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Welcome to the April 2021 edition of the *Journal of Military Learning* (*JML*). As we prepared this edition, we remained in the clutches of the COVID-19 pandemic. Special thanks to the authors of the articles, *JML* editorial board members, and the Army University Press production staff who persevered in order to contribute to the profession. This edition of the *JML* includes a diversity of topics and manuscript sources. One peer-reviewed article and the special topic are research from the Army University, Command and General Staff College (CGSC). The other two peer-reviewed articles originate from the Army War College, and the Air Education and Training Command and Air Force Recruiting Service. The two articles of interest represent research from the Inter-American Defense College and Marine Corps University, and the Royal Military College Saint-Jean, Canada. The topics cover faculty development; student sense of belonging; teaching critical thinking; developing soft skills: metaphor, story, symbol, and simulation in education; and an overview of the CGSC Art of War Scholars program.

The *JML* brings current adult-learning discussions and educational research from the military and civilian fields for continuous improvements in learning. Only

Dr. Keith R. Beurskens
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through critical thinking and challenging our education paradigms can we, as a learning organization, fully reexamine and assess opportunities to improve our military education. A detailed call for papers and manuscript submission guidelines can be found at https://www.armyupress.army.mil/Journals/Journal-of-Military-Learning. ❀

Malleability of Soft-Skill Competencies

Development with First-Term Enlisted Experience

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Abstract

As in the labor force as a whole, military recruits typically begin their careers with deficiencies in at least some soft skills relevant for workplace success (e.g., accepting feedback, collaboration, integrity, self-awareness). While many may assume that soft skills can be developed naturally as enlistees gain experience on the job, certain soft skills may prove more resistant to change than others. The current study quantitatively compares the relative malleability of distinct soft-skill competencies in an Air Force context. Specifically, we evaluate the development of first-term airmen on 17 distinct organizationally valued soft-skill competencies based on the perceived proficiency of first-term airmen (in aggregate) at two career milestones. Estimated change in competency proficiency is based on survey ratings from 1,059 technical training instructors and 6,894 first-line supervisors on the competency proficiency of first-term airmen (a) upon completion of technical training and (b) at the end of their four-year enlistment. Results are interpreted through a framework of developmental difficulty theory previously tested only in the context of the short-term development of midcareer professionals. Implications for the prioritization of certain competencies in screening and personnel selection are discussed.

When employers cannot select employees who are proficient on all competencies needed for highly effective performance, they face difficult decisions to prioritize and distinguish competencies that are not readily amenable to change without extensive intervention (that may need to be targeted in personnel selection) from competencies that can be more readily

developed on the job as employees gain experience. This prioritization may be particularly important in tight labor markets, especially for all-volunteer militaries that recruit for a fixed term of enlistment and often cannot be as selective in hiring as many private organizations.

As noted by many authors (see Campion et al., 2011; Schippmann et al., 2000), "competencies" is a broad term and can refer to any knowledge, skills, abilities, or other characteristics needed for effective job performance in a given context. U.S. military organizations similarly define the term broadly and often distinguish technical, occupationally specific competencies from competencies that are nontechnical and intended to apply across (military) occupations (see U.S. Department of Defense, 2016). The latter type of competencies, our focus in this article, has also been termed "soft skills" and has been defined by previous researchers and human resources practitioners as encompassing both interpersonal (people) skills and personal qualities and (career) attributes (Robles, 2012; see also Meeks, 2017).

Evaluations of competency change have generally provided encouraging evidence that many soft-skill competencies can be developed (e.g., Gibbons et al., 2006; Martin-Raugh et al., 2019; Mueller-Hanson et al., 2015; Straus et al., 2018). However, questions as to which soft-skill competencies are more or less amenable to development than others remain largely unanswered. With few exceptions (e.g., Gibbons et al., 2006), there has been little attempt to meaningfully classify competencies to evaluate their malleability based on the underlying structure of what is to be learned.

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Relative Malleability of Distinct Soft-Skill Competencies

The few studies that have explored the topic of competency malleability typically have proposed theories without presenting empirical evidence, or they presented preliminary empirical findings that had significant methodological limitations. We describe three theoretical models that have been proposed (Brush & Licata, 1983; Hellervik et al., 1992; Waters, 1980) and the limited empirical evidence to date.

