Strength in Knowledge

The Warrant Officer Journal

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Modernizing Warrant Officer Education

Strength in Knowledge:
The Warrant Officer Journal

Disclaimer

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Commandant's Corner

The Army is at an inflection point and so too is the United States Army Warrant Officer Career College. This publication represents the first edition of an enduring effort to provide a professional forum for sharing of information focused on current and emerging topics within the Warrant Officer Proponent. This edition highlights a renewed focus on the education and training of Army Warrant Officers.

The Warrant Officer, termed the "Quiet professional," has always supported Commander's efforts to maintain the advantage against existing and emerging threats on the battlefield through creative thinking, problem solving, and the integration of complex systems. As such, this publication endeavors to inform and shape the continued growth of the profession through the sharing of key insights and lessons learned from those that seek to be recognized as life-long learners. As the Army embraces new doctrine and advancing technical capabilities, the role and requirements placed on the Warrant Officer will evolve. The Army of 2030 will be more technical than any encountered before and it will depend on the leadership skills of the Warrant Officer Cohort to ensure its continued success.

The faculty and staff here at the USAWOCC are adapting to the continuing challenges of the current and future operating environments with a laser focus on modernizing how we educate, train, and develop our Army's leaders to ensure each has the necessary skills to fight and win on the multi-domain battlefields of tomorrow.

Strength in Knowledge!

Deputy Commandant's Corner

This publication aims to be the central voice for the Warrant Officer Cohort generally covering Warrant Officer relevant topics and lessons that improve the Army profession. The first edition speaks clearly about optimizing the relevancy of the Warrant Officer through education modernization.

The Army of 2030 and beyond requires Warrant Officers who are innovative technical leaders of character who possess sound knowledge, skills, and behaviors to address the complexity of the emerging operational environment. To meet the Army's requirements the right strategy for Warrant Officer education and training is imperative.

USAWOCC is the center of gravity for Warrant Officer foundational education. As the executive education change agent, USAWOCC endeavors to reestablish the building blocks for Warrant Officer Professional Military Education (WO PME). USAWOCC understands that educating Warrant Officers equally is a complex equation to solve. Moreover, achieving the right balance of foundational education with the right level of technical skills requires relevant, valuable, and meaningful options for learners. Through a paradigm shift in the developing Warrant Officer Learning Continuum (FY26), USAWOCC focuses on an optimized approach toward shaping progressive and sequential Warrant Officer education.

This optimized approach begins with our flagship program, the Warrant Officer Candidate School (WOCS). The WOCS modernization initiative focuses on reemphasizing the identity and role of the Warrant Officer to ensure their talent, education, and skills align with the Warrant Officer competencies (integrate, communicate, lead, advise, operate). The generational shift in our Army requires WOCS to offer a more practical outcome-based learning experience; increased cognitive levels and academic rigor; and a more formative warrant officer acculturation process that ensures WO1s will be better prepared to serve at their first unit of assignments. An optimal level of technical expertise in a Multi-Domain Operations environment is critical, the relevancy and timing of Warrant Officer education are paramount to the success of Army 2030 and beyond.

Strength in Knowledge!

Modernizing Common Core Military Education for the Army Warrant Officer

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Introduction

The United States Army is at an inflection point brought about by a dramatic doctrinal pivot and shift from over two decades of counter-insurgency operations. The pivot point in question surrounds the Army's latest doctrine outlined in Field Manual (FM) 3-0, *Operations* (Department of Army, 2022). The newly embraced doctrine, better known as *multidomain operations*, outlines and describes an operational vision that now includes new dimensions and domains of warfare that exceed current force capability. This dramatic change in doctrine has provided the necessary impetus for every academic institution in the United States Army to undertake curriculum and education modernization, and this includes the Warrant Officer Career College.

The Reality of the Future Fight – Inspiration for Modernization

Multidomain operations doctrine, through prescribed tenets and imperatives, provides that the Army will engage the enemy across 3 dimensions (physical, information, and human) and 5 domains of warfare (land, air, maritime, space, and cyberspace). These engagements focus on the employment of combined-arms and joint capabilities to achieve operational success across space, time, and domains. One of the most unique doctrinal declarations within this publication is that future warfare will be systems oriented. FM 3-0 states the following on systems warfare:

> *Systems warfare is the identification and isolation or destruction of critical subsystems or components to degrade or destroy an opponent's overall system. Peer threats view the battlefield, their own instruments of power, and an opponent's instruments of power as a collection of complex, dynamic, and integrated systems composed of subsystems and components. They use systems warfare to attack critical components of a friendly system while protecting their own system.*

As the above passage highlights, future warfare embraces a viewpoint focused on systems. This implies that the future Army will be more technical than any encountered before in history. Mastering technical complexities have been the hallmark of one cohort since their inception in the United States Army, the Warrant Officer. After all, the Army Warrant Officer is the prime manager, technical expert, and integrator for all the Army's complex systems. If that is not

enough, large scale combat will also require Warrant Officers to extend their knowledge and understanding beyond technical aspects to ensure effective integration of systems within Army processes and structures. This means the future Warrant Officer requires an education that is both progressive and sequential, and one that focuses on technical capabilities as well as common core topics like leadership, communication, and doctrine. All together, these equip the Warrant Officer with the appropriate skillsets to meet operational requirements.

The driving force of such a holistic doctrinal change, coupled with the realities of a coming focus on systems warfare, was inspiration enough for the faculty and staff at the USAWOCC to undertake a detailed institutional review of the current curriculum and chart a path for modernization. Not simply a change for change sakes, but instead a detailed and purposeful effort to reimagine Warrant Officer education, from beginning to end, to make sure all are ready to contribute to the next fight.

Moving Forward: Modernizing the Warrant Officer Education Continuum

With the publication of this first edition, the faculty and staff at USAWOCC are focused on the first of five phases targeting the modernization of the Warrant Officer Education Continuum for common core requirements with with targeted implementation by FY26. Phase one represents the beginning of the process and as such, is the Warrant Officer foundational educational experience at the Warrant Officer Career College – Warrant Officer Candidate School or WOCS. The ongoing analysis and development is firmly rooted in historical studies and data regarding WOCS educational gaps. USAWOCC leaders recently collected additional

data from the operating force through the conduct town-hall style symposium. From these and other key data points gleaned from student populations, the USAWOCC modernization effort focuses on two critical areas: 1) understanding of the Profession and 2) supporting doctrinally centric and applicable academic instruction.

Education on the profession for Warrant Officer Candidates focuses on key areas such as communication, leadership, and military history. The college's motivation is to ensure that newly minted Warrant Officers arrive with the skills necessary to be immediately value added upon arrival at their first unit of assignment. This becomes even more critical as approximately 65% of initial Warrant Officer assignments are at the battalion level. Efforts in modernization for these areas showcase new or revised instruction on topics such as systems thinking, relevant

military history as it applies to inform future decision-making and increased "sets and reps" in both written and oral communication. The goal is to equip newly appointed Warrant Officers with the foundational knowledge and skills they need to succeed in leading and contributing as integral members of combined, joint, or multinational teams.

Modernization of doctrinally centric education is similar in many ways. The emphasis on systems warfare in the future fight again requires a Warrant Officer with astute doctrinal literacy and understanding of Army and Joint planning processes. The Warrant Officer will need to be able to integrate their technical knowledge and effectively communicate in a way that is practical and meaningful to inform key decisions. Operational successes involving the Army of 2030 will undoubtedly rely on the capabilities of the Warrant Officer cohort. The specific efforts within this focus area include seminars and analysis of the operating environment, the Military Decision Making Process (MDMP), Army modernization and the emerging capabilities within the Army 2030 organizational changes.

Closing

This modernization effort is on glidepath with relevant changes already in the works for the Warrant Officer Candidate School but promises to quickly move into the Professional Military Education (PME) courses as laid out in the CAC modernized Warrant Officer Education Continuum. These efforts are being worked by, with and through key stakeholders across the Enterprise, those being Army University, the Combined Arms Center and associated Centers of Excellence, and Compos 2 and 3 as well. As the proponent, USAWOCC is dedicated to ensuring the Warrant Officer stands ready to meet the needs of the current and future operating force through their continued work as technical experts, integrators of functions and systems, doctrinally informed operators, and command advisors.

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Identifying Common Core Competencies of the Army Warrant Officer

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Editor's Article of Interest

Introduction

The United States Army Warrant Officer Career College (USAWOCC), the proponent for cohort Professional Military Education, has recently focused considerable effort towards reinvigorating the Warrant Officer (WO) student's educational experience. More importantly, the USAWOCC effort has been holistic in nature and revealed that the eventual work to enhance WO education involves additional exploration regarding learning outcomes.

Exploration into desired learning outcomes at the foundational level gave way to discussion of cultivation of an educational experience that produces an identity that could be considered common across the cohort. While the cohort shares a definitive identity grounded in technical competence and expertise, there is a question of whether or not other general competencies can be found applicable to the cohort regardless of technical specialty. To address this problem, USAWOCC is recommending the adoption of five WO-centric competencies: leads, communicate, operate, integrate, and advise.

Leads

Leadership is a hallmark professional competency that spans all ranks in the United States Army. Even initial-entry Soldiers are expected to demonstrate leadership potential throughout their training. However, the Warrant Officer is a leader that is usually facing conditions and levels of responsibility unlike any other rank across both the Officer and Non-Commissioned Officer Corps. The reality is that it is rare for the average Warrant Officer to be responsible for more people than simply themselves. That is not to say a Warrant Officer will not be a leader, but their authority and leadership is usually indirect rather than direct. After all, a Warrant Officer is typically thought of as a technical Subject-Matter Expert (SME) and advisor rather than a direct leader. However, it is always necessary for a Warrant Officer to lead by example as well as by developing others in both formal and informal ways.

While Warrant Officers are not typical direct leaders, they do stand unique amongst the Officer and NCO Corps. It begs the question, what type of leadership must this unique leader be able to apply? First and foremost, a Warrant Officer uses their technical expertise to both readily build trust and cultivate influence that can extend beyond the confines of the Chain of Command (CoC). The very necessity of a technical expert position (i.e., a specialist among centrists) within systems- and technology-dependent formations means that a Warrant Officer must be able to lead those below, around, and above them within the organizational hierarchy. This requires someone willing to think

holistically and develop the technical capacity of subordinates, peers, and superiors alike, thereby leading an entire organization by example and action with respect to their technical area of specialty.

