the national geography, with particular problems of a social, cultural, political and economic nature.

d. Optimize the performance of the graduate in personal, professional, and institutional roles, improving relationships with life systems and the ecosystem necessary for their survival,

e. Encourage the implementation of a bioethical culture in the Esmicsiana Educational Community to provide greater interdisciplinary integration within the curriculum and towards the provision of the corresponding competencies in social bioethics.

Conclusions

1. Bioethics, as a set of inter-, trans-, and multidisciplinary knowledge, offers the
tools for a comprehensive humanistic education with an open, critical, constructive, reflective, and deliberative perspective in the military context in the face of the developments of the new millennium worldwide and in the world. I agree in the national order. These tools are the transversally and interdisciplinarity of the knowledge and subjects that make up the curriculum, so that they contribute to the development of attitudes and behaviors with an open, active, and reflective intellect based on critical and argumentative thinking in the face of complex life situations and of life systems as problems to be solved.

2. A humanistic education, which favors dialogue, must contribute to the integral development of the human being, forming generations better prepared intellectually, with greater sensitivity in their minds and hearts, with ethical and civic awareness, individual and social responsibility, which allows them to promote and value divergent, critical, reflective, and inclusive thinking.

3. Bioethics integrated into education, through dialogic pedagogy, as an essential category, and the didactics of problem-based learning and interdisciplinary dialogue, allow to base the formation of an awareness of autonomy, solidarity, and responsibility in students, as subjects of their own learning.

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Learning to Lead Across Cultures: Crafting a Curriculum to Assist Future Military Officers In a Time of Racial Tensions

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Disclaimer: This paper represents the views of the author only and does not necessarily reflect the official stance of the U.S. Naval Academy, the U.S. government, or the USNA Stockdale Center for Ethical Leadership.

Abstract: During summer 2020, as the United States wrestled with a series of racially-fueled incidents, the U.S. Naval Academy’s (USNA) Stockdale Center for Ethical Leadership commenced work on an extra-curricular program to aid future military officers in leading across different cultures in the Brigade of Midshipmen and the Navy and Marine Corps fleet. Fittingly entitled “Leading Across Cultures,” the discussion-based program aimed to increase awareness of the challenges that minorities face both at the Naval Academy and in the naval services, and to provide a framework for racial reconciliation that students, faculty, staff, and coaches could use in Annapolis and beyond. The program includes a series of small group, in-person training and discussion sessions, initially led by Stockdale Center staff, then replaced by Midshipmen facilitators. This paper explains the evolution of the “Leading Across Cultures” initiative, from conception to execution. The authors will describe how the leaders of the Stockdale Center for Ethical Leadership narrowed down the focus of the effort and selected a series of learning outcomes, how the contentious national political environment shaped and delayed the final product, and how/why the Stockdale Center chose the “Mutual Obligations” approach of Baylor University’s Professor George Yancey upon which to construct its curriculum. The paper will also explore why Stockdale Center staff included in this curriculum the complex history of slavery in Maryland, which continues to shape the brittle racial relations that mark the region even today.

Introduction and Summary

During 2020, as citizens wrestled with a series of racially-fueled incidents across the nation, the U.S. Naval Academy’s (USNA) Stockdale Center for Ethical Leadership commenced work on an extra-curricular program to aid future military officers in leading across different cultures in the Brigade of Midshipmen and in the Navy/Marine Corps fleet. Entitled “Leading
Across Cultures,” the discussion-based program aimed to increase awareness of the challenges that underrepresented populations face both at the Naval Academy and in the naval services, and to provide a framework for racial reconciliation that students, faculty, staff, and coaches could use in Annapolis and beyond. The program includes a series of small group training and discussion sessions, initially led by Stockdale Center staff, but ultimately to be replaced by Midshipmen facilitators when they earn their qualifications.

This paper explains the evolution of the “Leading Across Cultures” initiative, from conception to execution. The author will describe how the leaders of the Stockdale Center for Ethical Leadership narrowed down the focus of the effort and selected a series of learning outcomes, how the contentious national political environment shaped the final product, and how/why the Stockdale Center chose the “Mutual Obligations” approach of Baylor University’s Professors George Yancey and Michael Emerson to inform the “Leading Across Cultures” curriculum. The paper will also explore why Stockdale Center staff included in this program some local race-related historical events, whose complexity continues to shape the brittle racial relations that mark the region even today.

This paper does not attempt to capture everything the U.S. Naval Academy did in response to the racial difficulties of 2020 and 2021. That response included dozens of offices and hundreds of people. Rather, this paper attempts to explain how the Stockdale Center for Ethical Leadership responded in creating its “Leading Across Cultures” program, which is used today for two purposes: to train those faculty, staff, and coaches who have expressed an interest in improving cross-cultural relations on campus, and to train a cadre of new student “Diversity Peer Educator” (DPE) facilitators, who serve in each of the thirty companies (a military unit with approximately 150 Midshipmen) on campus and on every varsity sports team. This paper references “Conversations in Conscientious Leadership,” an 18-minute video created, directed, and edited by two USNA grads from the Class of 2020. In the video, four minority graduates reflect openly and frankly about their experiences during four years as midshipmen at USNA, sharing many emotions that they had never previously expressed. This paper will help to explain how “Leading Across Cultures” facilitators use the audio-visual vehicle to help create a safe environment in which to discuss how “all hands” can identify a shared “critical core” of interests, derived from the Navy and Marine Corps’ ideals of “Honor, Courage and Commitment, and Respect.” The video may be viewed at https://www.youtube.com/watch?v=dJhR-Zpag4w.
Search for Existing Programs Leads Stockdale Center to Construct Its Own

In spring and summer 2020, as racially-fueled protests and riots spread across the nation following the killing in Minnesota of George Floyd by a uniformed police officer, the staff at the U.S. Naval Academy’s Stockdale Center for Ethical Leadership pondered how it could respond. The mission of the Center involves using externally-provided gift funds to stage extra-curricular and co-curricular activities to develop ethical leaders for the naval services. The Stockdale Center staff commenced its efforts by reviewing many of the racial reconciliation and training programs available in the commercial marketplace. For multiple reasons, the Stockdale Center staff chose not to select them. Some proved so closely connected to civilian business applications that they failed to account for the unique facets of military organization and life. Other programs openly embraced controversial political views—both on the right and the left—that threatened to draw the Stockdale Center into the thorny national debate over race, which might jeopardize the Center’s long-standing aim of remaining apolitical. Having found no commercially available products or curricula that seemed to fit, the Stockdale Center leadership began to craft its own program that aimed to begin to foster racial reconciliation. As with the creation of any new curriculum, we started by asking ourselves, “What are we trying to do?”

Teaching and Learning in the ‘Affective Domain’

In the 1950s, Dr. Benjamin Bloom worked with teams of researchers to create a taxonomy that classified learning into one of three domains, and in each, sub-divided educational learning objectives into levels of specificity and complexity. The three domains addressed (1) cognitive, (2) psycho-motor, and (3) affective learning. The cognitive domain includes much of what one traditionally thinks of as “classroom learning,” such as mastering the periodic table, for example, or learning how to do long division. The psycho-motor domain, on the other hand, includes physical motions, such as learning how to swim or to ballroom dance. In our early deliberations the Stockdale Center staff agreed that our program for racial reconciliation—whatever its final form—should not concentrate on these first two domains, but rather on the third domain: affective learning, which aims to foster changes in people’s attitudes, feelings, and interests.¹ In other words, in aiming for “affective learning,” we hoped to shape people’s hearts and minds concerning others who didn’t share their culture, or who did not look like them. More
specifically, we wanted to explore and make people aware of their preconceived notions of others and their own stereotypes, with an eye toward treating all with dignity and respect and fostering group feelings of cohesion and inclusion.

As part of developing the overall educational taxonomy that Bloom initiated, American educational psychologist David Krathwohl developed a hierarchy of learning for the affective domain. “Krathwohl’s Taxonomy of Learning in the Affective Domain” involves five different levels, from most basic to most advanced:

**Receiving** refers to the student's simple awareness that a thing exists.

**Responding** refers to active participation on the part of the student.

**Valuing** involves a commitment to something.

**Organizing** brings together different values, resolving conflicts between them, and begins the process of building an internally consistent value system.

**Characterizing by a value set.** This culminating stage is reached when an individual has developed a value system that controls their lifestyle; the behavior is pervasive, consistent, and predictable.²

While we hoped our students would one day reach the fifth and highest level of Krathwohl’s affective learning—getting all service members to develop a value system that views all humans equally, that eliminates stereotyping, and treats all people with dignity and respect—we concluded that was perhaps too lofty a goal given our time constraints. Instead, we adopted the fourth as a more realistic end-state: bringing together different values, resolving conflicts between them, and beginning the process of building an internally consistent value system. Having set this overall goal for learning in the affective domain, the Stockdale Center staff then set about trying to figure out how to change peoples’ hearts and minds as it relates to race relations.

**Selecting a Pedagogy for Teaching and Learning in the Affective Domain**

While Bloom and Krathwohl describe learning in the so-called affective domain, they don’t offer suggestions on how to achieve it. Thus began a spirited debate within the Stockdale
Center on how best to change attitudes, feelings, and interests. We quickly ruled out two pedagogies: traditional classroom lecture and online computer-based learning. The first often requires little of a student beyond sitting in a seat while someone else talks, and the second involves little human interaction with others as the learner flips through online slides. Over time, Stockdale Center leaders zeroed-in on a pedagogy that involved a small group (defined here as approximately 10-15 people), in-person, discussion-based format, led initially by the senior leaders from the Stockdale Center. Ultimately, however, Stockdale Center leaders aspired to get Midshipmen to lead these small group discussions.

**Borrowing from the U.S. Coast Guard Academy: DPE**

The USNA Chief Diversity Officer asked the Stockdale Center staff to assist with standing up a new “Diversity Peer Educator” (DPE) program, patterned on a like-named program at the U.S. Coast Guard Academy. The plan envisioned training a cadre of students, at least one from each of the thirty companies at the U.S. Naval Academy, as well as at least one representative from each of the sports teams and major clubs. Once trained and certified, these “DPEs” would then become chief facilitators and discussants on inclusion-related issues throughout the 4,400 students in the brigade. The Stockdale Center agreed to use its nascent “Leading Across Cultures” affective learning-based program, which was just taking shape. Stockdale Center leaders crafted a formal mission statement for the DPE program, along with specific learning outcomes:

**Mission:** To create an inclusive environment that fosters dignity and respect throughout the Brigade by equipping Midshipmen to lead across cultures.²

The word “inclusion” in the mission statement proved important. Often in today’s discussions of race and racial reconciliation the words “Diversity” and “Inclusion” get used interchangeably. There exist, in reality, real differences between them. “Diversity” refers to the degree to which an organization consists of people of different traits, such as race, religion, technical skills, age, etc. As such, then, “diversity” represents a quantifiable metric. “Inclusion,” on the other hand, represents something less discreet and more abstract: the degree to which members feel like they are part of a group, or their feeling of “belongingness” inside an organization. Relatively few people decide the diversity of an organization; at the Naval
Academy, it is U.S. Congressmen, Senators, and the admissions office staff who shape the incoming class of students. Everyone, on the other hand—Midshipmen, faculty, staff, and coaches—creates an environment of inclusion. Members of the Stockdale Center believe that the ability to lead across different cultures, and to make everyone regardless of their background feel that they are a part of a unified team—to feel like are “included,” in other words—represents a fundamental mission of all the members of the armed services.

How do we accomplish the mission of creating a more inclusive environment by way of the “Leading Across Cultures” curriculum? We developed an adjunct to the mission statement, the DPE “objective:”

**Objective:** Diversity Peer Educators support the moral mission of the U.S. Naval Academy by facilitating small group conversations that educate and inform Midshipmen, Faculty, and Staff and foster a culture of inclusion across the Yard, resulting in resilient teams ready to exert maximal performance and win the naval service’s battles.

Small group conversations, then, represent the pedagogy that we selected to educate and to inform, and to generate the affective change necessary to create a culture of inclusion across the U.S. Naval Academy’s campus.

**Learning Outcomes Adapted from Big Navy’s Efforts**

Concurrent with this local Naval Academy and Stockdale Center effort, the larger Navy fleet headquarters compiled an Inclusion and Diversity “Core Competency Continuum” that provides some broad learning outcomes upon which to build the “Leading Across Cultures” curriculum that we used to train our DPEs. This Core Competency Continuum provides a secondary set of learning outcomes that nests well under the overarching outcome pulled from Krathwohl’s Taxonomy discussed above, which states: “bring together different values, resolve conflicts between them, and begin the process of building an internally consistent value system.”

The Navy’s Core Competency Continuum offers a set of learning outcomes aimed at servicemembers with 5-12 years of experience in uniform, which all Naval Academy graduates will possess when they reach the end of their military obligations; this appeared to be a worthy set of goals:
• Understand the impact of diversity on group dynamics;
• Demonstrate inclusion through communication;
• Understand organizational and social norms;
• Create an inclusive environment for all members;
• Ensure equity of all team members in work assignments; and
• Mitigate negative effects of bias.

To these, Stockdale Center leaders added three other outcomes pulled from a recent set of U.S. Navy Pacific Fleet directives on “Navy Signature Behaviors”: 5

• Treat every person with dignity and respect;
• Intervene when necessary; and
• Embrace the diversity of ideas, experiences, and the backgrounds of individuals.

And finally, drawn from the DPE mission statement:

• Facilitate small group conversations that educate and inform Midshipmen, faculty, and staff.

These comprise the learning outcomes for the “Leading Across Cultures” curriculum.

A Curriculum to Meet These Learning Outcomes

The Stockdale Center crafted a 12 hour “Leading Across Cultures” training program comprised of several different modules, all aimed at meeting the outcomes above, plus providing for Midshipmen the requisite tools to become effective DPE small group facilitators in their companies and on their sports teams. The curriculum opens with a discussion about the importance of creating a warm and welcoming environment in which people feel free to share their true feelings. We use an ice-breaker called the “The Name Game” in which students share something about their name—first, middle, or last. We’ve found that this exercise helps our participants get to know one another on a personal level, and they begin to feel more comfortable revealing their hidden selves. They also learn that America’s military is comprised of people who hail from all over the world – their names help to emphasize our ethnic diversity as well as our shared humanity. As one of our facilitators remarked during the inaugural training session, “Unless your name is ‘Dances with Wolves’ (a Native American name made famous in a like-named movie), your family came to North America from somewhere else. And even then, your
ancestors at some point arrived here from elsewhere.”