Waters (1980) distinguished four types of managerial skills based on the expected time required for their development and the degree of behavioral specificity: practice (short time interval, behaviorally specific), insight (short time interval, behaviorally nonspecific), context (long time interval, behaviorally specific), and wisdom (long time interval, behaviorally nonspecific). He argued that practice skills (e.g., active listening, oral presentation) are the most malleable, whereas wisdom skills (e.g., charisma, "working the hierarchy") are the least. Insight skills, which emerge through the gradual acquisition of insight rather than from planned practice (e.g., working in groups, dealing with ambiguity) and context skills (e.g., building commitment and motivation) were believed to have intermediate levels of malleability.

Similarly, Brush and Licata (1983) proposed that skills that primarily depend on acquiring specific knowledge or following set procedures are the easiest to develop, whereas skills requiring interpersonal interaction or noncognitive elements (i.e., changes in attitudes, dispositions, or values) are more challenging to develop. They noted that it is easier to change cognitive processes (e.g., a process or technique for dealing with a complaining customer) than emotional ones (e.g., reaction to conflict).

Hellervik et al. (1992) proposed that malleability is driven by the complexity of the behavior to be learned. In this framework, behaviors that are highly complex, requiring high levels of cognitive ability, are less malleable, whereas behaviors that are less complex, requiring lower levels of cognitive ability, should be easier to learn. Hellervik et al. suggested example behaviors from Campbell's (1990) taxonomy of job performance that might be easier (e.g., "write a grammatical sentence free of spelling errors"; p. 840) and more difficult to learn (e.g., "prepare a scientific treatise"; p. 840).

Few studies have provided empirical evidence of the relative malleability of distinct competencies. One study identified 16 competencies consistently described as critical for managerial performance, derived from 1,095 dimensions from 65 sources (Gibbons et al., 2006). For all 16 competencies, we found some evidence of malleability. However, because the studies varied considerably in method, population, length, and dimension definitions, it was impossible to directly compare the magnitude of change across competencies. More recent studies of objective competency change using competencies such as leadership (e.g., Avolio et al., 2009), communication (e.g., Barth & Lannen, 2011), teamwork (e.g., Salas et al., 2008), and other interpersonal skills (e.g., Klein, 2009) present similar challenges. These studies provide ob-

jective measures of change but lack sufficient similarity to allow for an appropriate comparison between competencies on their extent of malleability.

Other research has gathered subject-matter expert ratings of competency malleability (see Gibbons, 2006; Smith & Brummel, 2013), with results generally showing some alignment between the results of these subjective rating studies and studies of objective change. For example, Gibbons et al. (2006) surveyed 139 managers in several organizations on their beliefs regarding the developability of 16 competencies. Most dimensions received ratings significantly above the neutral point for perceived development with creativity and motivation as the only exceptions. Written communication, planning and organizing, teamwork, and information seeking received the highest development scores, indicating that respondents believed these skills could be developed with appropriate training.

Despite the theoretical models and studies focused on competency malleability to date, early calls suggested by studies like Brush and Licata (1983) to microanalyze competencies to better understand their level of malleability and how malleability impacts training effectiveness have largely been ignored. One exception from the multisource, multirater literature is described next.

Longitudinal Development of Soft-Skill Competencies With Feedback and Experience

In contrast to research on training interventions, studies tracking longitudinal change on multisource, multirater competency assessments ("360-degree feedback" ratings) could provide a useful source of information on the relative malleability of distinct competencies. In these studies, the same limited intervention—that is, feedback on the results of a competency assessment, in some cases supplemented by workplace coaching—is potentially applicable to improvement on a very broad range of competencies. Further, all competencies are assessed directly in the same standardized manner, based on coworkers' natural observations over an extended time period.