Communicate

As mentioned in the leadership competency, the Warrant Officer must be prepared to lead by example and develop others and their technical capacity to the benefit of their organization's efficiency. That means the Warrant Officer must extend influence to subordinates, peers, and leaders, both within their organization and beyond. This takes a special kind of officer because after all, communication is the currency of leadership.

The Army Warrant Officer must be successful and efficient in every avenue and form of communication. The Army Warrant Officer must speak with emotional and cultural intelligence to work efficiently with and develop the members of the diverse Army team. Additionally, an Army Warrant Officer must appreciate and be capable of applying Army-centric communication tools in accordance with guiding policy to ensure timely messaging is both correct and well-received. Finally, a Warrant Officer must be both a tactful and intelligent communicator who can express technically relevant information that is both contextualized for operational relevance and understood by all audiences. Again, this takes a special kind of officer.

Operates

The Army Warrant Officer must also cultivate a competency surrounding operations and application of systems knowledge. Knowledge without understanding application is utterly useless, and the Army Warrant Officer is anything but useless. It is imperative that the Warrant Officer have a firm grasp of doctrine and Army operations if they are to be of value to their commander and organization.

An operationally savvy Warrant Officer will take a commander's intent, both at their level and above, compare that to the problem set presented within the operational environment, and see the organizations they support through every type of situation. This requires an officer with a holistic view that is intelligent and willing to think both creatively and critically through presented problems. The operationally savvy Warrant Officer must also be able to lead through significant operational challenges as they are integrated across organizations and agencies and are fully aware of all associated strengths and weaknesses. This allows the Warrant Officer to advise on how to best apply their capability and systems. This makes the Army Warrant Officer the ultimate problem solver.

Integrates

Integration is a process of bringing either people, processes, or systems together across boundaries, whether real or virtual and unifying all associated variables to achieve one harmonious effect. Warrant Officers, by their very definition, are charged with being integrators of Army systems and processes across formations and organizations to meet desired end states of commanders. The Army Warrant Officer is a technical expert on Army and DoD systems and leads across multiple levels of an organization, though they typically represent a human capacity that is usually one-deep. The Warrant Officer bears the full brunt of integrating the Army's most cutting-edge technology.

The burden of integration creates a perceived competency of need that is fostered through years of hard-fought experience. It almost never fails; the Army Warrant Officer is often seen as standing alone in a formation, as many simply do not know how they integrate into the greater organizational picture. In many respects, this provides the Army Warrant Officer with a degree of hallmark autonomy as they seamlessly traverse the challenging landscape and layers of the military hierarchy. This means the Warrant Officer must understand that they integrate into a team or among leaders at the point of need.

That's right: a Warrant Officer cannot simply integrate systems in a technical capacity; they must also integrate themselves in a human capacity within the organization that may need them in a specific moment in time. It is this ability to integrate into any organization, team, or group of leaders that makes the Warrant Officer capable of being able to integrate systems warfare across the organizational landscape of the Army.

Advise

Again, a Warrant Officer is typically only accountable for themselves, or perhaps a very limited number of people, though a select few serve as commanders, e.g., 420C – Army Bandmaster. This is a unique condition set for any Army leader. This condition allows the Warrant Officer the opportunity for tremendous professional and technical focus, thereby producing the highly coveted and experienced subject-matter expert. To be sure, the depth of knowledge requires application, but it is done so in a way that is typically agnostic of power and authority, specifically meaning the Warrant Officer is rarely considered a formal decision authority, as that is typically the domain of a staff and commander. Instead, through the freedom of perspective and ability to be outside looking into an organization, the Warrant Officer advises leadership, understanding the left and right limits of their decision space and that of others on multiple courses of actions and approaches to solving everything from well-structured to complex problems. The competency of the adviser implies both tremendous responsibility and humility, as the warrant officer understands the weight and potential impact of every uttered word. True, the Warrant Officer is the Silent Professional, but when they speak as an advisor they must do so in a concise, competent, and confident manner.

Summary

The Army Warrant Officer is a leader like no other. As such, the Army Warrant Officer must command specific competencies to maintain professional relevance across a dynamic and ever-changing modern battlespace. The discussion of these specific competencies is not mere window dressing, but instead a guide for future development and the cultivation of a common and appreciable cohort-based identity. These competencies must be addressed and supported across the entire Warrant Officer education continuum, guiding the formative experiences of both current and future members of the cohort. As such, USAWOCC will continue to evolve and enhance the Warrant Officer's educational experience to ensure that they are properly developed across the professional competencies of leads, communicates, operates, integrates, and advises.

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Understanding the Educational Needs of the Army Warrant Officer

Assessment of Outcomes-based Education Following First Unit of Assignment

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Editor's Article of Interest

Abstract

The United States Army has made modernization of Warrant Officer education a priority. The Warrant Officer Candidate School (WOCS) represents the foundational course for all Army Warrant Officers and remains the prime focus of the US Army Warrant Officer Career College (USAWOCC). Modernization of Warrant Officer education must begin at WOCS, and so it was necessary to determine if junior Warrant Officers were being properly prepared for their first unit of assignment (FUA). The following research, collected via a pilot study, sought to determine if there was a gap in understanding of the right educational outcomes between the USAWOCC and the experiences of their most recent graduates of the Warrant Officer Candidate School. A mixed-methods research methodology was undertaken to present data on the perceived content relevance and value ascertained by those graduates serving at FUA. The participating limited sample size revealed that Warrant Officers at their FUA feel ill-prepared to meet outcomes, implying an incongruence in expected versus actual outcomes of education. The implications of the data point toward further issue with a missing deliberate design to ensure the entire continuum of the initial Warrant Officer educational experience is both progressive and sequential.

Introduction

In 2018, the Department of Defense took note that professional military education, or PME, had started to stagnate, focusing more on topics instructed resulting in credit earned (NDS, 2018, p. 7). By 2020, the Chairman of the Joint Chiefs of Staff had released a refined vision on the purpose and direction of PME, stating "initially, we must shift our PME curricula from a predominately topic-based model to an outcomes-based approach and emphasize ingenuity, intellectual application, and military professionalism in the art and science of warfighting" (CJCS, 2020, p. 5). Organizationally, the Army had recognized that we were educating our personnel, but the outcome, or ability of an education to influence success in application was not best preparing our Soldiers for follow-on assignments or

subsequent challenges in the future fight. The decision was made to reinvest in PME through an "outcomes-based military education strategy" to better prepare officers across the enterprise. This brought forth the challenge of trying to determine what an outcomes-based military education strategy might be at every officer producing school in the entire Army, including courses taught at the United States Army Warrant Officer Career College, or USAWOCC.

One of the first steps in any problem-solving process is problem identification to eventually move into analysis. An outcomes-based education is output-driven with an emphasis on evidence collected from direct and indirect assessments both within and external to the learning environment. To move forward in solving this problem, USAWOCC determined it necessary to look beyond simple data found within end-of-course critiques and considered assessing the experiences and perceptions of recent graduates of their foundational course, Warrant Officer Candidate School, or WOCS, that were currently serving in their first unit of assignment. This was considered an ideal population, given their recency of graduation and need for knowledge to ensure successful application of effort in support of their first unit of assignment. The researchers determined that key data points regarding the value of the current course and identified gaps in knowledge could be uncovered to improve educational outcomes. With this information the researchers could better identify perceived content relevance of the current course based upon respondent time and opportunity to reflect given the knowledge of expectations experienced within the first unit of assignment.

The data-driven research into aspects of perceived content relevance and identified gaps based on real experience places USAWOCC at analysis phase regarding deliberate ADDIE[1] -based instructional design of a new, outcomes-based foundational education experience. This research will provide insight into the educational experience of the new Army Warrant Officer (WO), potential unrealized gaps in education due to failure to achieve a symmetric progressive and sequential effect for student development, and potentially inform the outcomes-based education strategy needed by USAWOCC to meet Army PME guidance. This research aspires to demonstrate the value of deliberate and well-informed instructional design as being critical to success in military education.

Literature Review

For a WO, professional focus is historically placed upon their technical and tactical expertise, with each serving niche roles at various organizational levels. As such, WOs comprise an exceptionally small portion of the United States Army and are often seen as specialists or technical advisors. Given the nature of the WO and the reality that many rarely work directly with these specialists, the authors thought it prudent to conduct a literature review inclusive of the current state of Warrant Officer education and assessment. Additionally, when discussing the modernization of an entire military cohort's professional education it becomes necessary to include associated educational theories. Theories discussed include self-efficacy, confidence, and rigor. It was also necessary to review The Army Learning Model and Army University's preferred weapon of choice, experiential learning theory, or ELT, a theory gaining in popularity (Heinrich & Green, 2020, p. 206).

The Current State of Warrant Officer Education

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[1] ADDIE – A generalized process employed by instructional designers and developers. ADDIE is a phased process and stands for Analysis, Design, Development, Implementation and Evaluation.

Warrant Officer Candidate School, or WOCS, is not currently designed to teach candidates technical knowledge related to their branch specialty (e.g., human resources, military intelligence). Instead, WOCS includes a core curriculum that serves to bridge the duties of a prior enlisted Soldier or civilian to those of the regular officer (e.g., captain), who is not a technical expert. The technical acumen of the WO begins with the knowledge they bring from their work as an enlisted Soldier. To become a WO, the applicant must have documentation that they can serve as a technical expert in their chosen career field. However, the prior knowledge of the typical applicant is or was focused differently as opposed to the WO. To assist in the successful matriculation of the student's prior knowledge into the realm of technical expertise, a learning continuum is established and ensconced within a curriculum-based program.

Curriculum-based programs, such as WOCS, should include experiences that build on each other and provide multiple opportunities for learning concepts (National Park Service, n.d., para. 1). Throughout a course, the curriculum should build on prior lessons, providing connections for the learner so they may understand how one concept integrates with another. The learning continuum concept is a tool that can help guide academic experiences (Wood, 2015, para. 2) and assessments. A learning continuum informs faculty what and when learning objectives should be taught as well as how they are taught. A learning continuum assists educators as it indicates through the continuum's phases what the students should be expected to know and do (Victorian Curriculum and Assessment Authority, 2019).