The curriculum then proceeds to the next unit, a shared video viewing and discussion session on cultural inclusion. In summer 2020, the Stockdale Center leadership approached a recent African-American graduate, Second Lieutenant Ramesh Nagarajah USMC, and asked him to produce a short video that addressed the question, “What do black graduates wish that members of the dominant group knew, but don’t?” Earlier in the year, Lieutenant Nagarajah has written and published a powerful essay entitled “Reflections of a Token Black Friend,” which garnered millions of views from around the world. Working with a classmate videographer, the two interviewed three other recent black graduates, who shared their frank discussions in front of the camera. The video broaches subjects like code-switching, in which black students feel like they need to change personality, expressions, and demeanor depending upon whom they are talking with; about hurt feelings when some students get left behind on social outings, wondering if their ethnicity led to their exclusion; about the burden that female minorities feel when leading others, suspecting that because few African-American female midshipmen exist, that their mistakes will reflect on the reputation of their ethnic peers; about how difficult it is for first generation college learners, who find it difficult to compete with sons and daughters of Ivy League graduates. The video precedes a 45-minute guided discussion period in which the facilitator poses questions like, “What ideas did the speakers relate?” and “What surprised you about their thoughts and why?” and “Based on what you learned, what can we all do to increase the level of inclusion that people feel across the campus?” With these open-ended questions, the discussions rarely stall; the allotted time normally ends before the group members want it to stop. We’ve found that the video normally accomplishes its chief goals: to initiate conversations about race and inclusion that rarely happen spontaneously, and to serve as a template that DPEs can use in future inclusion-related discussions. This video is the first in what the Stockdale Center hopes will be a series of “Conversations in Conscientious Leadership,” all aimed providing an opening device to stoke similar conversations in small group settings.

The video screening and discussion normally exhaust the participants. After a 10-minute break the group members reconvene for an introductory unit on how to become an effective facilitator. We discuss a dozen techniques for good facilitation, such as lesson planning and developing a set of open-ended questions that will stoke a free-flowing conversation. We talk about how to handle the loud-mouth who attempts to dominate a discussion, as well as the
techniques for enticing a reluctant talker to join the conversation. We talk about re-centering techniques for how to bring back a wayward discussion back to the subject at hand.

We then spend 30 minutes discussing active listening. We urge people to “listen with their whole body.” We encourage them to physically lean in to a speaker when listening, which shows interest in the content and the speaker. We suggest that they make consistent and earnest eye contact, furthermore. After this unit on active listening, we introduce the concept of cross-cultural competence. We discuss the cultural “Iceberg,” a concept that suggests that the most important dimensions of a culture—like that of an iceberg—lie hidden under the surface, awaiting exploration from an interested and eager learner. We encourage students to read the history and literature about other cultures, particularly those with whom they will interface in the workplace or on an upcoming deployment. Either as homework or an in-class discussion, we take a cross-cultural competency online test, which often proves humbling to even the most internationally-minded person.

**Intervening When Necessary: Role Playing Exercises**

Learning to “Intervene When Necessary” serves as one of the “Signature Behaviors” that fleet leaders want Officers and Sailors to exhibit. But how does one develop the skills to intervene in fraught and tense situations? In the “Leading Across Cultures” curriculum we give participants an opportunity to practice such interventions. Again, in small group settings, we distribute slips of paper to participants, each with a difficult race or cultural dilemma, such as:

- You discover that a teammate has posted racially insensitive material on social media;
- A company mate has forwarded a joke with ethnic slurs to a group chat address;
- Your teammates play music at practice that include racial slurs;
- Your company officer has told a racial minority that their hair looks unprofessional, even if it meets length requirements;
- Two roommates get into a heated discussion over “Blue Lives Matter” or “Black Lives Matter;” and
- An underclassman is distraught over why some ethnic groups can use ethnic expressions while others can’t.
All of these scenarios come from previous experiences witnessed at the U.S. Naval Academy. The purpose of this role playing is not to determine right and wrong, but to develop among the participants some interpersonal skills that they can use to help facilitate discussions at a low level to defuse tensions before they explode.

Perception and Bias

After our discussion about cross-cultural competence, we turn to scholarly issues of perception and bias, which serves as a key academic component in the “Leading Across Cultures” curriculum. In the Naval Academy’s freshman leadership course “Preparing to Lead” (NL110), Midshipmen learn about perception, cognition, and bias, and how the human brain frequently and naturally makes rapid conclusions when it confronts new things, new ideas, and new people. In this segment of the Diversity Peer Educator program, we review these classroom concepts. We discuss how this human process of making rapid conclusions can prove beneficial when it provides quick meaning in a complex or dangerous environment: it allows one to draw upon prior experience to determine safety or danger in “fight of flight” survival circumstances. But the brain’s proclivity to make rapid judgments can also elicit negative consequences when it causes us to quickly—and sometimes unfairly—judge individual persons based on limited information or prior experiences. This plays a role in the development of human biases, stereotypes, and prejudice. Thus, knowing the essentials of how the brain works—how it sometimes functions quickly and at other times more methodically—can help us in recognizing that all of us possess and act subconsciously upon our own biases, the necessary step in starting to build more inclusive teams.

In this section of our “Leading Across Cultures” curriculum, we also discuss the work of Nobel-prize winning scholar Daniel Kahneman, who has popularized a model of the mind that explains why the brain operates quickly in some situations yet slowly in others, a differentiation that is important in understanding the emergence of human stereotypes and biases. In his influential book Thinking Fast and Slow, Kahneman explains that there exists a figurative part of the brain—he calls it System 1—that operates quickly and makes rapid conclusions. To exemplify this, we show a photo of an angry woman’s face. It takes very little time for most adults to interpret: the woman is mad, and likely very will soon blurt out some very unkind
words. Most people don’t need to spend much time analyzing this scene: the brain interprets it very quickly. Likewise, with simple arithmetic calculations. If someone is asked to multiply 4 x 4 or 6 x 2, most adults can quickly answer, perhaps drawing from multiplication tables memorized decades before. System 1 thus operates automatically and rapidly, with little or no effort and no sense of voluntary control. The brain’s System 2, on the other hand, allocates attention for effortful mental activities, including complex computations. System 2 is often associated with complex operations and those requiring concentration. If one were asked to multiply 17 x 24, for example, most people could not answer from rote memory, and would need to stop their other tasks and exert purposeful, dedicated energy to calculate the sum of 408.

What importance do System 1 and System 2 have in our understanding of diversity and inclusion? They are important because they impact the manner in which humans judge others. When meeting a new person, the average person sums up the other very rapidly, sometimes within just a second or two of meeting, based upon our experiences and learning that may have come decades before. There exists a growing scholarly literature that backs up the ideas that the human mind makes quick decisions about others, usually at the subconscious level. One researcher has even shown that quick impressions from looking at others’ faces lead people to overgeneralize, as we equate strangers whom we meet for the first time with those with structurally similar faces. As he warned, “Although cultural wisdom warns us not to judge a book by its cover, we seem unable to inhibit this tendency even though it can lead to inaccurate impressions of people’s psychological traits and has significant social consequences.” Thus, the brain’s System 1 is very powerful, and often leads people to make conclusions about others much more quickly than a rational analysis of their backgrounds, skills, knowledge, or competencies might otherwise suggest.

In the “Leading Across Cultures” curriculum we think it important to ground our discussions of human bias and stereotyping upon the latest research from the behavioral sciences. The subjects of Diversity and Inclusion, after all, represent some of the most controversial and explosive subjects in the public domain. There exists plenty of objective evidence to support the notion that some human bias and stereotyping arises from unconscious, natural functions of the human brain – we want to ensure that people are aware of the way that their own brains work. This is especially important because, as Kahneman warns, even when we become aware of these biases, we tend to think that we are immune from them. But in reality, he says, we still make
mistakes.

Some Strategies on How to Recognize and Overcome Our Own Biases

If Kahneman is right, that we can’t avoid our biases even if we know that we have them, what are we to do? How are we to overcome our subconscious System 1 biases that give rise to stereotyping and lead us to draw incorrect conclusions about people based on partial information. We spend time in this unit discussing some suggestions. Kahneman and others have recommended several possible techniques. First, when making an important decision, increase the number of people involved and ensure that they come from diverse vantages; in doing so we can seek out alternate opinions and explore them fully, thus providing an opportunity to see inconsistency and faults in our own logic. Second, when interacting with someone different than ourselves, we might paraphrase back to the speaker what we think we heard, in order to confirm that we have interpreted things correctly and that our understanding has not been clouded by our own biases. Finally, we can make a conscious effort to learn about others and perhaps change our pre-existing attitudes and beliefs.

Using Yancey and Emerson’s ‘Mutual Obligations Approach’

The “Leading Across Cultures” curriculum then turns toward a unit that provides a structural framework on how officers might, during their course of their careers, engage in long-term improvements in inclusion in the fleet’s operational forces. Sociologists George Yancey and Michael Emerson have developed a process they call the “Mutual Obligations Approach” to transcending barriers between people of different cultures, backgrounds and attributes. While they wrote specifically with race in mind, the same process could be used in a military context to help transcend barriers between the genders, those of different sexual orientation, and those of other differing backgrounds or attributes. Their “Mutual Obligations” framework empowers and encumbers all members of a group to help shape attitudes and beliefs, and as such, represents a form of “affective” learning. In our “Leading Across Cultures” curriculum, we introduce this framework and talk about how individual service members might adapt it to help improve feelings of inclusion:
1. Initiate inter-group communication under controlled circumstances;

2. Listen to each other;

3. Recognize and incorporate individual and group interests;

4. Search for a critical core that all can agree on, giving voice to cultural uniqueness;

5. Acknowledge and define the inter-group problems at hand; and

6. Devise ways that allow for negotiation of these individual and group interests to produce a solution to which all can agree.

Sharing Military Virtues: A Topic We Can All Agree Upon?

Split along geographic, ethnic, religious, educational, and political lines, we live today in a deeply divided America, with some of the most contentious issues surrounding those of diversity and inclusion. How do we start to overcome these deep political cleavages? Step 4 of Emerson and Yancey’s “Mutual Obligations Approach” encourages all members of society to “search for a critical core that all can agree on.” In the naval services, the long-standing service virtues of honor, courage, commitment, and respect, might provide such critical core:

Honor. We honor our shipmates when we accept them as equals, regardless of their race, color, creed, sexual orientation, faith, or other attribute. We honor them by celebrating their histories as well as the struggles that they faced. We should eat and savor their foods, listen actively to their histories, and read their literature. In so doing, we honor our fellow citizens and help to forge the “more perfect union” that our forebears challenged us to perpetually seek.

Courage. Courage is the ability to do something that scares someone. We can all habituate courage by practicing bystander intervention when we witness racism, like when we hear off-color jokes or overhear an ethnic slur. Intervening takes courage, because it compels us to speak up: “Hey shipmate, your behavior is improper, and you must change it.”

Commitment. One shows “commitment” when one exhibits a steadfast dedication to a cause. In this context, we can habituate our commitment to stand up for equal opportunity for all, regardless of one’s race, religion, sexual orientation, or ethnic origin. Such a commitment might involve our dedication to improving feelings of inclusivity in our units.
Respect. Finally, we can exercise the virtue of “respect” by recognizing that, as human beings, we all possess an inherent human worth, equal in power and weight to that of all others. All major faiths preach this, and the same idea is reflected in the secular Enlightenment idea that undergirds our U.S. Declaration of Independence, that all people are created equal. One of the Enlightenment’s foremost thinkers, Immanuel Kant, placed “respect” at the very top of moral thinking about the equality of humans. By virtue of their existence, Kant believed, all humans possess certain things that no one else can take from them. As scholar Thomas Hill summarized:

All persons, regardless of rank or social class, have an equal intrinsic worth or dignity. Human dignity is an innate worth or status that we did not earn and cannot forfeit. ... Legal institutions must interpret, apply and coercively enforce the innate right to freedom of every person, and individuals must respect themselves and others as persons with equal standing under the moral law.

So, by habituating these cherished naval virtues of honor, courage, commitment, and respect, according to the Emerson and Yancey “Mutual Obligations Approach,” over the long term we might help to build bridges across social divides and help forge a more inclusive environment.

Teaching Future Military Officers to Understand the Political Thicket

The next component of the “Leading Across Cultures” curriculum surrounds an objective review of the heated and contentious political views on Diversity and Inclusion. The Stockdale Center believes that members of our nation’s officer corps benefit from understanding the logic behind the various viewpoints. Chapters 3 and 4 of Emerson and Yancey’s text Transcending Racial Barriers provides a literature review of sorts, and the authors explain the rationale of those who, from the political right, argue that the Jim Crow era of governmental segregation and discrimination ended in the 1960s, and after that, the proper approach of the state toward racial issues should be one of “color-blindness” in which all members of society receive the same treatment, regardless of their race, creed, religion, sexual preference, or other trait. The authors go on to explain the voices from the left, who counter that centuries of state-backed racism has created a system so fundamentally flawed and so deeply tilted against the historically oppressed that a “structural racism” exists. Adhering to “color blind” policies would simply entrench more
deeply this structural racism. Thus, according to this logic, citizens have an obligation to dismantle the racist state, along with those institutions that support it. Emerson and Yancey in these two chapters provide a taxonomy that allows our future military officers to understand most sides of these contentious issues. We assign this reading, provide about a 30-minute summary lecture on approximately 25 key terms that are often heard in contemporary discussions Diversity and Inclusion issues. We then provide time in small groups for the students to attempt to explain them in their own words and discuss the merits of each argument as well as the shortcomings. The purpose of this segment is not to indoctrinate, but rather to inform, so that future military officers can understand better this vital national debate that is connected to their immediate task of creating an inclusive environment in their military workplace.