Even within this literature, however, studies comparing longitudinal improvement on distinct competencies have been limited. For example, at the time of a 2005 meta-analysis, 24 studies had evaluated longitudinal change in multisource, multirater competency ratings (Smither et al., 2005). However, only four of the 24 studies distinguished results based on competency. Of those that did, none distinguished competencies based on the underlying type of competency. While there was evidence that managers improved more on competencies they self-set as goals for improvement, there was no evidence of greater improvement on competencies designated by the organization as critical, competencies explicitly targeted for development, or competencies on which managers were rated lowest (Avery, 2000; Hezlett & Ronnkvist, 1996; Nemeroff & Cosentino, 1979; Quadracci, 1995).

We could identify only one study that sought to distinguish the extent of longitudinal improvement on the basis of the underlying type of soft-skill competency (Dai et al., 2010). In the study, 78 midcareer managers working within a financial services company were provided with an executive coach and incentivized to submit progress reports documenting their efforts to improve on target competencies; the managers were then rerated on the same multirater competency assessment one to two years later.

The Dai et al. (2010) analysis sought to validate a commercial "developmental difficulty index" intended to indicate how hard it is for managers to develop on 67 leadership competencies included on the multirater assessment (Lombardo & Eichinger, 1995). The index (1 = easiest to 5 = hardest) was derived from rational coding of each competency by two psychologists, Lombardo and Eichinger (1995), but had not been previously empirically validated. The index developers theorized that competencies are, by their underlying nature, more difficult to develop if they are more (i) likely to involve, engage, or trigger emotions; (ii) closely related to attitudes, values, opinions, and beliefs of the individual; (iii) closely related to intellectual abilities ("cognitive complexity"); and/or (iv) complex in terms of the sheer number of rules and processes involved. While more tautological, the index was also based on ratings of the extent to which the competency was (v) viewed as more innate—that is, closely related to predispositions or natural tendencies ("human makeup")—and (vi) requiring more experience to develop. It should be noted that Lombardo's index bears close resemblance to the theoretical models described in the previous section (e.g., Brush & Licata, 1983; Hellervik et al., 1992; Waters, 1980), with each element represented in at least one of the earlier studies. Despite the limited sample size, Dai et al. (2010) reported that the average extent of longitudinal improvement on 54 managerial competencies (that one or more study participants selected for targeted development) was negatively correlated with the developmental difficulty index ($r = -.27$).

Current Study

The current study contributes to the limited literature on competency malleability in two ways. First, using ratings from a large sample of U.S. Air Force trainers and supervisors, we document the extent of improvement on 17 organizationally valued competencies based on aggregate ratings of enlisted airmen (a) at the time of graduation from initial technical training (as rated by technical training instructors and the immediately gaining supervisors of new graduates) and (b) at the end of four years of military service (as rated by their supervisors). Our study extends previous research (see Dai et al., 2010) through our focus on longer-term development of entry-level recruits in diverse military occupations rather than the short-term development of (a very small sample of) midcareer managers in the private sector. Second, recognizing that no list of competencies is likely to be exhaustive, we empirically test the extent to which each of

Lombardo and Eichinger's (1995) theorized "developmental difficulty" criteria explain the relative extent of competency improvement. To do so, multiple psychologists rated each competency on the six theoretical criteria. We then relate the instructor- and supervisor-observed extent of cohort improvement on each competency to the psychologist ratings to evaluate which of Lombardo and Eichinger's (1995) theoretical criteria (if any) empirically explain the relative malleability of the range of competencies.

Method

Study Overview

The current study surveyed (a) technical training instructors (TTIs) responsible for training U.S. Air Force enlistees immediately prior to their first duty assignment and (b) supervisors of new enlistees on the job. Our use of an Air Force sample, in which all new enlistees assigned to a given career field complete the same training prior to job assignment, allowed for the use of two independent sources to establish a baseline for initial competency proficiency: (a) TTIs rated competency proficiency upon graduation and (b) supervisors rated competency proficiency when new graduates report to their first duty assignment, typically within a few weeks of technical training graduation. Although instructors and supervisors both rated the competency proficiency of airmen at the same career milestone (technical training graduation), supervisors' ratings were at least partially retrospective.