WOCS, in conjunction with an eventual Warrant Officer Basic Course, or WOBC, is designed to fill in learning gaps from the Soldier's enlisted time and expose them to the multiple components of their specialty that they had not engaged in previously. WOBC is also designed to build on WOCS core curriculum, ideal for a learning continuum. Through this study, the researchers sought to determine how much value WOCS brought as the new WO entered their first unit of assignment and whether WOBC curriculum built on that of WOCS. This idea, then, implies that there is a lack of sufficient collaboration between instructional designers across the WO learning continuum, thereby eroding away at an efficient progressive and sequential educational experience.

Warrant Officer Candidate Assessment

Assessment is a tool for educators and is an "essential [component] of teaching and instruction" (Saher et al., 2022, p. 1). Educators know that authentic assessment, or assessments that "require application of what students have learned to a new situation" (Indiana University Bloomington, n.d., para. 2), should be used to truly evaluate what students have learned and can do. Conventional tests can be of value but are not substitutes for authentic assessment.

The graded assessments currently at use in WOCS consist of four multiple-choice exams given at the end of each week of training. Although these exams are focused on the concepts that were studied, they do not necessarily connect to earlier or later topics that are studied throughout the course. After the test, students perform what is commonly known as a "brain dump." An alternative would be to utilize a more rigorous authentic assessment. A major disadvantage to authentic assessments is the time involved in both conducting the test and grading. Each WOCS course has between 83 and 96 candidates with three training-advising-coaching (TAC) officers who manage each class's actions and time. In addition to the TACs, there are instructors in each department who teach the various courses to the warrant officer candidates (WOCs). The student to teacher ratio is set by the Army Training and Doctrine

Command and is mandated to be 16:1. Unfortunately, that is not the outcome. Instead, the ratio is around 30:1, which makes assessing and grading extremely challenging to manage.

WOCS modernization effort would recommend a refined assessment strategy. The desire would be to achieve more manageable grading, as well as a more authentic measure of what the candidates know and can do. As Saher et al. (2022) pointed out, "innovative assessment practices" (p. 287) can influence the faculty and developers at the college to design assessments that are multifaceted in capability and application. This could open more opportunities for self-reflection, which requires "critical thought, self-direction, and problem solving," thereby better aligning with outcomes-based education aligned with the CJCS vision (Gün, 2010, p. 1).

Self-Efficacy Theory and Confidence

The nature of the research involves past graduates engaging in a critical theory known as self-efficacy. Bandura's theory of self-efficacy is the overarching framework for the traits and characteristics that ideal Warrant Officer Candidates are assumed to have. Self-efficacy theory manages how people function cognitively and motivationally, what their mood is, and their level of optimism or pessimism (Bandura, 1997). Non-commissioned officers (NCOs) who apply for and attend WOCS are assumed to have high degrees of self-efficacy, believing they will be able to meet the requirements of the WOCS curriculum and eventual professional expectations.

Eccles and Wigfeld (2000; 2002, as cited in Zhen et al., 2019) found that students' self-perception of competence helped shape academic motivation. Candidates who believe they can be successful will be more motivated to attempt the WOCS course. As NCOs are being recruited to apply for WOCS, those who are recruiting should informally assess a potential candidate's belief in their ability to conquer challenges in multiple areas of life. This evaluation gives a more complete picture of the candidate's self-perception and level of self-efficacy, which could serve to predict their outcome in WOCS.

In many ways, though different, confidence is as much of a factor in success as self-efficacy. Hamann et al. (2020) found that college students must have some ability to predict their expected grades to sufficiently study for exams (p. 2). Translating this to the WOCS candidate, there must be a way for them to judge their ability to meet the requirements of the course or address areas of weakness in preparation for the course. LaTrobe University (2022) wrote there is a distinct difference between self-efficacy and confidence. Confidence is likened to having a "strong belief, whether in something positive or negative" (para. 9). The conclusion from this idea is that the candidate must believe they will meet all the requirements, as confidence extends beyond the realm of the possible.

Academic Rigor

The culture of a learning institution is made up of the "values, beliefs, perceptions, rules …, and relationships" and these factors influence how the institution functions (Boss & Larmer, 2018, p. 13). A school culture that encourages achievement and understanding must have high standards for learning, a collaborative environment, and academic rigor. The course material must ask the students to apply critical and creative thinking and past experiences with a belief that they can master the material.

Defining rigor is a complex process because different stakeholders have different ideas of what constitutes rigor and the value of it. It is challenging to assess rigor as well, although there are growing

calls for learning institutions to measure learning outcomes, rigor, and resulting skills and competencies (Denecke et al., 2017). Rigor is used in academia typically to mean academic relevance, critical and creative thinking, challenge, and high academic standards (Great Schools Partnership, 2014). The Army's working definition of rigor is "the deliberate challenge that increases competency and performance outcomes through the design and adjustment of one or more of the key components of the learning environment across the learning domains to meet or exceed the Army Standard" (US Army Combined Arms Center, 2022, slide 4). Finch et al. (2021) highlighted the need for learning institutions to engage in program assessment and validation to ensure they provide relevant and rigorous content and continuous improvement. To support the modernization of WOCS and the level of rigor with new learning outcomes, the faculty at the WOCC undertook the study of junior warrant officers discussed in this paper.

Army Learning Model

The Army Learning Model (ALM) is the framework the Army uses as it designs instruction (Department of the Army, 2017a). The Army's focus is to use strategies and teaching techniques that are innovative and effective to increase the rigor and learning. The ALM is underpinned by the idea of organizational learning. The Army, as an organization and system, must continue to grow and learn to continue to meet the challenges presented by global threats to the Nation's national security. The Army is a "learning organization that learns by repetitive execution" (Department of the Army, 2017b, p. 14). As a result of organizational learning beginning in the late 2000s, ALM 2015 was developed to ensure a "more competitive learning model" was employed on all fronts (Department of the Army, 2017, as cited in Ferguson, 2017, p. 2).

One lesson that the Army, and thus USAWOCC, has learned in embracing the framework of ALM is that instruction should be student centric. Because teacher-centric instruction has been a staple in the education arena, many faculty across the Army Education enterprise have been challenged to learn new methods of instruction (Ferguson, 2017). The weapon of choice for the Army in this endeavor has been the adoption of Experiential Learning Theory.

Experiential Learning Theory

Paulsen (2020) posited that people understand experiences as the feeling they had during the experience and how they perceive the event (p. 862). Applying Kolb's Experiential Learning Theory (Kolb & Kolb, 2017) means the student is "directly in touch with the realities being studied," as opposed to merely reading or hearing about a topic (p. 14). Faculty and course developers at USAWOCC strive recognize that students have gained knowledge from their own "ordinary course of life and work," to which now requires supplemental "analysis and observation" by faculty (Kolb & Kolb, 2017, p. 14).

Employing both Adult Learning Theory and ELM, the educators at USAWOCC assume different roles, depending upon the cycle of learning in which the students are participating. Faculty may be facilitators, subject-matter experts, evaluators, or coaches (Kolb & Kolb, 2017, pp. 18-19). With adult learners, faculty can be seen as partners in learning rather than simply transmitting information for the students to absorb. One strategy to help learners acquire more understanding is to provide them tools for self-awareness of themselves as learners, a hallmark of the effort underlying the revised Army Learning Model framework and ultimately ELT. Yardley et al. (2012) stated that experiential learning allows a learner to construct their own "knowledge and meaning from real-life experience" (p. 161). ELT

is an intentional design that integrates "theories, learning and content, and context" (Heinrich & Green, 2020, p. 207). The ELT design includes a four-phase cycle that incorporates "concrete experience, reflective observation, abstract conceptualization, and active experimentation" (Kolb, 1984, as cited in Heinrich & Green, 2020, p. 208).

The PME modernization effort underway at USAWOCC seeks to employ a greater use of ELT. The researchers assume that greater utilization of ELT will come through more practical exercises and authentic assessments. Candidates will be asked to perform as they travel through the ELT cycle. These performances must and should indicate an increased depth of learning and mastery of concepts, as the student is "doing" and "applying" knowledge rather than simply being a simple receiver in the standard lecture-based paradigm.

Research Design and Synopsis

The opportunity for research presented itself rapidly during the summer of 2022 on the heels of a Warrant Officer Solarium. It was evident excellent data could be formally collected and reported from this event to better aid the WO learning continuum modernization effort. However, given a limited population and eventual sample frame in attendance to the solarium, in addition to a new and unvalidated research instrument, the selected research methodology and approach would be a mixed methods pilot study. The rationale was to maximize analysis of limited collected data and not overstate results.

The objective of the research was to assess perceived content relevance and impact of WOCS by recent graduates serving in their FUA. It was determined a short survey could be utilized that incorporated both quantitative and qualitative data collection. Additionally, members attending the solarium provided short instance of personal correspondence to further highlight the effort. Given this is a pilot study, the authors aspire to present the effort in such a way as to justify replication of the study on a larger scale.

Demographics and Sample Size

Broadly speaking, the research population can be identified as recent graduates of WOCS, in the rank of WO1 and CW2, and currently serving in their first unit of assignment. The nature and limitation of the pilot study further restricted the sample to the described WOs currently serving within the local area of an Army base on the east coast of the continental United States.

Approximately 50 personnel in the immediate area of the research site attended the solarium event. Nearly 30 personnel would leave their email as a point of contact for survey participation and 8 would return valid surveys, resulting in an ~25% rate of return. More than acceptable return rate for a pilot study. All respondents had 10 or more years of total military service and 75% had 15 or more years of service. Prior highest professional military education was reported as being the NCO Advanced and Senior Leadership Courses. All demographics point toward respondents being highly experienced and well educated militarily.

Sampling Procedures

Sampling procedures were fixed convenience and kept objective through utilization a third party, Army University's Institutional Research and Assessment Division, or IRAD. Potential participant

contact email addresses were collected at the solarium and given to IRAD. IRAD then emailed a standard research invitation email that included a link to the survey. Participation was voluntary and no identifiable information was collected that would somehow connect participants to responses.

Instrumentation

The instrument for this research was a survey created by the authors and featured 15 total questions. The survey collected basic demographics in the first 7 questions and the next 6 questions utilized Likert-scale responses to assess perception of the overall WOCS experience and the individual content areas covered in class. The Likert-scale allowed the following responses and associated weighted response: Little or no value – 1, Somewhat valuable – 2, Valuable – 3, Very Valuable – 4, and Extremely Valuable. Finally, the last 2 questions are free text entry to collect qualitative information on topics and other suggested changes that respondents consider would have been impactful on their experiences at their FUA.