Culminating Project: Develop and Lead a Discussion-based Lesson Plan

The culminating project of the 12-hour “Leading Across Cultures” curriculum is a lesson plan in which the students break into small groups of 3-4 people and develop their own discussion-based lesson plan and execute it. This also becomes the chief assessable product for the “Leading Across Cultures” curriculum. Throughout the curriculum students are encouraged to think about how they might use a “vehicle” around which to build a small group discussion amongst their company mates or team mates, similar to the “vehicle” of the 18-minute “Conversations in Conscientious Leadership” video that preceded the group discussion early in the curriculum. We suggest that a good “vehicle” is a short newspaper story of specific interest to their group, or perhaps a video clip from YouTube, or maybe a movie clip. We then discuss the importance of developing a lesson plan, which includes a set of goals or learning outcomes, and some open-ended discussion questions that will lead to a productive dialog.

On the final day of the “Leading Across Cultures” curriculum, we provide about 20 minutes per group for the students to present. We allow them about 10 minutes for their “vehicle”—the short video clip or other such device. Then we terminate that and move into the discussion phase, to see if the team can exhibit good facilitation techniques and if they have prepared a worthy lesson plan. We’ve discovered that in almost all cases, the students want to perform well in front of their peers, and the discussions prove very good. The Stockdale Center facilitators attempt to provide honest but constructive feedback.
Incorporating Local History in Future Experiential Learning

The Naval Academy is located within Annapolis, in the Civil War border state of Maryland. Many of the state’s antebellum residents enslaved people, especially on the Eastern Shore of the Chesapeake and in the state’s southern reaches. The state’s troubled racial history provides a unique vantage from which to apply historical lessons to contemporary discussions of race. We have incorporated into the “Leading Across Cultures” curriculum a 30-minute overview of the vestiges in Annapolis of the slave trade. We think that there is room to grow this part of the curriculum, as well as to increase the amount of experiential learning that Midshipmen might benefit from. Toward that end, the Stockdale Center has already led book club discussions on the autobiography of Frederick Douglass, an enslaved person who grew up on Maryland’s Eastern Shore and in Baltimore, from which he staged a dramatic escape the freedom in the North. The Center’s leaders, furthermore, have procured permission to stage visits to the homes of Colonel Lloyd, the master of Frederick Douglass; his plantation on Maryland’s Eastern Shore and his family’s city home immediately outside of Gate 3 in Annapolis both can provide insights into the horrors experienced by enslaved labor in the antebellum South. Similarly, the Stockdale Center would like to stage a weekend “staff ride” that retraces the Underground Railroad journeys of Harriet Tubman and others who escaped enslavement in the old South. And finally, the Stockdale Center has coordinated with a local historian of African-Americans in Annapolis Anne Arundel County, who will provide walking tours of the local area. The walking tour would start along the scenic waterfront, where in the 1700s a disoriented West African warrior named Kunta Kinte, the ancestor of Pulitzer Prize winning author Alex Haley, was led in chains from the hold of a sordid human cargo ship and sold on the waterfront to begin a life of human enslavement in America. The walking tour would visit other sites of interest in downtown Annapolis, including the State House in which Maryland’s elected officials voted to free the state’s enslaved population a year prior to the post-bellum U.S. constitutional amendments that set blacks free elsewhere in the South. The tour finally terminates at the state’s African American museum and its display of memorabilia from one of Maryland’s most famous residents, Frederick Douglass. The Stockdale Center’s leaders believe that such experiential learning is a potent way to further our “affective learning,” which includes changing people’s feelings toward others.
Assessment

The Stockdale Center’s new “Leading Across Cultures” Curriculum has an accompanying assessment plan that initially assesses one of the learning outcomes discussed earlier in the paper: "Facilitate small group conversations that educate and inform Midshipmen, Faculty, and Staff.” The Stockdale Center leadership chose that outcome to assess first since leading small group discussions serves as the very heart of how we hope to achieve “affective learning.” For those Midshipmen who seek a DPE qualification, after completing the “Leading Across Cultures” in-person training, participants prepare a lesson plan for an hour-long small group discussion. Such a lesson plan includes an opening device like a short magazine/newspaper article or a YouTube video that aims to provide a theme for the discussion. The student lesson plan also includes open-ended questions to keep the discussion moving along. Finally, in front of a team of evaluators, the student presents a shortened version of the small group discussion. The evaluators provide feedback to the discussant, emphasizing the group facilitation techniques covered in the “Leading Across Cultures” curriculum. Thus far, all of the students who pursued a DPE qualification succeeded.

In succeeding years, the Stockdale Center will choose different learning outcomes to assess. Of particular interest is discerning whether or not the “Leading Across Cultures” program has actually improved measures of inclusion amongst the student body. Stockdale Center leaders have discussed what such an assessment might look like. After gaining requisite approvals from the U.S. Naval Academy’s Institutional Review Board and Human Research Protection Protocol leaders, the Stockdale Center would likely conduct a controlled experiment with two groups (companies) of Midshipmen, each of which includes approximately 150 students. Midshipmen from both groups would take the Gallup Company’s “Q-12 + 3” Engagement survey. The survey starts with 12 questions that gauge a worker’s organizational engagement, with questions like: “At work, do you have the opportunity to do what you do best every day?” and “Does your supervisor, or someone at work, seem to care about you as a person?” By comparing employee answers to an enormous database, Gallup representatives claim that Q-12 can quantify how deeply an employee feels engaged with their organization and their co-workers. To these 12 questions on engagement, Gallup has added three additional questions that purport to measure feelings of inclusion:
At work I am treated with respect?
• My workplace is committed to building the strengths of each associate?
• If I raised a concern about ethics and integrity, I am confident my employer would do what is right?

Scores from these three questions, Gallup suggests, measure inclusion.

According to our draft assessment plan, sophomores and juniors in both companies would take the Q12+3 at the beginning of the study. Only one company, however, would receive DPEs who have completed the “Leading Across Cultures” training, and only that same company would receive once-per-month small group discussions led by their DPEs. At the end of each of two academic years, the two companies would receive another Q-12+3 to see if there has been any change in feelings of engagement. The hypothesis is that the company with the DPE and small group discussions would show higher scores in engagement and inclusion than the control group, whose members received none.

Due to a recent retirement in the Stockdale Center, however, this proposed assessment regime awaits the arrival of a new “Director of Influencer Development,” who should join the Stockdale Center sometime in 2022.

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Endnotes

3. Stockdale Center Associate Director Major Desiree Sanchez, USMC, crafted the DPE Objective and Mission Statement while serving as USNA’s DPE Coordinator.


Think Like a Commander: Not Like a Cadet: Is It Possible to Develop 21st Century Army Officer Expertise for Mission Command at a Military Boarding School?

Richard D. Megahan

Abstract: Mission Command is the current U.S. Army doctrinal approach to operations, training, and leadership development, codified after eight years of revisions in Army Doctrinal Publication (ADP) 6-0, Mission Command: Command and Control of Army Forces (July 2019). A departure from the Army’s traditional “detailed command” style, this publication addresses the asymmetric conditions of twenty-first century military operations by establishing a base philosophy to guide unit training and prepare officers to “command into the uncertain.” Central to this doctrine is the notion of “implementation of Mission Command throughout the Army” as a professional attribute, a competency that the Army expects to be applied throughout an officer’s career, from “cadet to Colonel.” Therefore, if military schools are preparing future leaders for the Mission Command environment of the Army, learning, and applying Mission Command in school is a crucial first step. Yet, where do the first steps in the development of professional expertise in Mission Command take place for the cadets in pre-commissioning programs? Outside the United States Military Academy, the military boarding schools with their Senior ROTC programs provide the most fertile and exciting environments for the development of professional expertise in Mission Command for aspiring Army junior officers. This paper examines how the U.S. Army Cadet Command (USACC) and two U.S. Army-based military boarding schools—one military junior college and one senior military college—provide an instructional emphasis and experiential learning focus in Mission Command. This paper reports on a study methodology consisting of a critical content analysis of SROTC military science program syllabi, course documents and references, USACC training guidance, and cadet regiment training schedules, leadership training outcomes determinations, and evaluation methods. Specifically, the study found little evidence of USACC and military school academic/curricular emphasis placed on the instruction or actual practice of Mission Command. According to Ericsson and Pool (2016) deliberate practice is the “Gold Standard” for developing professional expertise in any field, but where is it in the military school programs? This study revealed not only a serious shortfall in the ROTC curriculum for Mission Command instruction, but a yawning gap concerning pedagogical methods for Mission Command being experientially transferred into the leader development culture of the military school Corps of Cadets. A close reading of syllabi and training schedules suggests that deliberate practice for Mission Command is missing-in-action, with more energy and emphasis placed on learning how to be a cadet. This assessment is supported by four main themes that emerge as obstacles to deliberate practice of Mission Command: military contextual influences; organizational contextual influences; curricular alignment influences; and instructor professionalism and leadership influences. Also, from an institutional perspective, curricular misalignment includes how other academic leadership programs offered at military schools and colleges conflict, are contradictory,
confusing, or lack experiential components that connect and intersect with ROTC programs and cadet leadership duties and responsibilities in their regiments. This study offers recommendations for inculcating a comprehensive organizational culture of integrative leadership development in Mission Command in military boarding schools. Embarking on the pathway to expertise in Mission Command, future Army 2LTs must have intensive experiential learning opportunities that reinforce thinking like a commander, not a cadet.

**Keywords:** Mission Command; Leadership Development; Professional Expertise Development; Deliberate Practice; Experiential Learning; Training/Learning Transfer.

*This method of teaching [mission command] supported the real notion that there are no perfect solutions in war. Things would constantly go wrong or break down, intelligence would be faulty, a company would get lost, etc. Therefore, flexibility of mind is the most important thing to teach an officer—that he would be able to make do, no matter the situation, that he would be to command unruffled amid the turmoil and chaos of war, which would in itself calm the situation. He would “command into the uncertain,” but command he would* (Muth, 2011).

**Introduction: Starting with WHY**

*Mission Command* is the current U.S. Army doctrinal approach to operations, training, and leadership development, codified in Army Doctrinal Publication (ADP) 6-0, *Mission Command: Command and Control of Army Forces* (July 2019). Concerns exist within the Army community about the diverse application of Mission Command in units in garrison, training, and during operational deployments, and this impacts pre-commissioning education of future leaders (see Department of the Army Inspector General (2015), Survey on Company Level Implementation of Mission Command and Center for Army Leadership (2016), Annual Survey of Army Leadership (CASAL). While Mission Command is a leadership and training philosophy, this paper examines why SROTC and Corps of Cadets leadership programs at military schools and colleges do not reflect the current Army focus on this philosophy. It investigates the related concepts of the development of leadership expertise through deliberate praxis in the context of undergraduate military boarding school students who hold leadership positions within their respective Corps of Cadets regiments.
Background: What is Mission Command Really?

*Mission Command* is an open-minded, opportunity-seeking approach to command and control, a pedagogy for leader training and education, and a leadership philosophy (ADP 6-0, 2019). As an approach to command and control, *Mission Command* focuses on outcomes, not details of accomplishing the task or mission. Commanders capitalize on subordinate ingenuity, innovation, and decision-making to achieve the commander’s intent when conditions change, or current orders are no longer relevant. Subordinates must seek opportunities, and commanders accept risk for subordinates trying to meet their intent. Subordinate decision-making and decentralized execution appropriate to the situation help manage uncertainty and enable the necessary tempo at each echelon during operations. Employing the *Mission Command* approach during all garrison activities and training events is essential to creating the cultural foundation for its employment in high-risk environments (ADP 6-0, 2019, p.1-4).

As a pedagogy, *Mission Command* is a learner-centric practicum oriented on adaptive leadership challenges addressed with deep learning, coaching, and mentoring by instructors, and growth in expertise (Green and McBride, 2015). Peer-to-peer learning, choices, learner autonomy, and experimentation are instructional approaches that demonstrate the critical link between pedagogy and *Mission Command* (Barlett, 2019; Vandergriff, 2019). Leaders must be educated and trained to be agile and open-minded in their approach to wicked problems and situations, using an interdisciplinary schema to apply critical thinking skills to search for opportunities, to examine multiple perspectives. Training and education foundations provide occasions to transfer learning to “what you see is what you get” experienced-based intuition and decision-making skills (Vangel, in Vandergriff and Webber, 2018).

As a leadership philosophy, commanders empower subordinates to use their initiative to accomplish their assigned tasks. Commanders provide direction to subordinates who can execute without the need for continuous guidance. Commanders realize that the complexity of operation means they alone cannot make “every important decision at every critical moment” and must lead, coach, and train subordinates to apply initiative and sound judgment in the time-constrained, simultaneous decision required during combat (ADP 6-22, 2019). Young leaders are empowered—and expected—to make crucial decisions based on their training and education,
connecting observations and determinations of what is taking place on the ground (Heyward, 2013). The common thread is a trust-trust relationship that binds all unit echelons, from commanders to soldiers (Vangel, 2019). Mission Command is a culture of commanders providing direction but not tight control because of a reservoir of trust. Trust is built with a mindset of a continuous progression of leaders along the pathway to professional expertise (Muth, 2013).

Mission Command is replete with a set of guiding principles that describe the mindset and highlight the focus for the development of professional expertise: Competence; Mutual Trust; Shared Understanding; Commander’s Intent; Mission Orders; Disciplined Initiative; and Risk Acceptance (ADP 6-0, 2019). Operating within the philosophy of Mission Command, in combat, training, or garrison, requires Army officers to understand how to apply the principles of Mission Command as leaders and staff officers. While the Army issued an unambiguous articulation of its expectations of all members of the force to apply, learn, and train in Mission Command, it has over the past eight years he Army admits it has had problems with defining Mission Command principles, establishing Army-wide implementation guidelines and metrics, and inculcating the approach within the officer corps. As a result, there has been narrow-mindedness in training and opportunities lost in education (Muth, 2011; Orsini, 2019; Vandergriff, 2019; Orsi and Mundell, 2019). This dysfunction has had the most harmful effect on ROTC pre-commissioning training and education (author, personal communications, July 20, 2020).

Therefore, if military schools are preparing future leaders for the Mission Command environment of the Army, learning and applying Mission Command in school is a crucial first step.

Military Boarding Schools

Outside the United States Military Academy, the military boarding schools provide the most fertile and exciting environments for the development of professional expertise in Mission Command for aspiring Army junior officers. These are unique institutions because of their emphasis on “Whole of Cadet” development, which includes rigorous academics and challenging physical training. Even more important, they provide aspiring officers their first unit experiences, their first opportunities to practice unit leadership, in a military organization replete with the
diversity of personalities, thoughts, skills, goals, and motivations they will find in their very first platoons.