Supervisors also rated the competency proficiency of enlistees at the end of four years of military service (mandatory minimum active duty service commitment), which typically coincides with new enlistees' first duty assignment tenure. Within this context, competency improvement between technical training graduation and the end of four years of service can be largely attributed to individual development rather than cohort changes due to attrition. Unlike in private organizations, enlistees typically cannot voluntarily separate during their service commitment, and first-term separations after technical training graduation are rare (~2% total attrition postgraduation).

Organizationally Valued Soft-Skill Competencies

Official Air Force doctrine has defined "institutional competencies" that are expected across job types during an Air Force career (U.S. Air Force, 2014). While these institutional competencies have been used as a basis for the Basic Military Training curriculum (prior to technical training), enlistees are not explicitly trained or developed on these competencies during technical training or within their first four years on the job.

Table 1

Institutional Competency Definitions and Psychologists' Ratings of Developmental Difficulty Based on Lombardo and Eichinger's Methodology

Competency	Definition	Overall Developmental Difficulty Rating
Accepts Feedback	Accepts constructive feedback. Demonstrates a willingness to seriously consider feedback received and its implications for behavior.	2.57
Active Listening	Listens, giving full attention to the speaker. Seeks clarification when needed, synthesizes messages from others, and responds appropriately.	3.13
Adaptability	Accepts change and maintains effectiveness when experiencing changes. Responds in a pro-active manner to unexpected or ambiguous situations.	3.07
Collaboration	Gains cooperation, builds consensus, and effectively collaborates. Seeks opportunities to work with diverse individuals and organizations. Cultivates an active network.	3.33
Cultural Awareness	Seeks to understand cultural and language norms or customs. When possible, develops linguistic skills while absorbing cultural commonalities.	3.17
Decision-Making	Makes effective, timely decisions informed by sound reasoning . . . evaluates and assimilates information from multiple sources and considers the consequences of potential actions.	3.33

Table 1

Institutional Competency Definitions and Psychologists' Ratings of Developmental Difficulty Based on Lombardo and Eichinger's Methodology (continued)

Competency	Definition	Overall Developmental Difficulty Rating
Followership	Adopts the values and standards of the organization, recognizing one's responsibilities as a follower, and one's role within the organization. Commits to the action plan of the organization and advocates for leader's point of view when a decision is established.	2.43
Integrity	Commits to and follows [the organization's] accepted codes of conduct and ethical principles. Represents information and data accurately and completely.	2.60
Learning Orientation	Applies newly acquired knowledge or skill to practical use. Seeks and capitalizes on new learning opportunities.	3.07
Openness to Alternative Views	Considers all parties' viewpoints and concerns, manages personal emotions, and is open to alternative positions. Objectively evaluates others' ideas and opinions.	3.43
Problem-Solving	Evaluates options and selects appropriate actions when confronted with a problem. Identifies and fills gaps in information required. Applies analytic methods in solving problems.	3.00
Professionalism	Maintains military bearing and professional etiquette at all times.	2.33
Self-Awareness	Acknowledges own interpersonal and technical strengths and weaknesses. Analyzes self-behavior and quickly and proactively modifies behavior to deal effectively with changes.	3.33

Table 1

Institutional Competency Definitions and Psychologists' Ratings of Developmental Difficulty Based on Lombardo and Eichinger's Methodology (continued)

Competency	Definition	Overall Developmental Difficulty Rating
Speaking	Speaks in a clear and concise manner. Seeks input and validates understanding of spoken communication. Adjusts messages to meet audience needs when necessary.	2.87
Timeliness	Adheres to timelines and milestones set for mission accomplishment.	2.27
Upward Communication	Provides effective feedback and advice to leaders about goals and mission accomplishment. Works to establish job performance standards in coordination with supervisor.	2.73
Warrior Ethos	Exemplifies and models the warrior spirit. Maintains self physically, emotionally, spiritually, and socially. Exhibits courage and a hardiness of spirit despite physical and mental hardships.	3.27

(Air Force enlisted personnel receive formal instruction on institutional competencies later in their careers as part of professional military education, typically after approximately five years of service.) For the present study, 29 competencies were defined based on observable behaviors identified in AFMAN 36-2647 as expected at lower ranks (U.S. Air Force, 2014). Of the 29 competencies, we focus on the 17 that the majority of first-line supervisors identified as expected of all new enlisted members in their career field upon reporting to their first job.