Data Collection and Analysis Strategy

Army University's IRAD distributed the survey invitation via email, thereby enhancing protection against connecting specific responses to individual respondents. The analysis strategy, given the small sample size of the pilot study opted to focus on descriptive statistics. IRAD provided initial analysis of survey responses with the authors complete data analysis.

Findings and Discussion

Quantitative Results

The survey utilized during this research was new. However, the survey received review from both authors and members of IRAD prior to utilization and the consensus was in support of face validity (Leedy & Ormrod, 2013). The alpha score for the simple instrument was identified using Excel via an Anova: Two-factor without replication by using the following equation $\alpha = 1 - (\text{Mean square error} / \text{mean square rows})$. This resulted in a value of $\alpha = 0.70$, or an acceptable value for measure of internal consistency.

As mentioned earlier, respondents had 10 or more years of total military service and 75% had 15 or more years of service. Additionally, respondent's reported attending various levels of NCO professional military education, all at least attending ALC, and thus bring considerable professional educational experience with which to apply in their responses for this data collection.

Given the small sample size, it was advantageous to consider all responses in the aggregate. The range of Likert-scale responses ranged from 1 to 5, with a total of 6 individual responses collected across all surveys. The response distribution can be seen below in Figure 1. Sadly, many respondents were likely to respond that certain classes, or the overall course as having no perceived value at FUA or being only somewhat valuable. The overall mean responses for all Likert-scale based questions came in at a value of $\bar{x}$ = 2.14, or 2, Somewhat Valuable. This is not ideal as it implies students assess the current WOCS program provides little or no value at the first unit of assignment. Military history content was rated highest for perceived content relevance across all five content areas taught at USAWOCC, or $\bar{x}$ = 2.9.
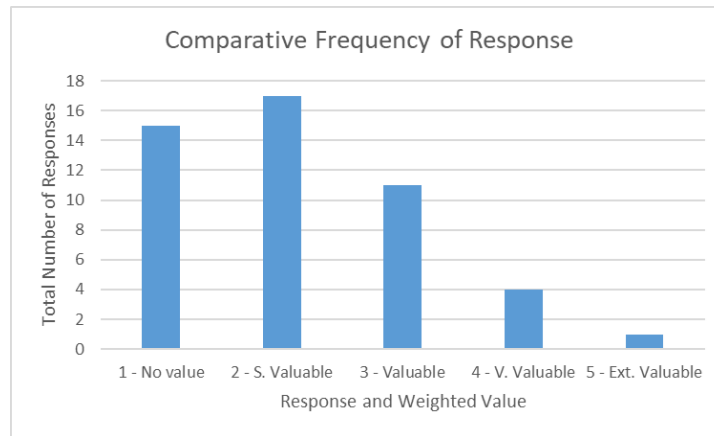
Figure 1. Comparative Frequency of Response

Qualitative Results

This section begins discussion of the qualitative results received from the participants of this phenomenological study, Warrant Officers One and Chief Warrant Officers Two. The responses came from small-group interviews, whole-group interviews, and an online survey. To make sense of the responses, we used first- and second-cycle coding. Each category of data (e.g., small-group interviews) was coded using a structural coding analysis (Saldaña, 2009). The responses were analyzed and then combined into 10 codes, two themes, and two dimensions.

Analysis shows WOCS graduates tend to arrive at their first duty assignment not knowing expectations for them are or how to integrate onto a staff. According to most of the participants, they are not familiar with what other military branches do. Because of this, they do not know how the other branches can help solve problems. The graduates also do not know how to develop courses of action that complement the other branches' courses of action. These perspectives point to a lack of knowledge about how the army functions as a system.

Many vocalized frustration that they do not fully understand the differences between a Warrant Officer and an NCO. The same holds true for the Warrant Officer and regular officer. Post-graduation, this phenomenon underscores the fact that an outcomes-based education is currently not being successfully achieved. WOCS graduates want to hear from senior leaders what they are looking for from their warrant officers. The graduates also want to understand how they should interact with NCOs, letting "the NCO do the NCO's job" (Personal communication, August 8, 2022). WOCS graduates also articulated a deep desire to be given enhanced professional development on how to grow as an officer, specifically a warrant officer.

Communications as an Over-Arching Guide for Instruction

The greatest number of responses were centered around effective communication. Participants indicated they did not receive enough instruction in writing for commanders, which includes a white paper and briefing slides. One graduate said, "I think the school does a great job with putting you on the spot with briefings and speaking in front of crowds. I would definitely keep that going," (Personal communication, August 28, 2022). This comment speaks to the need for instruction in effective and

influential communication. What the comment does not say, however, is whether classes on preparing and presenting briefs helped the commenter improve their skills.

Another participant said they needed more classes on preparing memos and writing white papers (Personal communication, August 8, 2022). That was followed by a commenter who said they agreed, especially with writing white papers because they are now on a staff and struggle to write well (Personal communication, August 28, 2022). Each of the graduates in the small-group interviews indicated their lack of communication skills were a problem.

Pearson and Nelson (2000, as cited in University of Minnesota Libraries, n.d.) stated communication is, "the process of understanding and sharing meaning" (para. 5). When WOs feel they cannot communicate effectively, they realize they do not have the influence they need to be effective advisors. If their commander cannot get complete, concise, and clear advice from their warrant officer, they will turn to someone who can meet those requirements. A lack of ability to communicate effectively means the WO will be sidelined as a staff officer.

Department of the Army (2019) stated decisive action includes the ability to communicate cross-culturally (p. 5). This means that the leader must be able to recognize "differences and similarities" (Stobierski, 2019, para. 4) among those in our workspace. To the WO, then, they must be able to recognize the leadership style of their commander and their intent and the personality preferences of their peers and subordinates. The WOCC must incorporate communications skills, which The University of New Mexico (n.d.) stated are written communication, oral communication, non-verbal and visual communication, active listening, and contextual communication. The WO must be a master of these skills in order to influence and advise their commander, other staff officers, and NCOs.

Operations, Teamwork, How the Army Runs, and Staff Functions

Table 1 includes the codes that were assigned to the qualitative responses so we could assign meaning to them. The themes that were derived from the overall message of the categorized responses summarize what we believe the participants feel about their experience at WOCS. Lastly, a sampling of comments is included to elaborate on the codes and themes.

Sample Comments	Code	Theme
"WOCS should have had more LRC and team stuff; more networking with MOSs."		
"I didn't know how to work on a staff."	Operations	
"We didn't really focus on warfighting functions."		
"Learning about the Army structure would be good."	Teamwork	WOs want to know how each component of the Army system functions and works together.
"I didn't know how I fit in to the unit when I first got here."	HTAR	
"The best part of WOCS was working as a team."	Staff Functions	
"I would've liked a brief on MOS capabilities."		
"More in depth discussion of Operations and Operations Process."		

Table 1. Themes on Participant Comments about Operations, Teamwork, How the Army Runs, and Staff Functions

The perspective of these respondents was generally that they did not feel they knew how to report and quickly adjust to the expectations of the commander and other staff officers. They had never been in a position where they were a touchpoint for the commander, so they were unfamiliar with what the other staff members were doing and what they, themselves, should be focused on. The WOs recognized that every new job comes with challenges in knowing one's place and role, but they felt they didn't have basic understanding to begin taking control of their responsibilities.

Typically, the first few days or weeks at a new assignment is stressful. There are adjustments to make, rules of the unit to learn, and personalities to discover. The comments from the graduates indicate there is a bigger problem than just initial butterflies and confusion. What the graduates experience is not knowing their boundaries and how much influence they can have. They do not know whether they are at the same level as regular officers or whether they should wait for someone in leadership to tell them what to do.

WOs who know their role will feel more like a member of the team, which enhances staff productivity and satisfaction (Kashyap, 2019). With more emphasis on how units operate within their echelon, new WOs can be prepared to take ownership of their areas of responsibility. WOs who understand how their warfighting functions integrate with others' can more effectively advise leadership. Understanding the functions of other staff sections (e.g., S2, S4) can help new WOs learn whom they should work with as challenges arise.

Sample Comments	Code	Theme
"Warrant officers aren't in leadership. We're a bridge."		
"I don't feel prepared to be an officer."		
"WOCS should be more like OCS to teach us to be officers."		
"We need more mentorship from the TACs."	Officership	
"More time explaining the differences between being Warrant Officer and an NCO and Commissioned Officer."	Mentorship	WOs need to be professionally developed to understand what their roles and responsibilities are.
"Identifying the differences between NCOs and Officers, in order to facilitate the transition."	Differences	
"More focus on transitioning into becoming an officer."		
"Focus on the basic things, especially … for reserve Soldiers."		

Tables 2. Themes on Participant Comments about Officership, Mentorship, and the Differences between Regular Officers, Warrant Officers, and NCOs

Conditions, Design, and Outcomes-based Strategy

Beyond identifying the specific areas of focus for WO PME learning and performance, to ensure an Outcomes-based Education Strategy is successful, intentional instructional design of the Professional Military Education (PME) curricula is imperative. The findings of this research suggest the need to better

and more systematically engineer subjects such as doctrine, communication, and strategic thinking more routinely throughout the Warrant Officer Learning Continuum in order to better improve readiness for the FUA and beyond. Given ever increasing resource constraints in conjunction with ill-defined talent management issues revolving around who truly produces educational products (Parker, 2020; Parker & Momeny, 2021), much of WO PME operates under an overt defining 'fire and forget' design perspective. This implies that assumptions are made during delivery of academic lessons. Those assumptions specifically consider that if definitions are provided alongside lectured topics and rapidly followed in short order by multiple choice tests, then sufficient learning has occurred and will presumptively be retained with little to no re-engagement.

Intentional instructional design is much more subtle and nuanced. Strategic Instructional Design of WO PME using the OBE approach demands considerations of subtle progressive and sequential curriculum development. It requires the nuanced learning sciences to inform design for a specific audience and outcome. Further considerations are given to specific environments and the use of key educational technologies to ensure learning takes place as efficiently as possible. For example, considering the learning psychology which likely informs the results of this study, Soldiers quantitatively reported the doctrine, communication, and strategic thinking topics of instruction having low value in the course. The qualitative data, however, indicated a desire for increased instruction in areas such as briefing presentation, operations order writing, etc. which fall squarely under the 'communications' topic. This incongruity speaks to a lack of confidence in knowledge and performance of the subject matter and its products rather than a lack of value.