This paper reports on research into *Mission Command* instruction and practice at one Senior Military College (SMC), and one Military Junior College (MJC) (author, in press, 2021). Both are well respected institutions with U.S. Army-based Corps of Cadets (cadet regiments), long-standing Senior ROTC programs, and widely known for exceptional liberal arts education.

Between just these two schools, over 3000 cadets are members of a Corps of Cadets (student body), are organized, trained, and educated using Army doctrine, occupy over 400 direct Corps of Cadets organizational leadership positions each year, and participate in 370 hours of scheduled training during the school year. Both schools conduct over 320 SROTC lessons, have over 100 ROTC battalion leadership positions, and ultimately provide over 125 new officers to the Army every year. Each graduate/commissioned Second Lieutenant must demonstrate proficiency in *Mission Command* (ADP 6-0, 2019; TRADOC Pamphlet 525-8-2; USACC Reg 145-3, 2018). The question is, given their respective environments, how well are military boarding school ROTC cadets trained and educated to achieve this *proficiency* in *Mission Command*?

**Rising to the Level of Our Training**

We begin with a warning to avoid the pitfalls of impotent learning outcomes. A quote attributed to Greek soldier-poet Archilochus (c. 650 BC) reminds us peril lies ahead: “We do not rise to the level of our expectations; we fall to the level of our training” (Feloni, 2017). The Army *expects* its future leaders in ROTC programs to be able to “demonstrate proficiency” in *Mission Command* philosophy; *Mission Command* Leader and Commander Tasks; *Mission Command* Staff Tasks and *Mission Command* Systems (ADP 6-0, 2019). However, what constitutes the level of training necessary for demonstrated proficiency is not well articulated in Army doctrine, making the expectations open to multiple interpretations. Consequently, USACC does not specify the priority scheme for training and education for these tasks.

Thus, one of the fundamental, unresolved problems with the level of training and education for *Mission Command* in pre-commissioning programs is the definition of, practice
for, and assessment methodology of proficiency. The Army Training and Doctrine Command (TRADOC) is responsible for making Mission Command training and instruction the main effort in the schools and courses of Army professional military education and ROTC program curricula (TRADOC Regulation 350-1, 2017, p.1). The Army’s pathway to professional expertise of officers in the application of Mission Command begins in pre-commissioning programs (USMA and ROTC), but it steps off on the wrong foot.

The pre-commissioning programs are the Army’s Initial Military Training (IMT) of prospective officers in USMA and ROTC programs, entitled Basic Officer Leadership Course Phase A (Army Regulation 350-1, 2017, p. 72). The U.S. Army Cadet Command (USACC) is directly responsible for executing the TRADOC BOLC. USACC supervises eight SROTC brigades consisting of 274 SROTC “battalions,” providing curriculum development, cadre training and certification, and quality assurance of training and education (USACC Regulation 145-3, p. 6). USACC addresses quality control through detailed guidance on developing Mission Command expertise in the form Operations Orders (OPORDs, where academic year training priorities are established) and in Military Science syllabi and lessons plans (USACC Regulation 145-3, 2019).

The Army employs pedagogical approaches that feature a Kolbian experiential model (see the Army Experiential Learning Model, The Army University, n.d.), but how cadets get evaluated in Mission Command proficiency demonstration is not outlined in connection with this approach. USACC Regulation 145-3 (18 June 2019) does not describe what constitutes a successful demonstration of proficiency. Appendix C-2 (Cadet Progression Model) of the same regulation highlights all four years of military science developmental education and experiences but fails to address Mission Command proficiency. The Cadet Military Science End States (App. C-2-2) specify “understanding the desired MS (Military Science) end state assists cadre/faculty in maximizing leader development opportunities for individual Cadets,” but does not equate this to Mission Command proficiency. Appendices C-3-1, C-3-2, and C-3-3 describe the purpose of Field Training Exercises (FTXs) essential to the curriculum, yet there is no mention of Mission Command in these appendices or the expectations for the demonstration of proficiency in Mission Command leadership expertise (USACC, 2019, pp. 48-49).
This study accessed the USACC published annual training guidance for Academic Year 2020-2021 (provided courtesy of USACC). OPORD 20-03-007 (10 March 2020) facilitates critical insights into the degree to which the command is achieving its mission and accomplishing the development of Mission Command professional expertise in its ROTC units. As described in the OPORD, “All Cadet development training must focus on preparing Cadets for success at CST,” with the emphasis on directed rifle marksmanship, call-for-fire, and land navigation training (USACC OPORD 20-03-00, USACC Annual Training Guidance Academic Year (AY) 20-21, p.10).

It is evident from the instructions in the OPORD that the emphasis on BOLC A pre-commissioning training and education rests on “traditional” technical and tactical skills, successfully demonstrated during Cadet Summer Training (CST). However, there is more. ROTC cadets must receive and complete required training on foot marches, Ranger Challenge, sexual harassment/assault response and prevention (SHARP) training, equal opportunity training (EO), suicide prevention, alcohol and drug abuse, and resilience training (p. 5). On top of this, the USACC curriculum requires lessons in military justice, ethics, combat lifesaving/first aid, military history, customs, courtesies, and traditions, financial readiness, counseling, problem-solving and decision making, administrative actions, OPSEC, counter-terrorism, Army writing style, cultural awareness, and Code of Conduct (Appendix A2 to Annex D, USACC OPORD 20-03-007 p.1). There is a considerable menu of required training to be conducted in each Military Science (MS) I-IV cohort, within fall and spring semesters of an academic year. Where does Mission Command instruction occur amidst these many competing priorities?

Analysis

A recent study (author, 2021, in press) examined Academic Year (AY) 2020-2021 Army ROTC syllabi (pre-COVID conditions) for scheduled course lesson periods with Mission Command instruction and assessed Corps of Cadets weekly training schedules for dedicated training periods demonstrating evidence of ROTC Mission Command training transfer. This study adapted the classification methodology of content analysis research of undergraduate syllabi conducted by Welch (2009, p. 3). This approach facilitated exploration for “manifest evidence” of mention for Mission Command (no mention; key words only; short statement of one
This Qualitative Content Analysis (QCA) of course syllabi and weekly training schedules also sought to highlight interpretations, inferences, and influences of the institution’s organizational culture approach to learning in *Mission Command*. QCA was applied to identify what the instructional documents promote, discount, enable, inhibit, expand, or limit within the educational and organizational contexts to be used (Krippendorff, 2013, p. 24; Schreier, 2012, p. 2).

The study found that across both schools, within 12 entire semesters and 324 total syllabi-driven class periods of Army ROTC course work, the manifest evidence of *Mission Command* instruction occurred in 4 class periods—just 1.23% of classes—where *Mission Command* was the specifically assigned instructional topic. Additionally, there was no manifest mention of *Mission Command* in 60 weeks of both schools’ Corps of Cadets training schedules.

A more in-depth view of the *Mission Command* instructional period lesson plans (courtesy of USACC) revealed Power Point presentations on the doctrine of *Mission Command*, and case studies where *Mission Command* was considered performed in operations. However, syllabi assign *Mission Command* lessons late in the academic year, and little to no precursor mention of *Mission Command* is seen in lesson plans of other subjects. The conclusion here is that a great opportunity was lost in the omission of *Mission Command* skills integration across the curriculum, which seem to subvert the learning outcomes established by the Army.

As one SROTC instructor lamented, it was like pulling teeth to achieve cadet focus on *Mission Command* when it was the primary instructional topic or interact about it. While frustrating, this was not surprising, since there was ROTC organizational reinforcement of the importance of *Mission Command* to the future officers, any integration of the principles of *Mission Command* across the ROTC curriculum, and definitely no practice during ROTC lab periods (P. Fransisco, personal communications, October 2020).

The absence of manifest evidence of attention devoted to *Mission Command* instruction and application within the ROTC programs at military boarding schools has been described as a symptom of the failure of the Army (including USACC) organizational culture to fully embrace *Mission Command* as a leadership philosophy (Townsend, Crissman, and McCoy, 2019;
Vandergriff, 2019). For USACC, the agency responsible for pre-commissioning instruction in Mission Command, it is evident from the syllabi that Mission Command is not the priority the Army has declared. Instead, the priority is Cadet Summer Training task preparation. Despite Army and USACC rhetoric, nothing in the syllabi explains how proficiency in Mission Command is to be defined, or assessed, what opportunities will be offered to practice Mission Command, or how instructional design reflects a movement toward the development of professional expertise in Mission Command. In the Army and ROTC program cultures, Mission Command is “out of sight, out of mind.”

Out of sight and out of mind in the Corps of Cadets, too. Like the ROTC syllabi, the cadet training schedules reveal how the school misses the junior officer leadership development target. Schedules prioritize major events on campus and a dizzying array of required tasks for learning how to be a cadet, not learning how to be an adaptive leader. At issue is the competition for cadet time. The precious time available for focused leadership training and practice, if it occurs, is tightly compressed into a rigid timeframe, and offers very little in experiential learning opportunities.

The training schedules in both schools reveal leadership development of assigned cadet officers and NCOs is hinged on a five-seven day training period before the arrival of new cadets, and this intensive period focuses almost exclusively on the administrative and procedural aspects of receiving and in-processing new cadets than learning and practicing leadership. Beyond this “cadre training,” progressive “professional development” for leader duties in the cadet regiment in both schools is weak, unfocused, or noticeably absent. If training periods throughout the academic year do occur, they inevitably involve subjects related to how to teach new cadets about the cadet system (author, personal communications, 2020).

Although the military schools’ Corps of Cadets follow Army doctrine, and endeavor to stay abreast of changes, the QCA showed leadership training and development activities within the cadet regiments do not refer at all to the Army’s philosophy of Mission Command. Thus, a dichotomy in culture and mindset emerges: what happens in ROTC is about learning to be an Army officer and stays in ROTC; what happens in the Corps of Cadets deals with being a cadet and stays in the regiment.
The QCA confirmed these two mindsets cause divergence instead of convergence on leadership training and education. No evidence appeared to suggest active attempts at congruence of military and organizational contextual influences. Aside from citing Army doctrinal sources, there was no evidence to show that instructional methods and curricula were synchronized or integrated. There was no evidence of intentional design to deliberately instruct, apply, or practice the ROTC lessons on *Mission Command* in the Corps of Cadets. There was no evidence in syllabi or training schedules of collaboration between ROTC instructors and the Commandant’s Leadership Advisors about effectively teaching, coaching, and mentoring in the Army’s *Mission Command* leadership philosophy. In the twenty-first century, why is this the case?

The QCA shows traditional emphasis on learning how to be a cadet remains a priority at both schools, and this, according to Reyes, Dinh, Lacerenza, Marlow, Joseph, and Salas (2019), is because institutions are more comfortable with leadership development programs featuring classroom-heavy delivery. Instructional strategies are predominantly lecture and discussion, but analysis points to the most effective method to achieve learning objectives is through more robust, experiential practice. Leadership development program evaluation focuses too much on classroom evaluation and not enough on the “transfer of learning” that occurs when institutions realize that leadership development “does not stop in the classroom” (p. 11).

This in turn strongly suggests that future officers of the twenty-first century are being trained and educated within a twentieth century approach to leadership with an accompanying plebe system mindset (Muth, 2013; Vandergriff, 2018). There are identifiable elements of the SMC and the MJC staying in their respective comfort zones of traditional approaches to leadership development. From the QCA “inside-out” review, to these schools the contextual influences of military training and organization, instructional methods and curricular alignment, and instructor effectiveness all appear logical and successfully applied to leadership development. When viewed from the perspective of accreditation (see Council for the Advancement of Standards Leadership Program Standards, 2020), institutions in the study meet requirements. However, the accreditation standards do not examine the influences mentioned above, and their impacts on leadership development training and education (author, personal communications, October 2020).
While the study demonstrates ROTC and the Corps of Cadets are two separate camps of leadership development on the SMC and MJC campus, there is a third camp that is firmly entrenched in both schools: academic leadership courses. In both schools, academic departments (excluding ROTC) offer nearly twenty leadership courses. Considering how divided the approach to leadership development already is on these campuses, the academic courses add significant confusion due to a lack of alignment with what is going on in ROTC, or the Corps of Cadets. This does not signify an interdisciplinary leadership development design; many of the academic offerings are “stove-piped” courses, following outdated theory-based and trait-focused pedagogy (Owens, 2012). Academic course syllabi (courtesy of the schools in the study) showed little to no emphasis on the importance of promoting leadership instructor effectiveness and professional development, and there are issues with applying substantive, outcomes-based data to design or improve programs (Owens, 2012).

According to authors Allen, Miguel, and Martin (2014, p.29) in their article, “Know, See, Plan, Do: A Model For Curriculum Design In Leadership Development,” the role of a leadership development curriculum is to address the development of expertise. The QCA illustrates that the definition of expertise, the road map of development for it, and the application of deliberate practice are all missing in the syllabi and schedules of the schools in the study.

How can the development of professional expertise in Mission Command instruction and practice possibly occur? Expertise is exactly what the Army expects of its leaders, but the study reveals status quo approaches signifying that knowledge is gained in school, and practice is gained following graduation (Muth, 2013). The objective of expertise development in Mission Command should be an essential influence in learning outcomes, curricular construction, and alignment. It gets to the rubber-meets-the-road practicality of learning leadership since, as the Allen, Miguel, and Martin contend, the lack of deliberate leadership practice venues and opportunities is the “Achilles ’heel” of leadership development programs (p. 29).

The recent study findings suggest that Achilles’ heel of ROTC/cadet regiment instruction and deliberate practice in Mission Command is due to a lack of interconnected contextual influences. The fundamental weakness of the ROTC program for Mission Command at military boarding schools in the study occurs due to an Army (and USACC) organizational culture that has still (after 9 years) not internalized Mission Command as its doctrinal leadership approach.
Whether an effect of agnotology (Croissant, 2014) or narrow-mindedness (Muth, 2013; Tran, Oliveira, Sider, and Blanken, 2018), the outcome is that Mission Command is not the focus, and is discounted, inhibited, or perfunctorily addressed in syllabi, lessons plans, Cadet Summer Training, and assigned instructor preparation to teach, coach, and mentor cadets in Mission Command practice.