Focal Population (Ratees): New Enlistees

For enlistment eligibility, recruits must meet physical, medical, and cognitive aptitude requirements and possess a high school degree or equivalent (Matthews,

2017). After completing Basic Military Training, new enlistees immediately complete technical training for their assigned career field; the length of technical training varies substantially by career field, ranging from approximately six weeks (e.g., the personnel career field) to 72 weeks (for certain types of cryptologic language analysts). All technical training includes practical training and requires trainees to demonstrate proficiency in performing specific work tasks.

Study Participants (Raters)

TTIs. All 3,727 current (at the time of the study) Air Force enlisted TTIs with at least six months experience were invited to participate in the online survey. Of these, 1,158 completed the survey. TTIs in career fields that were only open to retrainees were excluded, for a sample of 1,059 for analysis. TTIs typically held the rank of E-5 (25.5%), E-6 (40.0%), or E-7 (17.9%) and averaged 30 months' experience as a TTI; 86.9% were male and 82.3% identified as White.

Supervisors of First-Term Airmen. Supervisors were invited to participate in the survey if at least one of their current first-line supervisees had enlisted within the past four years and worked in their same primary career field. Of the 54,957 people invited to participate, 8,519 completed the survey. As an additional criterion for ratings quality, we limited analyses to respondents who had supervised at least five members of their career field for at least six months ($N = 6,894$).

Within this sample, the typical survey respondent had supervised members of the career field for five years and had supervised twelve members of their career field. The supervisors most commonly held the rank of E-5 (39.4%), E-6 (44.8%), or E-7 (13.8%). The sample was predominantly male (83.8%) and White (76.0%). With more than 140 distinct enlisted career fields, no single career field accounted for more than eight percent of the sample. The largest career fields represented were security forces ($N = 515$), munitions systems ($N = 356$), aerospace medical ($N = 204$), and aircraft armament systems ($N = 202$).

Survey Measures

The focal questions appeared at the beginning of a longer survey soliciting recommendations for improving recruiting. TTIs were presented with each competency definition (Table 1, pages 9–11) and responded to the following question: "Upon graduation from the [career field] training pipeline, how many trainees possess the competency to the level that should be expected in their first duty assignment?" Supervisors responded to two parallel versions of the question based on the same competency definitions: "How many new enlisted accessions in your career field possess the competency to the level that should be expected in their first assignment?" (a) "Upon reporting to their

first duty assignment" and (b) "At the end of four years." Note that, because supervisors' ratings were at least partially retrospective, their judgments were typically based on a somewhat earlier cohort of first-term airmen than those rated on by TTIs. TTIs and supervisors responded on the same scale: "All or Nearly All" (5), "Most" (4), "Some" (3), "Few" (2), or "None or Nearly None" (1). Raters who did not have a basis for rating a given competency or who did not believe the competency should be expected at the start of the first duty assignment could leave their response to a given item blank and progress in the survey to provide ratings in other areas.

Psychologist Competency Ratings

Five experienced psychologists with a broad range of backgrounds (research psychologists with training and personnel selection expertise; military operational psychologists) independently rated the extent to which each of the 17 competencies met the six Lombardo and Eichinger (1995) criteria using the following scale: 0 = Not at All, 1 = To a Small Extent, 2 = To Some Extent, 3 = To a Moderate Extent, 4 = To a Great Extent, and 5 = To a Very Great Extent.

Results

Development Based on Supervisor Ratings (Same Rater Pre- and Post-)

Across competencies, supervisor ratings of enlistees' competency proficiency at the end of four years were significantly greater than their ratings of enlistees' proficiency at the start of their first job (paired samples t-tests, $p < .001$ for all competencies). Competencies that showed the greatest improvement were decision-making ($d = 1.41$), problem-solving ($d = 1.28$), and upward communication ($d = 1.14$). Competencies that showed the least improvement were integrity ($d = .41$), professionalism ($d = .53$), and accepting feedback ($d = .61$). See Table 2 (on page 14).