Confidence is inherently a psychological or an attribute development issue. Therefore, both the overt skills of briefing presentation and the covert characteristics of confidence building need to be designed throughout the curriculum. How do you do that? One, consider how to incorporate briefing skills as part of any subsequent lessons in WOC, WOBC, and WOILE. Two, consider modifications to practical exercises that support confidence-building, almost imperceptibly to the Soldier-student. Three, consider ways to build in self-reflective and self-prescription opportunities to encourage students to take ownership of their learning beyond that of assessment grades. Increase motivation for self-improvement further enhances engagement with the learning environment and its content. Four, assess learning and performance with more academic rigor, rather than multiple choice tests.

Discussion and Summary

There is no such thing as a perfect learning experience. The data, whether quantitative or qualitative, captured in this study demonstrates some significant perceived incongruities across the Warrant Officer Learning Continuum. The idea of time and ability to reflect beyond an end of course critique is an exciting thought, especially given the nature of the continuum and how a WO is developed in a manner that is progressive and sequential.

Given the seriousness of modernization, USAWOCC has taken steps to refine curriculum and as of this paper will be providing students more exposure in the areas of declared interest. It is hoped the additional discussion in doctrine, orders production, and other topic areas will enhance the outcomes-based strategy currently being implemented at USAWOCC. Additionally, there are now revised moments in the curriculum that hope to better accentuate the desired mentorship and discussions on transitioning to the Warrant Officer ranks. After all, the managed educational transition of the applicant

to staff-ready officer is the necessary outcome of USAWOCC and the ideal outcome of both the future warrant officers and those they serve. Finally, given this was simply a pilot study, the authors feel both the quantitative and qualitative results, combined with the potential impact of collected data on USAWOCC outcomes-based strategy, is worthy of a replication study on a much larger scale.

Acknowledgements

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Fear of Failure

CW2 Mike Valdez

"We must be ready to defeat any enemy, anywhere, whenever called upon, under any condition." – General James C. McConville (FM 7-0 Training, 2021) Quite a high expectation from the Chief of Staff of the Army; however, it is one we must strive to achieve when our purpose is to deploy, fight, and win our Nation's wars. To meet this challenge and prevail against an unknown enemy in a rapidly evolving environment, our Soldiers and Leaders at all levels need to be experts and professionals in their craft. Masters of their arms, equipment, and mission. How does an individual or team reach such a lofty level of proficiency? Clearly, the answer is through unit training since it fosters confidence in Soldiers and develops Leaders, right? As long as no sections, staff cells, or companies make any mistakes, and the exercise is an overall success. The embarrassment of failure or the command pressure from higher echelons to succeed far outweighs the consequences of error in a combat environment. Therefore, any mission outside of the routine is stacked with the most experience in the room. Or it is the reason a junior Soldier isn't allowed to brief the BN/BDE Commander.

Somewhere in the back of our minds exists a categorized list of the times we fell short. And with those are the gut-twisting feelings of disappointment and failure. It may be that heart-dropping feeling of a low-test score. Or perhaps it is that empathetic "you'll get it next time" from a well-meaning mentor. It may even be the disbelief of watching a plan that was developed for weeks, spontaneously unravel in minutes when enacted. Could be misspent time with a depriving outcome instead of a reward. No matter the experience, most of us associate failure with mental anguish. It pains us to fail. It hurts our pride and our self-esteem. It breeds doubt and extinguishes motivation. This is because we are conditioned to believe failure will hurt us. The key word is "conditioned".

Marcus Aurelius, a former Roman emperor and one of the stoic philosophers had a different perspective. He said, "Choose not to be harmed - and you won't be. Don't feel harmed - and you haven't been" We can choose what hurts us with mental resilience and altering perspective. So, what if we did not view failure as this painful and absolute loss? What if it was seen as an opportunity to grow? Or to learn? Instead of loss, the yield from failure. We could learn to gather experience, information, or strength from failure. So many people are paralyzed by discouragement when they could conquer obstacles by learning from defeat. Our goals will always be met by opposition. We must train ourselves to fail proficiently.

The concept of learning from our mistakes and failures can be found embedded in our doctrine and should serve as a foundational structure to defend our right to fail. "Unit training provides the framework for leaders to develop their leadership skills and evolve as effective leaders. Training provides significant learning opportunities for junior leaders to make and learn from mistakes and improve their leadership proficiency. Senior leaders teach, coach, mentor, and guide junior leaders, underwriting their honest mistakes without prejudice." (FM 7-0, 2021) Many of us can look back to our childhood and recall a moment when a mistake cemented a hard learned lesson. Perhaps it was touching a hot pan or stove burner. The hot, burning pain seared more than a physical impression. In your mind it seared a reminder to never make that mistake again. Failure is often accompanied by its

own heat. The heat of embarrassment or shame that leaves you never wanting to experience that failure again. I often reflect on practicing dust landings under NVGs while in Afghanistan. I can still recall in vivid detail and clarity the face of my Company SP. Behind the soft green glow of the goggles, he looked at me and said, "If you don't do this right, a dust landing like you tried could get you killed." As he corrected my technique, my face and body felt hot. And not from the outside temperature, but from my own embarrassment and failure. It motivated me to try harder and become better. Benjamin Franklin once said, "Those things that hurt, instruct."

In the military, as a fighting force, we often accept certain ideas as being naturally inherent in combat operations such as risk. The army has developed doctrine specifically addressing Risk Management and promotes training at the small unit level, NCOES', and officer producing courses. However, isn't failure also inherent? I argue that we fail a great deal more than we will ever succeed. But it is because of those failures that success and proficiency can be developed. The culture requires a shift from cutting corners or avoiding challenges to avoid failure to harnessing our shortcomings as a teachable moment. We are responsible for the creation or destruction of our obstacles through the way we perceive the world. A junior leader makes a careless mistake that reflects a lack of understanding and experience. This can be exactly what you spend so much time and effort to avoid or with a shift in perception exactly what you were looking for. A chance to break down barriers and teach a lesson that can only be learned from experience. A mistake becomes training.

Wisdom, maturity, and expertise are forged in failure. Our organization is doing a disservice to the force by treating failure as something to be avoided at all costs. While in garrison or CTC rotations, this is the time to fail. It is essential to creating the cultural foundation for success in high-risk environments. Seize the opportunity of failure while the only ramifications are embarrassment and a teachable moment. This demands honest, accurate and descriptive feedback that is nurturing rather than punitive. We must allow our leaders and teams to fall short. Will the company's training mission fail also? Yes, but this is a culture and shift in mentality that must be accepted at all levels. As a commander, when would you prefer to identify weaknesses and vulnerabilities in your unit? In your summer training camp at NTC/JRTC or during the championship tournament in combat?

Failure is not only inherent, but also inevitable. The control we have is not over whether we will fail rather when we fail and what the consequences will be. Will the outcome be development, growth, and progress? Or will it be loss of equipment, friendly casualties, or failure of the mission? That is the choice we have. So, I will close with a charge to the force. You absolutely have a "no-fail" mission to fail often and with deliberation.

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Machine Learning and the Army's Future Human Capital

CW4 Wesley D. Tuchtenhagen
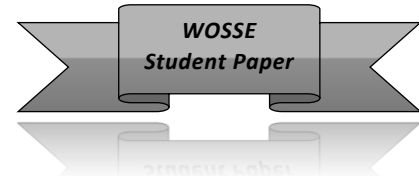
Introduction

Is the U.S. Army really using talent management in its truest definition? The enduring placement principle used from decades past is to hire and employ Soldiers by matching their pay grade and occupational specialty to open positions. Today, Soldiers largely play a role in their assignment and position selections, regardless of matching knowledge, skills, and behaviors to what assignments require, yet the Army renamed this process Army Talent Management.

The Army needs to invest in its future human capital by funding machine learning and data science because they will show leaders how to better utilize Soldiers. With enough data on-hand, the Army can use machine learning and data science to predict whom inside their formations will get selected for something great. The Army is becoming more data centric and has large repositories of personnel information to make informed decisions on hiring and employing their most precious asset. Below is a summary of how this potentially impacts Large Scale Combat Operations (LSCO) and additional considerations this investment would require.

Discussion

Without machine learning (ML) and data science (DS), LSCO's optimal success levels can be limited to only four of the five multi-domain operations. Understanding the Operational Environment (OE) is essential and includes the information environment domain. Inside this environment, informed data is king. The access, organization, analysis, and visualization of data allows commanders to deeply understand OE. The Army's operation manual says that data will "broaden and accelerate human interactions" (TRADOC, 2022) and simply accessing multiple data sets "enables the swift mobilization of people and resources around ideas and causes, even before they are fully understood." (TRADOC, 2022) While the U.S. Military competes below armed conflict with peer threats, maintaining a technological edge is a national interest (Biden, 2022) and how we use it is decisively more important today than 20 years ago. This investment into ML and DS starts in the personnel arena but sets the initial stages and builds our understanding to federate the data science into signal, intelligence, and even logistical problems sets later. The ML and DS initiative will require imagination, but above all will require systems and strategic thinking. For this reason, the next group of information examines how systems and strategic thinking play a vital role.

Today, NBA is analyzing current performance data to determine what factors play into their players' selection into the annual NBA All-Star Game. They are discovering which player statistics weight heavily compared to others and how it can relate to predicting human behavior patterns of people casting votes to select players. (Nguyen, et al., 2022). These are sterling examples how systems thinking

and strategic thinking weave themselves into ML and DS. Senior Army commanders who see the big picture and understand what systems the ML will affect are a requirement for Army's application. The goal is to combine ML analytics with commanders' intuitive decision-making processes. "Commanders blend intuitive and analytic decision making to help them remain objective and make timely, effective decisions."