This is much more problematic when coupled with academic institutional ignorance-administrators, faculty, coaches, and Commandant’s Staff-of Mission Command as a leadership methodology whose proficiency demonstration the Army requires of its new officers. Academic leadership courses reinforce this misunderstanding. USACC and the military boarding schools compound the problem by not recognizing the tremendous potential they collectively possess to establish-and put in deliberate practice-military, organizational, instructor effectiveness, and curricular alignment learning outcomes that benefit the entire Corps of Cadets.

The study assessed it is still business as usual for ROTC training, and it is also business as usual for the cadet system at military boarding schools. It seems so since there is little evidence of the Army’s leadership doctrine of Mission Command at the schools. But that should not be the case. Four significant themes emerge from the study that show why it is: 1) the Effect of Military Contextual Influences on Mission Command Instruction and Practice; 2) the Effects of Organizational Contextual Influences on Mission Command Instruction and Practice; 3) Instructor Leadership Effectiveness Contextual Influences on Mission Command Instruction and Practice; and 4) Instructional Methods and Curricular Alignment Influences for the Development of Professional Expertise in Mission Command Instruction and Practice. These themes directly support the most important finding: the Absence of Deliberate Practice and Learning/Training Transfer for Mission Command. In the next section these themes will be examined in more depth, describing why there are obstacles to Mission Command instruction, and why the development of professional expertise in Mission Command must begin with the deliberate practice of “Thinking Like a Commander, Not a Cadet.”

The Effect of Military Contextual Influences on Mission Command Instruction and Practice

The SMC and MJC in the study both consider their Corps of Cadets as a “center of gravity” for leadership development of twenty-first century leaders, rigorously trained and
educated in a unique military boarding school contextual environment. What gets glossed over is just exactly what this military context at the boarding school consists of, why this context exists, and what does the Corps of Cadet actually do within it. This military context, and its influences, come into sharp relief when examined for evidence of the training and education of future Army officers in *Mission Command*.

Establishing the parameters of a military context and answering the question of mission begins with viewing the Corps of Cadets as a “unit.” Neither of the military boarding schools in our study has determined what their respective cadet regiments must be, know, or do as a military contextual entity of their school. The cadet experience is vastly more than being students at a military boarding school. While not the purview of this chapter to explore the absence of mission analysis of cadet regiments, it remains a glaring deficiency in addressing the *reason* for the Corps of Cadets—the *why* of being part of the unit and striving to become an accomplished unit. No unit in the Army is without a mission, and this should be no different for the “cadet units,” where so many Army-related activities occur. For *Mission Command* to be embraced and performed in the Corps of Cadets, it has to have a clearly articulated mission, be trained to that mission, develop leaders for that mission, and continuously evaluate its mission. This produces an organizational cultural platform for *Mission Command* that is present, legitimate, and *all cadets, instructors, and Commandant’s staff benefit*.

Examination of the regimental training schedules shows that other than performing as a “ceremonial unit” for visiting dignitaries, conferences attendees, and alumni events, there is so little time afforded the cadet regiment to conduct training according to the Army doctrine it follows. In all fairness, these are military boarding schools, and cadets are attending to get a first-class pre-commissioning education. But mixed messages abound about the outcomes: is the mission of the unit of cadets “to be a cadet and go to school,” or is it “to prepare to be adaptive leaders proficient in *Mission Command*?” Thus, the military contextual environment remains amorphous, which skews cadet and administrator views of what is important for the practice of leadership (Muth, 2013).

As Richard Klimoski (in Rumsey, M., 2013, p. 267) “when it comes to leadership, context matters.” The military organizational context involves roles, norms, policies, processes, and practices, opportunities, and organizational culture, all of which shape and influence the
leadership effort (Oc, 2018). Further, there are distinctive “causations and contingencies” impacting military leadership at the schools (Hannah and Sowden, in Rumsey, 2013, p. 291). These influences include internal and external contexts, where “unique phenomenon” affects individual and collective organizational levels. Phenomenon such as sense-making, ethical leadership, decision-making and judgment, diversity, and motivation affect military leaders at the individual level. At the organizational level, they include hierarchical/bureaucratic administrative systems, unit dynamics, group goals and processes, and shared leadership (p. 305).

The causations and contingencies of the military context in a military school are military organizational structure and group processes (West, 2012). Military structure and processes are the basis for, and surrounding environmental conditions of, leadership development activities at a military school. It is, according to Klimoski (2013), how leadership plays out within the military structural context.

The Corps of Cadets is where leadership plays out. It is not in the academic classrooms, or even in the ROTC department. Where the day-to-day, intense, peer-to-peer experiential learning occurs is when cadets are involved with their units in leadership events and activities “back in barracks.” Still, cadet leadership development experiential learning opportunities do not play out in a military boarding school environment unless the Commandant of Cadets and the adult leadership advisors provide Mission Command inspired supervisory support. This ensures critical training transfer and enables psychological safety as mistakes are made and lessons are learned (author, personal communications, 2018).

Experience in practicing leadership makes all the difference in the quality and effectiveness of leadership development programs, and while some declarative knowledge can be attained in a classroom setting, practice and reflection are imperative (West, 2012). In the military boarding schools of the study, it seemed that the only legitimate, accredited practice of leadership took place within the ROTC program. So why isn’t leadership practice legitimized in the Corps of Cadets, the central organizational leadership learning construct at the school?
Effects of Organizational Contextual Influences
on Mission Command Instruction and Practice

Much of how we look at military boarding schools and Mission Command instruction and practice depends on how we view organizations, and how we understand the impact of organizational culture. According to Phillips, Phillips, and Ray (2015, p. 76), an organization’s culture “is a crucial factor for leadership development.” This point strongly suggests that any evaluation of institutional leadership program effectiveness, and the position of Mission Command instruction and practice, must incorporate an equally robust diagnosis of the organizational culture and climate in which the leadership programs occurs.

What are the organizational influences that impact leadership development in the military boarding schools of our study? First and foremost is the military and organizational contexts are very closely intertwined. How the cadet regiments are organized, and how the ROTC battalions are organized, situates the military contextual environment that is necessary to facilitate Mission Command instruction and practice.

In the study of the two military schools, the SMC cadet regiment did not mirror a standard Army organizational construct, but the ROTC battalion did. This created a dichotomy of leadership approaches and a schism between the Corps and ROTC. Consequently, the cadet regiment resorted to time-honored reinforcement of the SMC cadet system, while the ROTC battalion, replicating an Army unit, cliquishly pursued its USACC-direct pre-commissioning aims (author, personal communications, 2018).

Conversely, the MJC regiment and the ROTC battalion structures were identical. It would seem the school was presented with a decisive, ground-breaking opportunity to inculcate a very strong training and learning transfer in the organizational culture of the institution. However, the MJC endured an organizational schism of their own. The primacy of the ROTC program, due to its stature as an important academic credit-granting department, staffed with active duty Army instructors, overshadowed the Corps of Cadets and the Commandant’s staff, which possessed neither credit awarding clout, nor Army professional leadership advisors. What happened in the cadet regiment every day was “not real” to the aspiring future officers whose mental models changed when they reached the parking lot of the ROTC building (J. Graff, personal...
communications, 2020). Just like the SMC, the MJC Corps of Cadets focused on reinforcement of the cadet system while the ROTC program conducted “real Army” training.

The inability to create organization context synergies between the ROTC program and leadership development in the cadet regiment leads to a narrow-minded “we-they” mentality of both parties (see Haslam, Reicher, and Platow, 2011). This narrow-mindedness is the antithesis of what *Mission Command* philosophy produces. This Corps of Cadets organizational construct is precisely where the deliberate practice, the experiential learning of *Mission Command*, should occur because there are simply not enough syllabus hours for them to do so in the ROTC program. ROTC cadets cannot become proficient in *Mission Command* unless practiced and evaluated in “potent experiences,” aided by robust coaching by instructors. These potent experiential learning opportunities reside in the daily operations and procedures of the cadet regiments, where they not only exceed the number of ROTC lab sessions of the syllabi, they present the most realistic environment of diversity a future officer will encounter before commissioning.

Misalignment of the regiment and ROTC battalion organizational context then causes the schools to neglect “the extent to which the individual leader and the organization they work for are connected and aligned” (Hanson, 2013, p. 106). This is an “alignment” of individual leader reflection and discovery with leadership learning and development, and organizational leader multi-level feedback with leadership context, practice, and fit.

Misalignment feeds a systemic problem where institutions measure organizational performance as “a dependent variable” of leadership development (Hanson, 2013, p. 110), which is a function of continued focus on individual impacts of leadership, not leadership impacts of individuals on organizations. Imperative is “the need for practice in real-life settings,” connecting theory and reflection, and individuals with organizations (p. 110). Leader performance improvement occurs because of “the transfer of learning to the workplace” within the “organizational learning” context (Packard and Jones, 2013, p. 159). What is good for the ROTC battalions most certainly is good for the cadet regiment—why choose to miss this golden opportunity for cadet leaders to learn and grow through deliberate practice?

Alignment ensures the connection of training transfer, real life practice and organizational learning into the everyday practices of the organization (Roupnel, Rinfret, and
Grenier, 2019, p. 11). Leadership development program effectiveness directly connects to the success or failure of the organization (Mandanchian, Hussein, Noordin, and Taherdoost, 2017), which takes us back to the mission of the Corps of Cadets. In essence, the two points are inseparable, and any evaluation of the effectiveness of leader development (individual skills) and leadership development (organizational influences) in the Corps of Cadets and for Mission Command instruction must take both into account (Perruci and Hall, 2018). An “aligned” evaluation of leader development must also map and analyze the balance, accountability, and focus of leadership development processes and perspectives (Hanson, 2013, p. 116). Who “owns” leader development at the military boarding schools?

While the learning outcomes for Mission Command appear in the USACC syllabi and lesson plans for Mission Command, these outcomes do not align with those officially pronounced by the military boarding schools. Considering these military schools adhere to Army doctrine, it is not far-fetched to suggest that, at a minimum, the administrators ought to seek means to intersect and interconnect the Mission Command principles with the Corps of Cadets daily learning outcomes. The most effective approach is to deliberately and seamlessly align the military and organizational contexts of the ROTC program and the Corps of Cadets leadership development.

Once aligned, a comprehensive leadership approach requires another pairing: ROTC department instructors and the Commandant’s Staff, officially organized and recognized in “buddy teams” of prepared professionals, teaching, coaching, and training cadets in the deliberate practice of Mission Command principles.

Within the duality of the military and organizational contexts, the importance of qualifying what proficiency on the pathway to expertise actually means, and in which learning outcomes, cannot be overstated. Without military and organizational contexts in close conjunction, and without teams of instructor/advisor buddy teams, the potent cadet leadership experiences lose their potency. Further, Mission Command leadership deliberate practice must be assessed by ROTC instructors and leadership advisors buddy teams using “proficiency” performance measures.
Instructor Leadership Effectiveness Contextual Influences on Mission Command Instruction and Practice

One of the military boarding schools in our study prides itself in being a “leadership laboratory.” In following this analogy, the ROTC instructors and Commandant’s Staff leadership advisors buddy teams are the expert chemistry teachers who enable cadets to experiment with Mission Command leadership in real life deliberate practice.

According to the findings of their two-year longitudinal study of Israeli officer cadets, Luria, Kahana, Goldenberg, and Noam (2019) conclude that the trainer’s leadership effectiveness is an indelible impact on cadet leader development. Citing the need for more scholarship on how leaders grow in “real-life groups” and organizations, the authors focused on “how trainers in a military leadership program influence the development of cadets,” and “the process in which individuals who enter organizations participate in leadership training and eventually become effective leaders” (p. 572).

Referring to numerous authors who conclude that leadership effectiveness results from “a context and a situation” (p. 572), Luria et al. (2013, p.573) contend that a crucial part of that context is the leadership trainer. This adds the instructor/advisor buddy team as an essential component of the military/organizational contextual pairing.

The Luria and associates (2013) study found that the trainer’s “role-modeling” of effective leadership behaviors “accelerated” skills, knowledge, and “actual effectiveness” of cadets (p. 575) in the larger organizational collective. To be effective, ROTC instructor and Commandant’s Staff leadership advisor buddy teams must also be skilled in action learning and coaching, mentoring, and advising (Turner and Baker, 2017; Turner, Baker, Schroeder, Johnson, and Chung, 2018). Action learning heightens the reflection necessary for leadership development and is a potent tool when skillfully facilitated by effective leadership instructors (Roupnel et al., 2019). Action learning is an ideal technique for the military/organizational context; it reinforces a holistic, whole-of-cadet approach to leadership development in a military school environment (Murray, 2017). It incorporates peer-to-peer learning (Cooper, W., Leibrecht, B., and Lickteig, C., 2010), outcomes-based training and education (Borce, 2012), and development of the intangibles of adaptive leadership (U.S. Army Asymmetric Warfare Group, 2010).
The enhancement of leadership educator professional identities influences leadership effectiveness in teaching, coaching, and mentoring (Seemiller and Crosby, 2019). Instructors must be able to “stitch together” leadership education, leadership training, and leadership development with practice venues, and this means ongoing professional learning of faculty and staff as educators (Perruci and Hall, 2018, p. 262).

Instructor identity aligns ROTC Instructors and Commandant’s Staff leadership advisors buddy teams in a common campus military fraternity of Mission Command educators. This point strongly suggests that the need for continuous, officially funded and promoted adult continuing education or educational degree credit for professional development of these buddy teams is imperative (see Owen, 2012). A further step is necessary: financial incentives (stipends, bonuses) with appropriate contract language and Memoranda of Understanding (MOUs) for USACC and Commandant’s Staff employees, plus faculty titles (non-tenure) as Adjunct Professors in Mission Command Leadership. Money and mindset extraordinarily well spent and applied.

Instructional Methods and Curricular Alignment Influences for the Development of Professional Expertise in Mission Command Instruction and Practice

The qualitative content analysis demonstrated that the USACC “Achilles’ heel” is the very narrowly focused approach to the instruction for the development of professional expertise in Mission Command. A more expansive view which incorporates a campus-wide integrative or interdisciplinary leadership curriculum, connected to and intersecting with Mission Command instruction, would solve the problem. But the curriculum object, as stated by USACC, is directed to successful completion of Cadet Summer Camp (the ROTC cadre evaluation metric), not on Mission Command (the Army professional expertise metric).