Development Based on Instructor Ratings Upon Technical Training Graduation and Supervisor Ratings at End of Four Years

Comparing instructor ratings of enlistees immediately before reporting to their first job to supervisor ratings at the end of four years showed more limited evidence of cohort improvement but similar results in terms of the competencies that were

Table 2

Competency Proficiency of Enlistees at Start of First Job and at End of Four Years (Supervisors' Ratings)

Competency		Start of First Job		End of Four Years		
	N	Mean	*SD*	Mean	*SD*	Cohen's *d*
Accepts Feedback	6223	3.49	.95	4.03	.81	0.61
Active Listening	6181	3.31	.93	3.93	.79	0.71
Adaptability	5875	3.14	.89	4.01	.79	1.03
Collaboration	3446	3.14	.93	4.01	.78	1.01
Cultural Awareness	3669	3.23	1.02	4.13	.80	0.99
Decision-Making	3551	2.64	.93	3.87	.80	1.41
Followership	5971	3.41	.98	4.02	.80	0.68
Integrity	6103	3.69	.93	4.05	.82	0.41
Learning Orient.	4856	3.37	.92	3.99	.79	0.72
Openness to Alt.	4210	3.13	.98	3.79	.86	0.72
Problem-Solving	4280	2.78	.95	3.91	.81	1.28
Professionalism	5944	3.43	1.05	3.95	.87	0.53
Self-Awareness	4874	2.90	.97	3.84	.83	1.04
Speaking	3784	2.95	.97	3.92	.79	1.11
Timeliness	5785	3.35	1.02	4.08	.79	0.80
Upward Comm.	3757	2.84	1.04	3.92	.85	1.14
Warrior Ethos	4039	3.18	1.06	3.79	.92	0.62

Note. Paired samples t-tests for all competencies are statistically significant.
$p < .001$.

Table 3

Competency Proficiency of Enlistees Immediately Prior to First Job (Technical Training Instructors' Ratings) and at End of Four Years (Supervisors' Ratings)

Competency	N	Prior to First Job		End of Four Years		
		Mean	SD	Mean	SD	Cohen's *d*
Accepts Feedback	969	4.00	.75	4.03	.81	.03
Active Listening	950	3.83	.76	3.93	.79	.12***
Adaptability	921	3.80	.77	4.01	.79	.26***
Collaboration	542	3.85	.76	4.01	.78	.19***
Cultural Awareness	521	3.88	.82	4.13	.80	.32***
Decision-Making	609	3.62	.82	3.87	.80	.30***
Followership	929	3.94	.81	4.02	.80	.09**
Integrity	954	4.01	.82	4.05	.82	.04
Learning Orient.	734	3.90	.78	3.99	.79	.12**
Openness to Alt.	627	3.72	.78	3.79	.86	.08
Problem-Solving	683	3.69	.81	3.91	.81	.26***
Professionalism	947	3.91	.87	3.95	.87	.04
Self-Awareness	750	3.61	.82	3.84	.83	.28***
Speaking	586	3.62	.84	3.92	.79	.38***
Timeliness	895	3.98	.81	4.08	.79	.13***
Upward Comm.	554	3.57	.90	3.92	.85	.42***
Warrior Ethos	671	3.73	.89	3.79	.92	.07

Note. Ns = 3446-6223 for supervisors.

*$p < .05$; $p < .01$; $p < .001$

least (most) malleable relative to others. Cohort improvement on 12 of the 17 competencies was statistically significant (independent samples t-tests, $p < .05$). Competencies that showed the greatest improvement were upward communication ($d = .42$), speaking ($d = .38$), and cultural awareness ($d = .32$). Competencies that showed the least improvement were accepting feedback ($d = .03$), integrity ($d = .04$), and professionalism ($d = .04$). See Table 3 (on page 15).

Psychologist Competency Ratings

The 17 competencies were rated as covering a wide range on each of the six criteria. A developmental difficulty index based on the average across all six criteria would identify timeliness, professionalism, and followership as easiest to improve and openness to alternative views, collaboration, decision-making, and self-awareness as hardest to improve (see Table 1).