(TRADOC, 2019) A ML and DS project in Iraq's Department of Information Technology studies critical workforce elements surrounding attrition, training, and how they relate to return on investment, or workforce performance. (Alsaadi, et al., 2022) Combing the Army's personnel data with training, equipping, and operational tempo with ML and DS will help Commanders see their personnel through a different lens, predict their performance, and focus them on both productive and non-productive elements that exist inside their control. This investment will take time, people, new equipment, new facilities, and money, which is why it must enter the Force Management and the Total Army Analysis processes.

Being new and potentially cost intensive, MS and DS objectives must go through the Total Army Analysis (TAA). According to United States Army War College (2021), TAA should align funds only after it discovers the quality and quantity of these data analytics, determines the demand for this capability, what it will cost in equipment, training, facilities, and personnel, and at which levels of leadership this capability will nest to create the largest positive impact to the Army's human capital. The difficulty with the TAA process is not having empirical data from human capital improvement use cases inside military operations, which poses a challenge in TAA phase one. During TAA demand analysis, scenario-based use cases originating from other government agencies (OGA) or Non-OGAs can assist getting MS and DS project funding and advance it through the remaining phases. The secondary challenge TAA phase two presents is project funding with the Army's already scarce resources. This challenge will be overcome once the critical gap in human capital management is more prevalent after reviewing OGA and Non-OGA use cases. Under the mission command model below is where commanders have flexibility to approach critical gaps.

The essence of mission command empowers commanders at all levels decentralized decision making authority when execution operations. (TRADOC, 2019) The operations are dense with planning, resources, and information; however, the decision process is a combination of commander experience and accuracy of information. It's stated that "commanders base their command and control systems on human characteristics more than on equipment and processes." (TRADOC, 2019) I go back to the NBA's study of athlete performance and use Soldiers in comparison because they are a combination of field experts and athletes. The NBA describes its deep learning of athlete performance over one season's statistics to determine who will perform well in the following season. Many human studies using math, papers and pens, whiteboards, and business intelligence applications have been conducted for decades, each year getting similar results to predict winners. Dropping the same athlete data into ML and DS prepared computers immediately saw a 75% accuracy and 10% increase to winner predictions. (Nguyen, et al., 2022). The future power commanders have in mission command and its application of Soldier characteristics in the decision-making process is undiscovered. When implementing mission command as intended, many ethical rules of engagement using MS and DS become a cornerstone for maximizing results acceptable by the personnel inside the data.

According to Miller's (2019) study of ML and DS usefulness, he reviews ethical policies and laws that contradict acting on ML and DS results. In the study, it describes law enforcement's profiling and policing tactics to determine who is likely to repeat or even commit a first-time offence. Additionally, it highlights the use of voter information to predict political party vulnerability. (Miller, 2019) Ethics come into play when leaders act on perceived empirical data results. Should police make arrests based on human behavior patterns if a crime has not yet been committed and should campaign planners intervene to sway voting? Probably not in both cases but the highly accurate data results can put leaders into ethical dilemmas such as the aforementioned. Conversely, using MS and DS on Army Soldiers will have ethical limits. It's the difference between placing 10 Soldiers in a new job you know empirically they will perform well in versus not selecting them and excluding them from participation. It's a very thin line in this example and without ethical consideration can end a leader's career by further illuminating an unproductive environment. The Army's human capital is precious and should not be manipulated. Manipulating Soldier behavior is crossing the line and will becomes an ethical dilemma for commanders and the Army organization. Understanding and reshaping the environment, improving decision making, and enhancing Soldiers is what this investment is about.

Conclusion

The Army's future investment into human capital management is better informed by ML and DS, and can assist commanders and leaders how to better utilize their most precious asset – their Soldiers. The implementation of ML and DS can largely impact Nation's ability to rank highly in competition below the armed conflict compared to peer threats. It builds upon the Army's technological edge and can later federate to signal, intelligence, and logistic capabilities. Through the Total Army Analysis process, the Army decides where to prioritize the effects of ML and DS, and how to employ them across all military operations. Maximizing the performance of the Army's human capital is the entry point for ML and DS, but the Army's leaders, their imagination, and their initiative gives it limitless potential to do more.

About the Author

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Reorganize Field Maintenance Resources to Improve Equipment Readiness

CW4 Sean Dougan
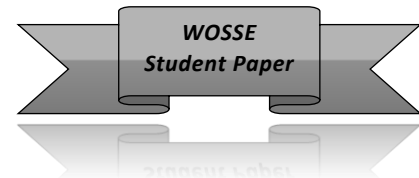
Introduction

For several years the Army has struggled to achieve equipment operational readiness goals (Center for Army Lessons Learned, 2022). Attempts to address readiness issues, such as the Forces Command (FORSCOM) Ground Readiness Evaluation Assessment Team (GREAT) and maintenance surge teams (MSTs), failed to produce any sustained increases in equipment readiness levels. Consider an active component Armor Brigade Combat Team (ABCT) participation in a FORSCOM GREAT engagement, then several iterations of Command Discipline Program (CDP) inspections, then a National Training Center (NTC) rotation, and then deployment to Operational Atlantic Resolve (OAR). Army Material Command (AMC) called upon the full support of the logistics enterprise to support the ABCT's out load effort for the four months leading up to the unit's departure. In the weeks following the completion of port operations in the OAR theatre, only eight of 43 lines of equipment tracked as critical fleet met the standard of 90% (S. Tefera, personal communication, June 1, 2022).

It is the recommendation of this author that Army Senior Leadership reorganize Field maintenance resources inside divisions to increase equipment readiness, improve Soldier confidence, and reinforce ethical reporting. This article intends to discuss readiness impacts on large-scale combat operations (LSCO), propose a holistic solution, incorporate force management processes, highlight communication strategies, and review ethical considerations.

Discussion

In 2006, the Army transformed from a division-centric structure (Army of Excellence (AOE)) to a brigade-centric structure (Modularity) to better support the perpetual deployment cycles associated with protracted Counterinsurgency (COIN) campaigns (Center for Army Lessons Learned, 2022). As we shift focus from COIN operations to LSCO, we need to organize the brigade-centric field-level maintenance assets to effectively support equipment readiness in armed conflict against a peer or near-peer threat (Center for Army Lessons Learned, 2022). According to ATP 4-33, the BCT commander may establish time limits for evacuating non-mission capable (NMC) equipment (Headquarters, Department of the Army, 2019). However, they must consider the overall knowledge, skills, and abilities of crews and maintainers, which have yet to keep pace with the highly complex systems of modernization initiatives.

These issues are further exacerbated by recruiting and retention shortfalls (M. Miller, personal communication, April 18, 2022). Many Forward Support Companies (FSCs) cannot execute the critical battlefield maintenance task of providing an accurate assessment or triage of NMC equipment in the Maintenance Collection Point (MCP) (M. Miller, personal communication, April 18, 2022). Furthermore, they cannot execute the timely repair of equipment in a forward operating environment (M. Miller,

personal communication, April 18, 2022). NMC equipment negatively impacts the unit's freedom of maneuver and freedom of action during large-scale combat operations (Headquarters, Department of the Army, 2019). In the next paragraph, this paper analyzes workforce requirements criteria to propose a strategic solution to the problem from the system thinking perspective.

The status quo approach of using ad hoc or Force Design Update (FDU) MSTs fails to produce meaningful results because it is a quantitative analysis. A holistic solution requires consideration of the qualitative aspects of workforce utilization (M. Miller, personal communication, April 18, 2022). A qualitative analysis of equipment readiness data is required to address the excessive deviation of actual time worked by unit maintainers from average work time figures found in the maintenance allocation chart (MAC) of the associated technical manual (TM) (M. Miller, personal communication, April 18, 2022). Two Level Maintenance (TLM), introduced during the transition to Modularity, eliminated all the highly capable echelons of maintenance that existed under the AOE force structure. A division of labor and a focus on task specialization enabled successful maintenance operations during the AOE era.

The current TLM structure expects maintainers to be knowledgeable on a broader range of more complex equipment with less training than AOE-era maintainers (M. Miller, personal communication, April 18, 2022). We must acknowledge our inabilities upfront and organize our maintenance formations by their task in a manner that limits their scope of work and effectively narrows the depth and breadth of knowledge required (Headquarters, Department of the Army, 2019). This concept will better set the conditions to develop our knowledge base and manage talent over time (Headquarters, Department of the Army, 2022). The following paragraph explores the Army's force management processes in implementing this solution.

The Army Force Management Model (AFMM) manages complex organizational changes through interconnected systems and processes that identify requirements, develop capabilities, and manage interrelated changes (Army Force Management School, 2021). Within the AFMM, the Force Design Update (FDU) process develops organizational design solutions to overcome identified capability shortfalls that cannot occur through updates to doctrine, training, leadership, education, facility, or policy solutions (Army Force Management School, 2021). Capability Development Integration Directorates (CDID) within Army Futures Command (AFC) and Centers of Excellence (COE) within Training Doctrine Command (TRADOC) consider potential courses of action across domains of doctrine, organization, training, material, leadership, personnel, facilities, and policy (DOTMLPF-P) (Army Force Management School, 2021).

Solutions involving organizations, materials, or personnel should be a last resort. TRADOC submits FDUs to the Deputy Chief of Staff (DCS) G-3/5/7. The FDU must then be staffed through a Force Integration Functional Area Analysis (FIFA) to ensure the design is suitable, feasible, and acceptable (Army Force Management School, 2021). If the FIFA recommends implementing the change, we must reallocate available resources or submit and prioritize the FDU for resourcing during the next Total Army Analysis (TAA) (Army Force Management School, 2021). TAA is the process that develops an effective force within fiscal constraints based on National Military Strategy (NMS) objectives (Army Force Management School, 2021). In the next paragraph, this paper identifies relevant stakeholders and messaging strategies required to shape this recommendation. In the next paragraph, this paper identifies relevant stakeholders and messaging strategies required to shape this recommendation.

Identifying key stakeholders and appropriate messaging is essential to communicating the solution. Key stakeholders from the operating force include Brigade Support Battalion (BSB) commanders, Brigade Combat Team (BCT) commanders, Division Support Brigade (DSB) Commanders, as well the Division Deputy Commanding General – Sustainment (DCG-S) (M. Miller, personal communication, April 18, 2022). Some DSB commanders disagree with losing their MST capability; however, they are not appropriately positioned on the battlefield to effectively control those resources (M. Miller, personal communication, April 18, 2022). The DSB MST resources should be moved and consolidated with resources reallocated from the Forward Support Companies (FSCs) under the Field Maintenance Company (FMC) of the BSBs to create another section that specializes in field maintenance tasks that require a depth of knowledge. Key stakeholders from the generating force include Combined Arms Support Command (CASCOM) and the United States Army Ordnance School (M. Miller, personal communication, April 18, 2022).