USACC develops all curricula and syllabi and directs required training of tasks, but instructors have minimal leeway to deviate from the syllabi or lesson plans to provide more potent learning opportunities for Mission Command expertise (J. Graff, personal communications, 2020). Anecdotal evidence shows that the misuse and misinterpretations of the AELM are major contributors to incompetent instruction, which remains lecture-centered, not learning-centered; instructor-centered, not learner-centered; and deliberate practice for the
development of professional expertise in *Mission Command* is absent (J. Graff, personal communications, July 15, 2020).

Similarly, a more recent article surveys the field of leadership development programs at the university level in the US, taking us once again to the problem of *Mission Command* training and education assessment. Using Kirkpatrick’s (1959) four types of desired training outcomes, Reyes, Dinh, Lacerenza, Marlow, Joseph, and Salas (2019) reiterate the importance of instructor observation and feedback. Consequently, it is observation and feedback of deliberate practice that reveal which type of learning outcomes are measured most often, how are they measured, when are outcomes evaluated, and what instructional strategies are used most often in higher education leadership development programs.

This meta-analysis (Reyes et al., 2019) provides some intriguing findings central to this paper, especially in examining how USACC addresses *Mission Command* instruction and evaluation. First, find that institutions devolve to training delivery approaches in executing leadership development programs that are the least expensive and more convenient and are not rooted in current theory. This conclusion resonates in the convenience of the USACC focus on CST military technical skills, not *Mission Command* leadership skills. Second, instructional strategies are predominantly lecture and discussion, but analysis points to the most effective method to achieve learning objectives is through more robust, experiential practice. The abundance of classroom instruction shown in the USACC syllabi and lesson plans prove this point. Lastly, moreover, that leadership development program evaluation focuses too much on classroom evaluation and not enough on the “transfer of learning” that occurs when institutions realize that leadership development “does not stop in the classroom” (p. 11). Again, the lack of emphasis of ensuring *Mission Command* learning transfer and deliberate practice in the cadet regiment reinforces this point.

How can the Army possibly expect new lieutenants to attain even the lowest level of expertise-proficiency-in *Mission Command*?
On Expertise and Proficiency

Expertise is not developed overnight (Elvira et al., 2017, p. 187), and ten years of practice is considered the norm for expert performance achievement (Boshuizen, Bromme, and Gruber, 2004). Leading the field of researchers over the past three decades, K. Anders Ericsson has concluded the pathway of achieving expertise in a given field begins with formal education (Ericsson and Smith, 1991; Ericsson, 2009; Ericsson and Pool, 2016; Ericsson, Hoffman, Kozbelt, and Williams, 2018). Other studies describe how the development of expertise occurs with noticeable improvements in knowledge, aptitude, and skill (Clark, 1999; Ericsson and Smith, 1991). This continuum of expertise development progresses from novice, apprentice, to expert (Dreyfus and Dreyfus, 1980). Further, there is considerable research on the objective evaluation of expert performance development (Ericsson, 2009). An examination of the extant Army doctrinal literature reveals that determining the outcomes of each echelon of expertise—what the measurable expectations of expertise look like in practice—is largely absent in military leadership curriculum outside of select vignettes in syllabi that purport to fulfill a comprehensive view of a leader’s experiences in extremis (author, personal communications, August, 2020).

Many researchers contend “the traveling” toward expert performance is just as important as the destination (Boshuizen, Bromme, and Gruber, 2004), citing the combination of experiences and education along that path (p. 14). Significant research pinpoints the role of higher education in “creating or inhibiting the preconditions of expertise” (Tynjala, Nuutinen, Etelapat, Kirjonen, and Remes, 1997, p. 479, in Elvira et al., 2017, p. 187). Other researchers have examined how higher education provides learning environments for extensive experiential development along with the all-important coaching and mentoring by expert instructors and advisors (Gijseelaers, Arts, Boshuizen, and Sergers in Elvira, et al., 2017, p.197).

The Army definitions of expertise reflect the mental models of Dreyfus and Dreyfus (1980). In The Five Stages of Mental Models for Expertise, the authors (p. 1) contend that expertise development occurs through a series of “concrete experiences.” These experiences enable the individual to progress from the lowest level of expertise to the highest. From lowest to high skill level, the five stages and the associated mental models are: Novice (needs detailed instructions on what to do; lacks understanding of context); Advanced Beginner (has more context to work from but needs rigid guidelines); Competent (questions reasoning behind tasks,
sees consequences); **Proficient** (still relies on rules but can identify what is essential); **Expert** (uses intuition as primary tool).

In their model, Dreyfuss and Dreyfuss place “Proficient” just beneath “Expertise.” Still, the critical point in this theory is that it takes considerable deliberate practice, in repetitive concrete or profound experiences, to progress. Anders Ericsson, arguably the preeminent scholar in the field of expertise and expert performance, has conducted extensive research to conclude that deliberate practice is the “Gold Standard” (2017).

Ericsson questions the 10,000 hours of deliberate practice it supposedly takes to become an expert. His essential elements of the Gold Standard begin with a deliberate practice involving a regimen evaluated and coached by expert performers. Ericsson's deliberate practice takes the student outside his/her comfort zone in an experience that is not always fun. Deliberate practice involves a plan of action developed by the student and expert performer/coach/instructor for making incremental improvements. It requires near-maximal effort and full attention; requires feedback and adaptation in practice as the student learns from mistakes; calls for growth in mindset/mental representation models as the student progresses; and instructors are decisive in providing the fundamental skills that enable progression (Ericsson and Pool, 2017, pp. 99-100).

How does the Army inculcate the mental models that insist on invaluable deliberate practice so necessary to developing professional expertise in *Mission Command*? How does the Army define expertise? Proficiency?

**Proficiency**

Developing proficiency is the first step on the road to expertise. The U.S. Army requires all soldiers to demonstrate proficiency in *Mission Command* as part of their Professional Military Education (TRADOC, 2019). The Army doctrine does define proficiency. Proficiency is relevant to individual tasks and collective task proficiency. But what is *Mission Command*? Individual task, leader task, or unit task?

Individual task proficiency, such as land navigation or marksmanship, is assessed as either GO or NO-GO. For unit tasks, including unit organizational leadership (the organizational context of *Mission Command*) and command and control tasks, the Army uses five measures of
collective task proficiency in best-to-worst categorization (FM 7-0, 1 July 2019, p. 4-2): **T is fully trained, or complete task proficiency:** T proficiency rating means a unit is fully trained, and has attained task proficiency to the Army standard; **T- (minus) is trained, or advanced task proficiency:** T-proficiency rating means a unit is trained. It has attained advanced task proficiency free of significant shortcomings; **P is practiced, or basic task proficiency:** P-proficiency rating means a unit is practiced. It has attained basic task proficiency with shortcomings that require significant training to meet the Army standard; **P-(minus) is marginally practiced, or limited task proficiency:** P-proficiency rating means a unit is marginally practiced. It has attained limited task proficiency with major shortcomings, and the unit’s shortcomings require complete retraining of the task to achieve the Army standard; and **U is untrained or cannot perform the task:** U proficiency rating means a unit is untrained. The unit cannot perform the task and requires complete training on the task to achieve the Army standards.

**Mastery**

A quick word about Mastery—Much of the problem with the term is the broad application of it throughout Army doctrine. The best way to define Mastery is to view it as consistent performance, in spite of conditions or situation. Task mastery means “Soldiers and units can perform a task to standard repeatedly under increasingly challenging, stressful, and varying conditions” (FM 7-0, 2019). The notion of mastery as a demonstration of expert skill development is amorphous, and assessment criteria vary across the spectrum of Army doctrine. Mastery is often used synonymously with expertise, although the Army construct sets it in between Proficiency and Expertise.

**Expertise**

The Army requires leaders to develop expertise (FM 7-0, 2019). The Army’s expert knowledge consists of four domains: Military-Technical: How the Army applies land power to accomplish the mission; Moral-Ethical: How the Army accomplishes the mission in the right way; Political-Cultural: How the Army understands and operates in a multi-cultural, complex
The Army details three critical tasks leaders are expected to perform when developing military expertise (Center for the Army Profession and Ethics, 2012, 2013): Continually developing expert knowledge and expert practices; Applying Army expertise under Mission Command; and Certifying the expertise of Army professionals and organizations. Note that only “Develop” and “Apply” [expert knowledge] are addressed in the three tasks, but not concrete experience, publish and process, or generate new information from the AELM.

For Applying Expertise in Mission Command, the Army expects leaders to follow the doctrine of Mission Command (ADP 6-0, 2019) in operations that allow subordinate leaders maximum initiative in operations inherently are complex and often chaotic, and where micro-management does not work. Yet, there seems to be an assumed “Mastery” of Mission Command; is this a category of skills and knowledge above “Proficiency,” with the unstated outcome that competent leaders consistently “apply their Army expertise” to the situation as it exists on the ground and accomplishing the mission based on their commander’s intent, that when leaders and units are Fully Trained (T)? What happens to Mission Command “Proficiency” for leaders and units who are rated Trained, Practiced, Marginally Practiced, or Untrained in Mission Command?

This question takes us back to the critical task of “Develop” Mission Command expertise, and how the Army initiates this development for aspiring junior officers in its ROTC pre-commissioning programs. The mindset of deliberate practice in Mission Command begins with instructors in these programs, who are also on the hook to resolve the discrepancies about what it means to be proficient, a master, an expert, in Mission Command.

The Army Experiential Learning Model (AELM)

The study revealed important aspects about how the ROTC programs instruct, and how they determine cadet proficiency on the pathway to the development of professional expertise in Mission Command. Central to the approach is the Army Experiential Learning Model (AELM).

The AELM is considered to be as a “framework for planning teaching and learning activities,” a structured yet versatile and effective pedagogy, “responsive to varied student
learning paths,” that provides “learning that sticks” (Army University, n.d., pp. 4-8). The AELM reflects David Kolb’s Experiential Learning Model (1984, 2014), Knowles’ Adult Learning theory (1980, 1984) and Bloom’s Taxonomy (1984), and is a synthesis of other models: Dewey (1938), Piaget (1950), Lewin (1951) Pfeiffer and Jones (1975) (Army University, n.d., p.8). This is familiar theoretical territory for the non-ROTC faculty at any university or college, but the Army is just now getting there.

The four learning outcomes (Mission Command principles; Mission Command and Commander Tasks, Mission Command Staff Tasks, and Mission Command Systems) dictate the instruction, training, and evaluation for all ROTC cadets concerning Mission Command, and are expected to be delivered by instructors using the AELM (USACC 145-3, 2019). The AELM enables instructors to present the USACC standardized lesson plans for Mission Command, but there are significant issues in interpretation of AELM, especially by cadre who are not Ph.D. educators by trade, and criticisms that AELM is more restrictive and rigid than versatile and transformative (Army University, p. v).

The USACC lesson plans describe the sequential AELM 5-step process. Excerpts of the definition of each step are: 1) **Concrete Experience**: student centered; interaction with classmates; no right or wrong answers; instructor designs lesson, sets up the experience and then observes. 2) **Publish and Process**: student-centered; all students share and reflect on their concrete experiences, answering open-ended questions; instructor designs the open-ended questions and introduces the next step; 3) **Generalize New Information**: the only instructor-centered step; instructor “lectures,” uses case studies, demonstrations or vignettes to present new info students need to be successful, linking back to the concrete experience; 4) **Develop**: student-centered brainstorming to establish future value of the new information; instructor designs open-ended questions, observes student responses and interaction; 5) **Apply**: student-centered demonstration of achieving leaning objectives; instructor uses a pre-determined classroom assessment technique to confirm learning, provide feedback, revisit or adjust new information as necessary (Army University, p. 9).

Despite the Army Experiential Learning Model, it seems both instructors and cadets are in the dark about outcomes. The Army Experiential Learning Model is on the right path, but the jury is still out to the extent this methodology can address proficiency in Mission Command and
traditional Cadet Summer Camp preparation for BOLC tasks. Tension exists between competing schools of thought within TRADOC about how much emphasis to place on basic skills and competencies training and how these requirements occur within an adaptive leader training curriculum.

Undoubtedly, Cadet Command is saddled with a tremendous responsibility to meet all BOLC requirements before graduating and commissioning new officers. But for the Army to declare *Mission Command* instruction and proficiency assessment as an imperative for junior officers, and then not make it happen in the ROTC curriculum, clearly suggests substantially divergent organizational culture views on what constitutes a *Mission Command* leadership development program.

What can the ROTC instructors do? What causes the ROTC instructors to appear too narrow-minded to find opportunities to facilitate the deliberate practice for the development of professional expertise in *Mission Command*? The Army (TRADOC, and USACC) sees the achievement of *Mission Command* proficiency as one that is squarely in the hands of “adaptive instructors,” who develop future “trusted Army professionals” (TRADOC Pamphlet 350-70-7, p. 8). But the instructors are hamstrung by Army cultural influences, competing USACC curricular requirements, and inadequate preparation for instructor duty (Vandergriff, 2018). How effectively do ROTC instructors promote the *Mission Command* leadership philosophy in organizations? Do they actively seek opportunities for deliberate practice, training and learning transfer, and assessment? Do they positively influence other school leadership program alignment, and close the “praxis gap” between ROTC programs and the Corps of Cadets? How does the AELM compare with other instructional principles for expertise?