Summarizing Results by Developmental Difficulty Criteria

Consistent with Lombardo and Eichinger's (1995) theoretical predictions regarding developmental difficulty, competencies that were (a) most dependent on the attitudes, values, opinions, and beliefs of the individual and (b) more emotionally involved were the least amenable to change among enlistees. Contrary to their theoretical predictions, competencies that were cognitively complex or otherwise highly complex overall were actually the most amenable to change among enlistees. See Table 4 (on page 18), which relates instructor and supervisor-rated improvement on the competencies (Tables 2 and 3) to psychologist-rated developmental difficulty criteria.

Discussion

Practitioners have emphasized the importance of distinguishing competencies that must be addressed in recruiting and personnel selection from those that employees can develop on the job (Hallenbeck & Eichinger, 2006). To the extent that most employees enter the labor market with deficiencies in at least some soft skills important for workplace success, our study sought to distinguish competencies that are harder for entry-level employees to develop with experience (less amenable to change) than others (Hart Research Associates, 2015). The U.S. Air Force context, in which new enlisted members are provided with no formal training on organizationally valued soft skills

during their first duty assignment, provided a unique opportunity to evaluate the malleability of distinct competencies in the absence of formal intervention.

Our results suggest that soft-skill competencies such as integrity, professionalism, and accepting feedback are among the most difficult to develop and should potentially be prioritized in screening and personnel selection. Comparison of the instructor-rated proficiency of new enlistees upon technical training graduation to supervisor-rated proficiency at the end of four years showed no significant improvement in integrity, professionalism, accepting feedback, or openness to alternative views. We note that our results are not intended to suggest that it would not be possible to design effective training interventions on these competencies, merely that enlistees showed little to no improvement over the natural course of gaining on-the-job experience. In contrast, results showed substantial improvement on competencies such as upward communication, speaking, decision-making, problem-solving, and collaboration in the absence of formal training intervention specifically targeting these competencies.

The results are potentially more broadly informative regarding the relative difficulty with which other soft-skill competencies can be learned through experience. The results partially support the developmental difficulty model proposed by Lombardo and Eichinger (1995). As theorized, *beliefs* (the extent to which a competency depends on the attitudes, values, opinions, and beliefs of the individual) and *emotion involvement* (the extent that performing the competency involves, engages, or triggers emotions) negatively related to competency change. In contrast to the theory however, *skill complexity* (the extent that highly complex skills are needed for competency performance) and *cognitive complexity* (the extent that performing the competency requires complex parallel processing of incomplete information) positively related to competency change. Although the 17 competencies evaluated in this study are not a comprehensive list of those valued across all organizations, our findings more broadly suggest that among other commonly valued competencies (Tett et al., 2000), those most closely related to one's personal beliefs (e.g., loyalty, rule orientation) and emotions (e.g., compassion) would likely be more resistant to change than other soft skills.

Limitations and Recommendations for Future Research

Previous authors have emphasized that a key feature of soft skills is that such skills are continually developed both inside and outside of the workplace (Robles, 2012). As a result, interpreting our findings as specifically due to workplace experience is inappropriate. Rather, our results likely reflect a combination of lifespan development of young adults and workplace experience. While we do not view this as necessarily a study limitation—that is, employers benefit from development of their employees, regardless of

Table 4

Correlation Between Lombardo and Eichinger's Proposed Developmental Difficulty Criteria and Competency Improvement

	TTI (Time 1) and Supervisor Ratings (Time 2)	Supervisor Ratings Only (Time 1 and 2)
<u>Beliefs</u> (Dependent on Attitudes, Values, Opinions, and Beliefs of the Individual)	-.57	-.60
<u>Emotion Involvement</u> (Involves, Engages, or Triggers Emotions)	-.32	-.30
<u>Human Makeup</u> (Derives From a Person's Makeup Such as Body Chemistry, Native Skills, Innate Predisposition, Natural Tendencies, and Brain Structure)	-.13	-.11
<u>Experience Requirements</u> (Large Amount of Experience Needed Before the Competency Could Be Executed Well)	.53	.61
<u>Complexity of the Skills Involved</u> (Highly Complex Skills Needed to Execute the Competency Well)	.71	.80
<u>Cognitive Complexity</u> (Draws Upon Raw Intellectual Abilities and the Ability to Do Complex Parallel Processing of Incomplete Information)	.72	.89

the cause of that development—we do note that the study findings may be less likely to generalize to older populations for this reason.