The critical messaging strategy for these organizations is an emphasis on the division of labor and specialization. The solution is to split the workload between the FSCs and the "Specialty Shop" of the FMC based on dynamic criteria related to task complexity, personnel abilities, and proficiency requirements determined at the unit level. We must seize this opportunity to develop our maintainers in the near time to provide commanders with confident maintainers capable of sustaining high levels of equipment readiness in the LSCO environment (Headquarters, Department of the Army, 2022). In the next paragraph, we explore the ethical implications associated with this recommendation.

The removal of the AOE-era Technical Inspector positions during the transition to TLM significantly contributed to the current problem of systemic equipment readiness reporting inaccuracies. Primary functions of the AOE era Technical Inspector, such as work order acceptance, are now aligned under other positions as additional duties or completely nonexistent in many repair activities. The equipment owner and the Field level maintainer are under the operational control of the same unit for day-to-day operations, and there is no forcing function to execute an internal acceptance inspection. Removing the system of checks and balances between the equipment owner and the repair activity produces unintended consequences that leave commanders unaware of issues such as insufficient equipment operator training and negligence. A significant portion of NMC equipment needs repair for reasons other than fair wear and tear (M. Miller, personal communication, April 18, 2022). Unit commanders must take administrative action for any damage occurring for reasons other than fair wear and tear (Headquarters, Department of the Army, 2016). This action will determine the incident's facts and inform the commander of necessary corrective actions regarding training, leadership, personnel, and policy (Headquarters, Department of the Army, 2022). Incorporating the Technical Inspector positions in the FMC "Specialty Shop" improves equipment ownership and increases the accuracy of readiness reporting by providing an ethical foundation in day-to-day operations.

Conclusion

To increase equipment readiness, improve Soldier confidence, and reinforce ethical reporting, Army Senior Leadership must reorganize Field maintenance resources with the divisional units. We must bring back the Technical Inspector positions because they assist with keeping our formations honest. We must acknowledge upfront that modernization has outpaced our ability to provide combatant commanders with maintainers with the proficiency required to sustain combat

power in the LSCO environment. To close the gap, we must reorganize our maintenance resources to emphasize developing higher levels of proficiency across the BCT formations by limiting their scope of work through a division of labor. If approved, this FDU will reorganize maintenance resources inside the divisions under the FMCs of the BSBs. This FDU allows the BCTs to control the resources necessary to build a maintenance culture of proficiency and provides the division with a true maintenance surge team capability during LSCO.

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Preserving Combat Power Through Enhanced Remote Mishap Investigation Training

CW4 Drew Aveson

WOSSE Student Paper
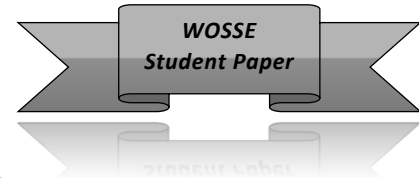
Introduction

The mission of the U.S. Army Combat Readiness Center (CRC) is to preserve Army readiness through "analysis, training, and the development of systems that prevent accidental loss of our people and resources" (U.S. Army CRC, 2022a). Critical to this mission is the mishap investigation process, which develops post-mishap findings and recommendations that enable the CRC to conduct necessary analysis to produce mishap prevention procedures and training. Integral to this process is the CRC Centralized Accident Investigation (CAI) where a team of highly trained experts from the CRC deploys to investigate a mishap. Additionally, many investigations are conducted by locally appointed Installation-level Accident Investigation (IAI) teams, which investigate mishaps that do not require a CAI team or when the CRC determines an IAI team is better suited.

While an excellent solution for the operational environment, members of the IAI teams do not receive the same level of training as a CAI team, potentially limiting the quality of findings and recommendations essential in preventing future mishaps and critical to preserving combat power. To ensure the maximum utility of these investigations, the Army should implement enhanced remote training and support materials for IAI teams, enabling improved findings and recommendations, enhanced loss prevention, and increased readiness for Large Scale Combat Operations (LSCO). This paper discusses a proposed framework that provides strategic, ethical, and force management benefits while addressing systems integration and communication strategies that present minimal impacts to cost or force structure.

Discussion

Preservation of combat power and capabilities is critical to the success of the Army's ability to respond worldwide in support of LSCO. Loss of time, personnel, or equipment associated with a mishap can hurt the ability of the Army to achieve this goal. Aramă et al. (2018) conducted a study in which they reviewed multiple mishaps with incorrect initial assumptions made by emergency response personnel. When trained personnel arrived, they discovered overlooked and "apparently unimportant details" that changed the context of the mishap and uncovered the actual cause. This study concluded that determining a mishap's true cause can eliminate future aviation and vehicular incidents.

The CRC sends a CAI team for an on-duty mishap when it involves loss of life, significant loss of equipment, or has the potential for high public visibility (C. Perkins, personal communication, October 26, 2022). The CRC sends these highly trained CAI teams to ensure a thorough and accurate investigation. The training CAIs receive is critical to ensuring investigators do not miss small details or misidentify the root causes of mishaps, which maximizes a commander's ability to convert findings into

effective prevention measures. These mishap findings are a key component to the Army Risk Management (RM) system, which will be enhanced by the strategy proposed below. There are circumstances when the CRC cannot send a CAI team. According to the 2nd Infantry Division (2ID) Safety Office, from 2020 and into 2022, travel restrictions imposed by the Republic of Korea due to COVID-19 led to the CRC's inability to respond with a CAI team for two fatal ground mishaps and other high visibility aviation and ground mishaps that occurred in

Korea. (C. Cabrera, personal communication, October 28, 2022). In such instances, a local IAI is appointed, receives guidance from the local safety office, and is given access to publications and references on the investigation process. Noetel et al. (2021) found that replacing face-to-face tutorials with pre-recorded videos led to improved student learning, with a similar but more significant effect if you substituted written text with videos. When educators combined videos, text, and face-to-face instruction, the improvement was even more potent, especially when the videos were short and could have their pace controlled by the student. A collection of short videos covering sections of the mishap investigation process with portrayals of the steps being performed, when integrated into the greater Army RM system, could significantly increase the accuracy of the findings produced by an IAI team without requiring significant changes to the current force structure.

The CRC has demonstrated the capability to develop high-quality videos through a history of seasonal, ground, air, and other safety training videos made available publicly through sides such as YouTube, as well as login access through the CRC website (U.S. Army CRC, 2022b). Production of a library of mishap training videos would not require significant changes to the Army force structure or the staffing of the CRC. According to S. Carpenter and M. James, the prior and current 2ID Safety Directors, a local IAI mishap investigation places a significant drain on the supporting safety office. In addition to training and mentoring the investigation team, the safety office coordinates with command, local, and civil authorities. This divided focus has resulted in the loss of evidence due to improper site preservation, incorrect witness statements, and delayed or incomplete reports (Personal communication, October 28, 2022). Creating a video library would be a short-term drain on CRC resources with minimal cost. Still, based on the available research, this resource will provide improved investigation findings and multiply combat power by freeing up the local safety office to conduct tasks that surround and enable the investigation team. Once produced, this resource can be communicated to the Army through pre-existing websites, training, and information channels.

Training is available at Fort Rucker, Alabama, through the Army Mishap Investigation Course, the Aviation Safety Officer Course, and the Ground Safety Officer Course. These courses provide weeks of valuable and intensive in-person investigation education (U.S. Army CRC, 2022c). However, the time required to travel to Fort Rucker is not compatible with the immediacy required of a local IAI team appointed for a recent mishap. Because online education is improved when blended with face-to-face instruction (Means et al., 2013), the local safety office can combine the proposed videos with initial face-to-face instruction and ongoing mentorship. These videos, when combined with written products like the Mishap Investigator's Handbook, would supplement and enhance the ability of the local office to quickly bring members of an IAI team "up to speed" while en route to a mishap and can be reviewed repeatedly to refresh primacy while conducting analysis. Students who attend the resident courses would be instructed on the use of this video training while gaining in-depth knowledge of the investigation processes, enabling them to implement the videos at their home stations and Army-wide.

These videos would reinforce the "left and right limits" of a mishap investigation to aid in avoiding ethical concerns that can arise during the investigation process.

Mishap investigation teams are afforded multiple privileges under Army regulations. Among these is the ability to offer promises of confidentiality while collecting witness statements, which ensures full transparency to prevent future mishaps. Legal investigations and commander's inquiries are often run parallel to the mishap investigation team and are essential to maintaining the privileges afforded to an IAI or CAI team, as they allow for a commander to separately obtain evidence for use in legal and administrative proceedings (Department of the Army, 2017, p. 32-33). As recounted by M. James, past IAI teams were unaware of what they were entitled to and responsible for, leading to witness statements becoming confused with legal, sworn statements (Personal communication, October 28, 2022). For commanders and team members, this becomes an ethical concern, as mishandled information collected by a mishap investigation team can threaten the integrity of the mishap investigation process and is punishable under Article 92 of the Uniformed Code of Military Justice (Department of the Army, 2017, p. 40). Diligent care is needed to ensure a parallel legal investigation does not incriminate a confidential witness, the commander, or the IAI team (Prior, 2011). The proposed video training would highlight these issues and help to prevent accidental violations.

Conclusion

The U.S. Army mission is "to deploy, fight and win our nation's wars by providing ready, prompt and sustained land dominance by Army forces across the full spectrum of conflict as part of the joint force" (Milley & Esper, 2018). A well-trained and mentored mishap investigation team is vital not only to the execution of the mission of the U.S. Army CRC but also to the Army's mission. Critical to these missions is the prevention of accidental personnel and equipment loss through lessons learned from thorough mishap investigations. With the development of a remote mishap investigation team instructional video library readily available at short notice and while on the go, the CRC can enable accurate and timely identification of root causes and lessons learned from Army mishaps. This will free up local safety office resources and ensure ethical and legal compliance with minimal cost. The prevention of loss of life and equipment achieved through improved lessons learned will provide strategic gains without requiring force design updates. The creation and implementation of this standardized resource will result in more consistent and higher quality investigation findings, improved loss prevention, and increased Army readiness in preparation for LSCO missions.