**Instructional Principles for the Development of Professional Expertise**

In a study published in 2017, authors Elvira, Imants, Dankbaar, and Segers outlined ten instructional principles that educators can readily apply for establishing the “learning environments” that create pedagogies for expert performance (p. 187). The study built on Tynjala’s (2008) Integrative Pedagogy Model, which describes how professional expertise is derived from and produces the combination of theoretical, practical, and reflective knowledge (Elvira et al., 2017, pp. 184-207).
These instructional principles are especially appropriate for the development of professional skill in *Mission Command* proficiency. 1) **Support students in their epistemological understanding.** Instructors help students understand that there are unknowns, uncertainties, and ambiguities in the world, “Forcefully pursue” their ability to recognize these “grey areas” by questioning their thoughts in the classroom rather than resorting to memorization of facts and procedures; 2) **Provide students with opportunities to differentiate between and among concepts.** The outcome of applying this principle during instruction is to place students in more and more situations where they can practice applying the critical thinking and problem-solving actions that pertain to their professional environment; 3) **Practice with a variety of problems to enable students to experience complexity and ambiguity.** The outcome of applying this principle during instruction is to place students in various decision-action scenarios that closely replicate their profession's volatility, uncertainty, complexity, and ambiguity; 4) **Enable students to understand how particular concepts are connected.** The outcome of applying this principle during instruction is to place students in everyday situations where they must acknowledge the higher-order concepts while “deconstructing” the various components of circumstances presented to search for patterns; 5) **Target for relevance.** Instructors must prioritize curricular activities that ensure, not detract from student focus on the professional field. This curricular focus aligns assignments and activities deliberately with situational practice “relevant to the workplace”; 6) **Share inexpressible knowledge.** The outcome of applying this principle during instruction is to provide students with continuous opportunities to “think out loud” with peers and superiors during decision-making exercises; 7) **Pay explicit attention to prior knowledge.** Instructors correct misconceptions by re-orienting students to the application of essential skills and knowledge to professional situations; 8) **Supporting students in strengthening their problem-solving strategies.** Important is the role of instructors as guides, coaches, and mentors in reinforcing expert performance strategies: Principle 9) **Evoke reflection.** During instruction, applying this principle is to make implicit knowledge more explicit through continuous, immediate feedback and reflection opportunities; 10) **Facilitating the development of metacognitive knowledge (learning strategies) and skills (self-monitoring, planning, and evaluation).** From the instructor, the students learn as apprentices how to problem-solve in their professional field and “how to plan, monitor, and evaluate their
own work” (Elvira, p. 193). This approach to metacognition aids the students in the development of their specific professional expertise.

If USACC instructors merged these ten principles with the Army Experiential Learning Model, what would be the most practical outcome expected in ROTC programs at military boarding schools? Provided the outcomes of Novice or Advanced Beginner are explicitly established, and instructors trained and certified in the approach, the leadership curricula of the school would need to be aligned to close the “praxis gap” caused by the absence of deliberate practice.

Alignment of Curricula

The “praxis gap” mentioned above is evident from the complete lack of deliberate practice in Mission Command within the content of the syllabi or training schedules. Nevertheless, it also symptomatic of closely associated curricular and pedagogical problems.

The narrow-mindedness exists from a mindset that is not one of growth but of the status quo. The lack of emphasis, even the paucity of course time spent on Mission Command, suggests that agnotology may be at play. According to Croissant (2014), agnotology is the absence of knowledge, an ontology of ignorance, which includes non-transmission of knowledge (p.6). This "non-transmission" involves narrow minded practices concerning the prioritization of subjects in the curriculum (Tran, Oliviera, Sider, and Blanken, 2018, n.p.).

One of the (usual) suspects of “deliberate ploy” in the ontology of ignorance is the organizational culture. Back to Croissant (p. 10), the problem of ignorance is deliberate in the sense that it is exacerbated by “intra-organizational processes” causing “blind spots” and issues with prioritization that lead to “ignorances of omission.” Proctor and Schreiber (2008, in Croissant, 2014, p. 5) detail this resulting narrow-mindedness as cultural, reflecting a less than enlightened organizational culture.

Ignorance about Mission Command as a leadership philosophy shows in the USACC curriculum and the pedagogy. These issues cascade into the military boarding school curricular alignment influences and instructor leadership effectiveness influences. A deeper investigation is necessary to determine the impact of these influences on the place of Mission Command training
and education within all leadership development instruction, and the alignment of multi-departmental curricula.

It is also essential to take a more informed view of accreditation standards for undergraduate leadership programs at the military boarding schools. The Army subscribes to educational processes of the Higher Learning Commission and Leadership Education Standards of the Council for the Advancement of Standards. For example, the Army endorses “teaching and learning processes,” “the dynamic interaction between teaching, learning, assessment and feedback,” “analysis, design, and development of curriculum” and the importance “external accrediting authorities have on Army educational practices and curriculum” (TRADOC Pamphlet 350-70-7, Army Educational Processes, 4 October 2018, p.7). But is this really correct?

The Reyes, Dinh, Lacerenza, Marlow, Joseph, and Salas research dovetails with another “higher-order” examination necessary to come to terms with these findings of incongruence and mis-alignment. According to Komives et al. (2011, p. 77), the two influences on leadership program coherence are institutional and program structure. This begins with determining the type of leadership curriculum (single, multi, or interdisciplinary leadership program) and its “academic home” (Komives, 2011, p. 259; Perrucci and Hall, 2018, p. 38). Even more so, then, this calls for a clear definition of what constitutes leadership education, based on concerted employment of theoretically grounded, not home grown programs, and powerful, high-impact learning experiences and evidence-based pedagogies (Komives, et al., 2011). Deliberate practice methodology meets this definition (Ericsson and Pool, 2016).

Program and institutional learning outcome congruence centers on powerful learning experiences that focus on the application of theory to practice and reflection. Powerful learning opportunities are “core” evidence-based pedagogies. They focus on program design, course design, course type, course context, audience, student characteristics, pedagogical focus, learning outcomes, and learning activities. These factors not only influence the program's alignment, but they compel educators to be learners also. Furthermore, they create a community of learners (the fraternity of Mission Command instructors and advisors) where research on current theory and practice is front-and-center (Komives et al., 2011).
Vitally important is the collaboration and partnerships among disciplines or departments in program design and execution, and continuous evaluation of outcomes of student learning are imperative to effective program coherence (Komives, et al, 2011, p. 77). Evaluation facilitates the curriculum-instructor practices/teaching-standards alignment (Gagne, Dumont, Brunet and Boucher, 2013; McPhail, 2020; Robley, Whittle, and Murdoch-Eaton, 2014). These include experiential learning, team-based learning, peer-to-peer learning, sociocultural learning, service learning, peer and instructor mentoring and advising, and reflection, and “contemplative practice” (Komives et al., 2011, p. 317). The point here is interdisciplinary leadership learning, across the academic, athletic, and co-curricular opportunities.

It is important to remind ourselves that Mission Command is the Army’s philosophy of leadership. It is the “core” approach to leader and leadership development. The analysis of the syllabi and training schedules of the two military boarding schools did not reflect Mission Command as a core program that other curricular topics revolve.

Our study of syllabi and training schedules in the two military boarding schools reveals curricular misalignment at the respective institutions. However, how is alignment achieved if there is no model available for a multi-program curriculum set? In their study Curriculum Alignment: Establishing Coherence, Gagne, Dumont, Brunet, and Boucher (2013) address conducting an alignment review where there is no precedent or guidelines is available. Is this the case at both military schools, Army Senior ROTC programs, and regiments of cadets following Army doctrine? Gagne and associates developed a taxonomy for the evaluation focused on content analysis of the literature of the program subject (emphasis added) to answer this question.

So, what constitutes the literature and instructional materials involved with the execution of multiple leadership programs in the military boarding schools of the study? According to Steiner (2017, p. 2), issues of instructional materials remain unresolved in curriculum alignment primarily because of the presence of “idiosyncratic curricula, when aim, approach, and instructional materials are self-selected by individual teachers.” A close look is required to ascertain the effectiveness of “homegrown” versus “published curriculum” at military boarding schools (hence the study on syllabi and lesson plans and their sources), that really make a difference in student learning.
The curricular alignment process is performed with an overt, highly visible cross-walk and content analysis of curricula (Webb, 2007). According to work done by Wijngaards-de Meij and Merx (2018), a curriculum mapping cross-walk helps to “conceptualize a learning trajectory as a coherent composition of teaching and learning, offered within different courses that together build towards achieving learning objectives” (p. 219). In their study, the authors focus on the identification of “building blocks” that enable instructors to see where their course is positioned in respect to other courses and serves to “eliminate inconsistencies and misalignments” in achieving student learning objectives (p. 221). Ultimately, the actual test for alignment is the “improvement of student achievement as described by the expectations” (Webb, 2007, p. 24).

Since the Army embraces adult learning theory and program accreditation criteria of higher learning, what is the problem with aligning a “core” curriculum for the “Corps” of cadets at military boarding schools to prepare students to be expert leaders? According to authors Allen, Miguel, and Martin (2014, p.29) in their article, “Know, See, Plan, Do: A Model For Curriculum Design In Leadership Development,” the role of a leadership development curriculum is to address the development of expertise. It gets to the rubber-meets-the-road practicality of learning leadership since, as the authors contend, the lack of deliberate leadership practice venues and opportunities is, as mentioned earlier, the “Achilles ’heel” of leadership development programs (p. 29).

**Conclusions: Deliberate Practice, the Gold Standard**

Frankly, the Army is not getting anywhere near enough practice in Mission Command for prospective officers even to be considered “familiarized.” Familiarization means becoming acquainted or aware of a subject, the accession of introductory, or basic knowledge. The analysis of the USACC syllabi and Corps of Cadets training schedules show that cadets are familiarized with Mission Command, but not made proficient according to Army training assessment doctrine. At best, using ADP 7-0 definitions, USACC training on Mission Command rates at U (Untrained).

So, are newly commissioned Army officers proficient in Mission Command, given the training they receive? One knowledgeable ROTC cadre member at one of the schools opined that Cadet Command “certifies” proficiency in Mission Command during the Cadet Summer Training
Advanced Camp capstone, where each cadet gets only two iterations of evaluated leadership positions to demonstrate he or she can be, know, and do Mission Command (P. Francisco, personal communications, October 15, 2020). If Mission Command proficiency is deemed an imperative for officer professionalism, remarked the cadre member, this exceedingly low frequency of opportunities barely achieves familiarization level. There simply needs to be more time for deliberate practice.

According to Ericsson and Pool (2016) to become an expert in any field of endeavor requires extensive hours of deliberate practice (p. 97). The study of the syllabi and lesson plans show that what the cadet involvement is in Mission Command is not even Naive practice (p. 14). Naive practice is performing repetitions of the same task, with the expectation that the volume of repetition will lead to improved performance. Purposeful practice (pp. 15-18) has well-defined outcomes, is focused, calls for hard work, gets one out of their comfort zone, and includes the critical component of feedback by a coach or instructor. It is a new way of learning that builds potential in challenging “good enough” thinking (p. 48).

Deliberate practice is enhanced purposeful practice which relies on development of mental representation, or mental models, about what expert performance looks like (p. 55). The mental representations provide “visions” of recognizing patterns and making sense of information (pp. 63-67). This in turn facilitates adaptive thinking when the situation in deliberate practice does not meet the outcomes planned for the task (p.76). Skill and mental representations constitute “the virtuous circle” of deliberate practice for the development of professional expertise: better deliberate practice leads to better skill; better skill leads to improved methods of deliberate practice (pp. 79-80).

The first step in establishing Deliberate Practice is to identifying the experts in the field. This step builds the mental representation of what expert performance looks like from the perspective of the top performers, which enables of design of deliberate practice toward that expertise. Practitioners now have a “picture” of real-world excellence, along with an understanding of the amount of work required to become an expert. For Mission Command, with the current state of implementation of the concept in the Army, one would have to turn to the Ranger Regiment, Special Forces, or US Navy SEALs for an exemplar. However, identification of these experts has to be done in-context, since there are many aspects of background, training,
education, and experience that cannot be replicated in a military boarding school ROTC program or Corps of Cadets. Once the exemplar of expertise is established, then the Army Experiential Learning model can most effectively be applied.

Deliberate practice is skills development. It is “doing” over “knowing.” It involves the building or modifying of current skills to improve performance. For Mission Command, this means skills development in the application of the seven principles of Mission Command within the military organization context. Deliberate practice consists of task situations and circumstances that move the practitioner out of the comfort zone, featuring “stretch-growth” tasks or adjusted conditions that are just out of reach of the current abilities of the practitioner. In the deliberate practice sessions, practitioners are intensely focused on what is taking place in the session and the goals set for their performance in the session. This focus includes the mental representations which incorporate declarative knowledge and the expert performance exemplar, which facilitate practitioner ability to monitor their own performance, spot mistakes, and adjust. Deliberate practice must occur under the observation of an instructor or advisor who is a subject matter expert and who can objectively view the performance and provide immediate feedback.

**Recommendations: Think Like a Commander, Not Like a Cadet**

Is it possible to develop future Army officer expertise in Mission Command at a military boarding school? The answer is “Yes-But.” “Yes,” a strong potential exists to jumpstart the pathway of developing expertise in Mission Command within the ROTC programs and achieve successful training transfer in Corps of Cadets leadership development activities; “But,” opportunities are lost in both elements. Encouragingly, the potential exists if the following recommendations are considered for the development of professional expertise in Mission Command.

**Changing Organizational Culture and Mindset**

For military boarding schools and associated ROTC programs to conduct the most impactful training and education of their cadets, it is time to stop prioritizing “thinking like a cadet at a military school.” To do so means treating new cadets as adult learners who are entering
the pathway to professional expertise. The amount of time devoted on arcane, non-sensical aspects of cadet life severely detracts from the precious training and education for becoming adaptive leaders that cadets must prepare for before their first experience in real military organizations.

The most significant issue is with an Army culture and mindset that still has not embraced Mission Command. This issue is pervasive in the ROTC pre-commissioning programs of USACC, and this can only be corrected by senior officers saying enough is enough. Status quo approaches to leadership development in ROTC amplify problematic university and college approaches to leadership education. Diagnosing and changing organizational culture is an enormous task, but we have learned from the analysis of Mission Command in military boarding schools that remarkable opportunities exist to make adaptations.

USACC’s ROTC battalions and the military boarding schools must get outside of their comfort zone (Ericsson and Pool, 2016) to make progress toward the development of expertise in Mission Command. The first step must be the difficult counter-tradition task of revising new cadet training to be more in line with how twenty-first century Army units receive new soldiers, and that means doing away with the “Full Metal Jacket” behaviors that no Army unit would ever do. Why does this remain accepted practice? It undermines learning how to be a leader.

One of the schools in our study describes its cadet regiment with the slogan, “One Corps, One Standard.” Unfortunately, this actually refers to disciplinary actions, not leader development. The center of gravity of the school is the Corps of Cadets, not ROTC programs, not academic departments. Therefore, the cultural narrative of the Corps should not be any more separate from that of ROTC than it should be of other academic programs. Central to this point is the necessity to establish and reward a culture of shared understanding, decision space, and empowered execution of Mission Command. There is simply no substitute for deliberate practice, and cadets in ROTC courses and in their respective regiments must get more time to do so. As the training schedules analysis revealed, the cadet week is full of required events. Why couldn’t an Athletic Department approach to practice be conveyed to the Corps of Cadets? Imagine an innovative and creative schedule with many opportunities for practice in Mission Command as the school football, basketball, or baseball teams.
The Mission Command cultural platform emphasizes a growth mindset for deliberate practice. Here, the school culture must underwrite and enable “psychological safety” for growth as a leader. Psychological safety is a crucial component of moving along the pathway of Mission Command expertise development. The leadership education and training approach must also account for new definitions of success and the role of failure in rich and full learning experiences. A culture of psychological safety ensures the ROTC Mission Command training transfer into organization leadership behaviors. The entire Corps benefits.

‘One Corps, Mission Command’

Too many different organizational contexts only serve to detract from the power of the synergies of a comprehensive and synchronized leadership development program. Instead of “One Corps, One Standard,” which focused on disciplinary fairness, how about “One Corps, Mission Command”? “One Corps, Mission Command” would simplify the pedagogical approach to leadership education and training. School academic leadership courses should be aligned with ROTC curriculum and the Corps of Cadet training program. It would enable an interdisciplinary leadership curriculum, build multi-departmental, university-wide learning outcomes that drive Mission Command education, training, and praxis. The entire school develops a new mental model supporting and reinforcing Mission Command. The focus becomes one of Mission Command Novice and Advanced Beginner certification. The Novice level of proficiency learning outcome includes clear, overtly measurable performance measures and applies them to other disciplines. Gone are those esoteric goals of unreasonably unachievable expertise ten years into the future. Fully understanding what is achievable with undergraduate neophyte leaders removes the mystery of instructional technique, provides for in-stride benchmarks, and sets a valid evaluation program for proficiency in Mission Command.

Corps of Cadets as ‘The Unit’

The change in culture and mindset must begin with viewing the Corps of Cadets as a “unit.” The Corps as Unit solidifies the organizational context within which Mission Command can take place every day. Mission Command becomes the leadership philosophy of the Corps of
Cadets, a platform for ROTC cadets to conduct definitive training transfer, deliberately practice in *Mission Command*. Like the approach to combat advising, *Mission Command* is taught and trained “by, with, and through” the Corps of Cadets (author, personal communications, 2019). ROTC instructors and Commandant’s Staff leadership advisors combine to establish a more robust, decisive, and in-depth *Mission Command* proficiency assessment amid daily deliberate practice.

Not sure how to get there? Try this: Assign one cadet battalion/squadron the mission as Provisional Test Unit for *Mission Command* instruction and deliberate practice. Conduct an institution-wide curricular mapping that emphasizes the interconnections and intersections of subjects, programs, courses, and lessons with *Mission Command* instruction, and vice versa. Take risk and carve out more institution-sanctioned, locked-in, inviolable time for cadet deliberate practice-like the football, basketball teams-every day, with instructor/advisor feedback, and reflection.

**Corps of Cadets as a Unit with a Mission**

*Mission Command*, after all, requires a mission. Neither of the military boarding schools in our study has determined what their respective cadet regiments must be, know, or do as an organizational entity of their school. The cadet experience is vastly more than being a student at a military boarding school. While not the purview of this chapter to explore the absence of mission analysis of cadet regiments, it remains a glaring deficiency in addressing the *reason* for the Corps of Cadets-the *why* of being part of the unit and striving for becoming an accomplished unit. No unit in the Army is without a mission, and this should be no different for the “cadet units,” where so many Army-related activities occur. For *Mission Command* to be embraced and performed in the Corps of Cadets, it has to have a clearly articulated mission, be trained to that mission, develop leaders for that mission, and evaluate its mission. Now a cultural platform for *Mission Command* is present, legitimate, and *all cadets, instructors, and the Commandant’s Staff benefit*.

The platform of the cultural narrative of the cadet regimental mission must also be officially and unambiguously aligned and intertwined with USACC’s ROTC organizational culture narrative. This narrative codifies the cadet regiment’s cultural DNA: it incorporates
observed behavioral regularities when cadets interact; describes an organizational climate; outlines formal rituals and celebrations; declares espoused values; establishes a formal philosophy; identifies group norms; establishes rules of the game; determines identity and self-image; lists embedded skills; reinforces habits of thinking, mental models, or linguistic paradigms; designs shared meaning; and develops root metaphors (Schein, 2017, pp. 3-10). Append the phrase “of Mission Command” into any one of these elements, and immediately, the power of a culture of Mission Command in ROTC and the Corps of Cadets organization is evident.

Leader Development Begins on Day 1 with Seven Principles of Mission Command

The next step would be to commence leadership development on Day 1, and not wait until new cadets reach some arbitrary benchmark after several months where they can be treated like adult learners. While it is important for new cadets to understand their new military college environment, let’s not over-subscribe to traditional reception and integration practices. Place new cadets in leadership positions (team leader, squad leader, etc.) for movement to in-processing locations, equipment issue, or convocation. This does nothing to detract from the importance of old cadets; instead, it displays their maturity and professionalism. Instead of countless hours learning how to make a bunk, or clean a room, now teach, coach, train, and assess cadets-in the entire Corps of Cadets-the seven principles of Mission Command. This is thinking like a commander, not a cadet.

Thinking like a Commander means deliberate practice in the application of the seven Mission Command skills in the military organizational context of the cadet regiment. Commandant’s Staff leadership advisors can be instrumental in inculcating the Seven Principles of Mission Command in every task and event that a unit is conducting. Teaching, coaching, and mentoring cadets in Competence; Mutual Trust; Shared Understanding; Commander’s Intent; Mission Orders; Disciplined Initiative; and Risk Acceptance aligns cadet life directly with the ROTC curriculum. Close, frequent, routine, and school-USACC sanctioned collaborative teamwork with ROTC instructors in all cadet activities solidifies the instructor identity of the members of the military fraternity on campus as “the team of teams” employs Adaptive Soldier and Leader Training and Education for the entire Corps of Cadets.
Adaptive Soldier and Leader Training and Education (ASLTE)

A decade ago, Outcomes-Based Training and Education (OBTandE) showed the Army just how valuable instructor leadership effectiveness in teaching, coaching, and mentoring was to developing junior leaders ( ). What it did was place combat-experienced instructors in a leadership role of teacher, coach, and mentor to orient on what soldiers must do in the context in which they are to do it (U.S. Army Asymmetric Warfare Group, 2010; Ericsson and Pool, 2016). Initially instituted within the U.S. Army in 2008-2009 by the Asymmetric Warfare Group (Riccio, Darwin, and Cortes, 2010), OBTandE is “developmental training-development of the individual within the training of a military task” (Borce, 2012, p. 4). The original concept comes from proven training techniques of special operations forces. Considered radical in many conventional Army unit circles until-literally-the results of OBTandE were applied in operations in Iraq and Afghanistan and closely assessed. In short order, OBTandE tenets were interwoven into every type of Army training, from basic soldier training to officer basic training and into the curriculum at ROTC programs and West Point.

From OBTandE came Adaptive Soldier and Leader Training and Education (ASLTE), which was a refinement of the concept and aligned with the Army Learning Model (Knott, Flanagan, Bickley, Ratwani, Dean, and Diedrich, 2014). According to the authors, research has shown that with the application of ASLTE principles “in any training event, students learn more than just the intended training content: they learn entire experiences” (p. 4).

ASLTE, when combined with the “flipped classroom” is an exceptional instructional approach to adaptive leadership and Mission Command, where instructors employ teaching as “an act of leadership” (Green and McBride, 2015; Heifitz et al., 2009; Perruci and Hall, 2018). It is the epitome of the individual development philosophy of “Be, Know, Do” (Snook, Nohria, and Khurana, 2012). There are glimpses in the Army Experiential Learning Model of OBTandE, but the concept requires open-minded, adaptive instructors and trainers, who turn the traditional “sage on the stage” methodology on its head. The results are astounding for both students and instructors (author, personal communications, 2018).
Apply the Army Experiential Learning Model to the Corps of Cadets ASLTE with Adaptive Course Methodology (ACM)

For ROTC instructors and Commandant’s Staff leadership advisors, it is time to get into the twenty-first century in adaptive leader education and training. The vehicle is the Adaptive Course Methodology (ACM). ACM emphasizes “growing the decision maker,” through episodes of deliberate practice that focus on the outcomes of real-world problem-solving exercises while featuring the task selected for training (Riccio and Darwin, 2010; Vandergriff, 2018, p. 81). ACM ensures the accountability for the outcome resides with the student leader, not the instructor. ACM is “experiencing the thing before it has a name,” conducting scenario type decision making training at least three levels up from platoon so junior leaders understand the nesting of their unit within the higher echelon mission (Vandergriff, p. 91). This is thinking like a commander.

Since 2017 the Army’s approach to instruction and instructors has been to implement Adaptive Soldier and Leader Training and Education (ASLTE). Grounded in Outcomes Based Training and Education (OBTandE), ASLTE establishes “instructional principles” that develop OBTandE intangible attributes through instructor-student interactions (Knott, Flanagan, Beckley, Ratwani, Dean and Diedrich, 2014). Current assessments contend that the Army still struggles with ASLTE just as it is with Mission Command, but the two are intimately connected (Vandergriff, 2019). The essential point here is that ASLTE techniques directly support the AELM. It requires that instructors are (1) trained to economize and respond to a cadet’s Zone of Proximal Development (ZPD) (Vigotsky, 1978) new challenges, (2) are capable of maintaining a positive attitude conducive to building trust and confidence in their students, and (3) purposefully and systematically move student learning activity towards a threshold of failure to challenge them while ensuring success to build confidence and initiative (Knott, Flanagan, Beckley, Ratwani, Dean, and Diedrich, 2014). One such challenging learning activity is Think Like a Commander.

Think Like a Commander (TLAC)

*Think Like a Commander (TLAC)* was tested by the developers at the Armor Captain’s Career Course (then at Ft. Knox, KY) in 2004. This training program emphasizes deliberate
practice to develop expertise in critical thinking, decision making, problem-solving, provided focused feedback and active coaching. It reinforced the immediacy of performance, emphasized challenging aspects, and of seeing “the Big picture”—all necessary to Mission Command proficiency (Ross and Lussier, 1999; Shadrick and Lussier, 2002; Lussier, Shadrick and Prevou, 2003). Based on our study of the development of professional expertise in Mission Command, it is time to resurrect and refresh this training program and apply it to the ROTC programs at military boarding schools and make it the training and education vehicle for the Corps of Cadets.

TLAC accounts for all elements revealed in this paper: it establishes a defined culture and mindset; supplies a curriculum and pedagogy; promotes movement along the pathway of the development of professional expertise; emphasizes deliberate practice, reflection, and training transfer; and it requires instructors to coach and mentor as subject matter experts, not lecturers, and sets conditions for an evaluation scheme for proficiency in Mission Command.

TLAC is, in a more updated phrasing, an Adaptive Course Model pedagogy. TLAC can educate and train cadets through Adaptive Leader Soldier Training and Education (ASLTE). These methods dovetail with what the Army expects to see of Mission Command-proficient junior officers. These approaches teach, coach, and train to the intangibles of adaptive leaders, through deliberate practice: training to grow problem-solving teaches Soldiers to “teach themselves” the skills necessary to the success of their Mission; training to increase intangibles develops the intangible attributes of confidence, accountability, and initiative; training to increase understanding and awareness teaches through the contextual understanding of the task and its mission application; training to increase deliberate thought conditions Soldiers to always exercise a deliberate thought process while under stress, and training to improve combat performance conditions Soldiers to overcome the psychological and physiological effects of combat. ASLTE intangibles are perfect for Army ROTC instruction and are just as viable when applied to the deliberate practice episodes of the cadet regiments at the military boarding schools of our study. Accepting TLAC/ASLTE as the engine for leader development, the following components in our study must be adjusted to support and reinforce the Mission Command leader training and education.
TLAC removes the tendency to overdo the training to be a cadet in a military school by looking at the future of cadets who need to already be moving on the pathway toward professional expertise in Mission Command.

Academic Credit for Leadership Experiential Learning in the Corps of Cadets

Nevertheless, there is one more significant element to put in place: award academic credit for leadership experiences in the Corps of Cadets on par with ROTC courses and labs. The Higher Learning Commission views that leadership development is equivalent to co-curricular opportunities like the Glee Club does a tremendous disservice to the dedication and effort of cadets to make their regiment a unit. It seriously undermines any sophisticated approach to leadership development that falls outside of academic departments (like the Commandant’s Office). The school administration policies should conspicuously promote and reward academic department collaboration that directly connects/intersects other programs with ROTC and the Corps of Cadet's praxis. Academic credit for leadership learning experiences in the Corps of Cadets aligns with the Army’s approach of “Successful completion of learning experiences (whether in formal, informal, or operational contexts), should award credit (or micro-credit) towards these outcomes, and when possible, be further recognized through credentialing” (see U.S. Army Training and Doctrine Command, 2017, TRADOC Pamphlet 525-8-2, The U.S. Army Learning Concept, 2020-2040). Going further, build it all into a Leadership Certificate in Experiential Leadership, to give cadets academic bona fides for learning how to lead.

Getting Back to WHY

Mission Command is all about leadership. Learning about Mission Command, and conducting the deliberate practice in it, is what the U.S. Army expects of the new generation of Army officers. This paper explored the concept of Mission Command, the Army's intentions for the doctrine of Mission Command, and how the Army seeks to educate and train its officers to perform Mission Command as “trusted professionals.” The military boarding schools are unique institutions in our country and offer a tantalizing environment for a much more robust daily practice and evaluation of Mission Command.
This paper sought to portray the problems and possibilities with future officers becoming proficient in Mission Command. There is much more to be studied, many more options to analyze. Not all options will succeed; some are just enough to get things moving. Nevertheless, every academic year the Army, the ROTC programs, and the military boarding schools that house them fail to take a concerted step forward is a colossal opportunity lost for those commissioning cadets. We must continue to seek options to make things better.

We can see hints of how we approach developing professional expertise in Mission Command in a lesson learned from Scotsman Robert Watson-Watt, the pre-World War II inventor of the powerful radar and direction-finding technology. Watson-Watt's co-workers asked him why he justified his choice of a “sub-optimal” version of the radar to anxious Royal Air Force officers to employ on the eve of the Battle of Britain. He cited his often-quoted “cult of the imperfect”: “Give them the third-best to go on with; the second-best comes too late, [and] the best never comes.”

As leadership trainers and educators, we have an obligation to do everything we can to prepare cadets to be able to command into the uncertain.

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