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The First World War

Written by John Keegan, Published by Vintage Books
New York, NY 2000. 475 pages.

A book review by CW5 Leonard S. Momeny, EdD.

Book Review
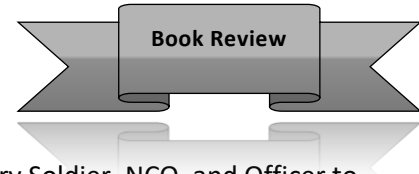
Military history is an area of tremendous importance for every Soldier, NCO, and Officer to study, but the challenge of what to study is always a matter of great debate. Discussing military history as relevant to the profession of arms is not always an easy undertaking, especially when searching for application. It has long been the opinion of this reviewer that application is found in the relevant parallels of history to the contextualized modern operational environment. Finding parallels in history that relate to the current threat seen in the light of multi-domain operations might seem improbable to many, but Keegan's, *The First World War* is such a temporal parallel.

World War I has never been an easy conflict to understand or explain, and Keegan does not mince words on this topic, noting that it was a "tragic and unnecessary conflict" (p. 3). Keegan spends the initial portion of his masterwork discussing the underlying complexities of the environment that preceded the eventual conflict. If nothing else, this initial portion of the book serves as a tribute to the undying need for members of the profession of arms to understand the underlying complexities of any operational environment. No detail is left undiscovered, as Keegan dutifully discusses the complexities and failings of various multinational treaties, political subterfuge, and the irreversible threat of a mobilizing army.

Keegan works exceptionally hard to convey to the reader that not only were multiple European nations perilously connected in various treaties, but they were also decidedly engaged in competition, both economically and militarily. While doctrinal understanding of competition and the continuum differ drastically from what was experienced during WWI, the reader certainly sees the act of international competition occur in light of modernization and organizational structure changes. Additionally, the opening chapters of the book talk about nationalism-charged enthusiasm for both service and war. The various multinational ethnic and national identities, and their associated allegiance to either self or monarch and nation, demonstrate the impact of culture and society on the conduct of war. It is easy to argue that the opening chapters of *The First World War* serve as justification for the professional Soldier to understand the impact of the human dimension of war.

The core of the book springs forth from the terrible moment in 1914 when nations decidedly leave the competition continuum and enter into crisis, specifically originating from the assassination of Austria's Archduke Ferdinand. Once this occurs and diplomacy falters, militaries across the continent begin to mobilize. Movement is initially fast, and Germany is quick to engage on both the eastern and western fronts. It is fascinating to note that in many instances, efforts in the pure maneuver of massive formations seem to fail consistently to achieve decided advantages for either side. This in turn leads the reader to finally be introduced to the terrible aspect of trench warfare. At one point, Keegan notes that

a "continuous line of trenches, 475 miles long, ran from the North Sea to the mountain frontier of neutral Switzerland" (Keegan, 2000, p. 136).

There is no doubt that many aspects of warfare are found within the various descriptions and battle synopsis provided by Keegan. The specific development of trench warfare seems to be indicative of peer threats meeting in conflict and neither being able to ascertain a decided advantage. The war that was supposed to end as quickly as it began would drag on for years, literally inching along. As these peer threats often came to a standstill and entrenched in response, a new presence would make itself known in light of the challenge of coming toe-to-toe with an equal, consistently employed multi-domain operations via air, land, and sea. Specifically, engineering and science were weaponized, giving way to rudimentary demonstrations in the advancement of both combined arms and multi-domain operations. Airplanes introduced the concept of refined aerial reconnaissance and bombardment, and dreadnoughts of increasing size roamed the sea both supplementing maneuver and operational reach. These efforts in modernization were not always employed with great success or even with intelligence. And yet, chemical warfare, refinement in weaponry, and other various systems had made their way onto the scene, including the invention of a new feature in the US Army, the Warrant Officer (though that's a story for another time).

The book concludes with a brief analysis of the impact that the entrance of the United States had on the conflict as a whole. More importantly, the reader is able to see that the US, by its mere presence, becomes a force for change on the world stage. The real value of this work is the tremendous detail of what it is like when peers meet on the battlefield. The impact of industry and technology in WWI leaves the reader with the distinct impression that this period marks the turn toward complexity in warfare. The study of WWI allows the reader to learn how others dealt with peer threats, the impact of changing domains of warfare, and the challenge of dealing with the introduction of new technology and force modernization in spite of being caught in large-scale warfare. Given the nature of rising conflict in Europe, and the combination of multidomain warfare and the threat of large-scale combat operations, *The First World War* is an excellent book for any student of the profession of arms.

Warrant Officers in History

Michael J. Novosel

There have been few Medals of Honor awarded to Warrant Officers over the course of history. This of course seems reasonable as the cohort only dates back to 1918 and has always represented an incredibly small portion of the actual military ranks. One of the most notable Warrant Officers in history just happens to also be a Medal of Honor awardee, CW4 (ret.) Michael J. Novosel. CW4 Novosel originally enlisted with the US military to fight in World War II. CW4 Novosel would later go on to fly in support of the Korean War and Vietnam. His career may have started in the B-29 Superfortress, but it was his mastery of the UH-1 Huey for which he is best known. What follows is his citation for actions in combat on 2 October 1969.

For conspicuous gallantry and intrepidity in action at the risk of his life above and beyond the call of duty Chief Warrant Officer Michael J. Novosel, distinguished himself on 2 October 1969 while serving as commander of a medical evacuation helicopter of the 82d Medical Detachment, 45th Medical Company, 68th Medical Group in Kien Tuong Province, Republic of Vietnam. He unhesitatingly maneuvered his helicopter into a heavily fortified and defended enemy training area where a group of wounded Vietnamese soldiers were pinned down by a large enemy force. Flying without gunship or other cover and exposed to intense machine-gun fire, Chief Warrant Officer Novosel was able to locate and rescue a wounded soldier. Since all communications with the beleaguered troops had been lost, he repeatedly circled the battle area, flying at low level under continuous heavy fire, to attract the attention of the scattered friendly troops. This display of courage visibly raised their morale, as they recognized this as a signal to assemble for evacuation. On six occasions he and his crew were forced out of the battle area by the intense enemy fire, only to circle and return from another direction to land and extract additional troops. Near the end of the mission, a wounded soldier was spotted close to an enemy bunker. Fully realizing that he would attract a hail of enemy fire, Chief Warrant Officer Novosel nevertheless attempted the extraction by hovering the helicopter backward. As the man was pulled on aboard, enemy automatic weapons opened fire at close range, damaged the aircraft and wounded Chief Warrant Officer Novosel. He momentarily lost control of the aircraft, but quickly recovered and departed under the withering enemy fire. In all, 15 extremely hazardous extractions were performed in order to remove wounded personnel. As a direct result of his selfless conduct, the lives of 29 soldiers were saved. The extraordinary heroism displayed by Chief Warrant Officer Novosel were an inspiration to his comrades in arms and reflect great credit on him, his unit, and the United States Army.

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Faculty Spotlight

George M. Wade, Ed.D.

Dr. George M. Wade is a retired CW4 and 270A, or Legal Administrator. Dr. Wade is a tremendously experienced faculty member that has both developed and instructed on curriculum across multiple departments within the United States Army Warrant Officer Career College (USAWOCC). Dr. Wade currently serves as senior instructor at USAWOCC, specializing in Military History. Additionally, Dr. Wade has recently began work on in-depth analysis for an oral history project focused on the Vietnam War.

It is significant to note that Dr. Wade has received awards for the development of WOILE curriculum, and innovations to both staff rides and history labs. Dr. Wade recently transformed his doctoral dissertation research into a book entitled, *A History of Student Culture at Athens State University: Ordered Life, Eccentric Personality, and Spiritual Ideals*. His academic achievements include: B.A. Athens State University, M.E.D. Boston University, M.A. University of Louisville, Ed.D, University of Alabama. Dr. Wade is also a recipient of the Army's Master Instructor Badge.

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Strength in Knowledge!

Announcements and Administrative Notes

Call for Papers

Strength and Knowledge is an organizational journal maintained by current faculty and staff working at the United States Army Warrant Officer Career College (USAWOCC). The journal aims to be a quarterly publication that supports efforts to improve education and training for the U.S. Army and all areas of the Warrant Officer education, whether common core or technical in nature.

We continuously accept manuscripts for subsequent editions with editorial board evaluations held once a quarter. The *journal* invites practitioners, researchers, academics, PME students, and military professionals to submit manuscripts that address the issues and challenges of military education and training, training development, doctrine (whether specific data from manuals or discussion of concepts), systems warfare, Army modernization and other subjects relevant to the profession of arms. Submissions related to technical areas of various Warrant Officers specialties will be considered on a case-by-case basis. Book reviews of published relevant works are also encouraged. Reviews should be between 500 to 800 words and provide a concise evaluation of the book and its relevance to the professional Warrant Officer or current fight.

Submission Guidelines

Submissions should be between 1,500 and 5,000 words and supported by research, evident through the citation of sources. Scholarship must conform to commonly accepted research standards such as described in *The Publication Manual of the American Psychological Association*, 7th edition. For resources on writing in approved APA format simply reach out to USAWOCC.

Manuscripts should be submitted to leonard.s.momeny.mil@army.mil by either 15 November, 15 February, 15 May, and 15 August. For additional information, call 334-255-0939 or send an email to the address above.

Resources of Interest – <u>Podcasts</u>

The Warrant Officer Historical Foundation wants to preserve history and educate both our military and general public audiences by sharing insight and stories from currently serving and recently retired senior Army Warrant Officers. The second season will focus on leadership, talent management, development, and education as viewed by senior Army Warrant Officers serving in leadership roles. This podcast can be found on many typical resources such as YouTube, Apple Podcast, Amazon, and Buzz Sprout.

Upcoming Events – <u>Warrant Officer Symposium</u>

Key members of the USAWOCC faculty and staff are set to visit both Fort Hood and Joint Base Lewis – McChord during FY23. During these events, the College will present a Warrant Officer Symposium in an effort to continue collecting real and relevant feedback from the field regarding the value and applicability of their military education. These symposiums mark opportunities to provide crucial insight and feedback to the USAWOCC faculty and staff responsible for driving the change that improves all common core Warrant Officer education.