Our study has several methodological limitations that we hope future studies can build on. First, although our use of two independent sources of information (technical training instructors and first-line supervisors) is a methodological strength, future studies should include instructor/supervisor ratings on individual trainees/subordinates rather than global ratings on a cohort. Ratings on individual trainees/subordinates would also allow for a true longitudinal study rather than one in which (current) supervisors provided ratings that were partially retrospective.

Additionally, it would be helpful for future studies to distinguish among different types of problem-solving and decision-making competencies, some of which may be more resistant to change than others. The definitions of problem-solving

and decision-making included in the current study were broad and could have been interpreted in terms of technical procedural, domain-specific problem-solving and decision-making, rather than in terms of problem-solving and decision-making in situations that are more novel, dynamic, and complex.

Finally, while we sought to show the extent to which first-term enlistees develop on organizationally valued competencies in the absence of formal, explicitly targeted interventions, development on some competencies may have been (tacitly or directly) emphasized more than others. Although all competencies included in analyses were identified by a majority of supervisors as important from the start of a new enlistee's first job, it is possible that some supervisors focused on specific competencies. For example, scholars have theorized that employees are more likely to engage in developmental activities when they believe that such development would result in recognition by managers, and studies have found that supervisor support relates positively to employees' participation in developmental activities (Dubin, 1990; Farr & Middlebrooks, 1990; Kyndt & Baert, 2013). CR

The views expressed in this article are those of the authors and are not necessarily those of the U.S. government, the Department of Defense, or the U.S. Air Force.

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Creating the Blended Online Community Leadership Model

Synthesizing Leadership Theories with the Community of Inquiry within a New Blended Online Faculty Development Course

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Abstract

This article explores the synthesis of three leadership theories into one hybrid theory and applies that theory to the Community of Inquiry model within online education. The theories of authentic leadership, path-goal theory, and transformational leadership blend with the elements of social presence, teaching presence, and cognitive presence to create a blended online community leadership model. I used a recent faculty development course for online instructors from the U.S. Army Command and General Staff College Department of Distance Education to illustrate how this leadership theory could apply in the virtual classroom.

The recent COVID-19 crisis forced the learning institutions within the Army's educational enterprise to temporarily shift their teaching modality from largely face-to-face to an online format. In this online modality, new instructors need to understand their roles as leaders in their virtual classrooms and establish the elements within the Community of Inquiry (CoI) (Garrison et al., 2000). Garrison et al. (2010) define the CoI as a collaborative learning environment that facilitates a purposeful learning community and provides an understanding of meaningful online learning experiences. The CoI is foundationally important to course designers and educators for the successful implementation of online education. At the center of this model, educational experience represents the interaction of the three

elements of social presence, teaching presence, and cognitive presence. These three elements not only interact with each other but also overlap in their practical application. While the CoI explains how to enhance an online educational experience by establishing these three forms of presence, it does not convey the important role of leadership to foster them. As Öqvist and Malmström (2016) contend, teachers' leadership can facilitate the educational performance of students; thus, understanding how to apply leadership within the CoI framework can help practitioners better lead and facilitate their virtual classrooms.

The Army University course catalog includes several online courses conducted in asynchronous format; however, these courses all lack the collaboration and active learning advocated by Bailey and Bankus (2017) for Army online courses. While the Army University faculty development program focuses on face-to-face instruction, it does not include instruction on how to conduct blended online education (Van Der Werff & Bogdan, 2018). Across the entire U.S. Army Training and Doctrine Command Army learning enterprise, only one organization specializes in this online modality. Within the U.S. Army Command and General Staff College, the Department of Distance Education (DDE) delivers the Army's Command and General Staff Officer's Course (CGSOC) to nonresident students in the online modality. This online version utilizes the same curriculum and learning objectives as the one-year resident course at Fort Leavenworth, Kansas. As delivered by DDE, the first phase of CGSOC is the Common Core course conducted asynchronously. The second phase of CGSOC, the Advanced Operations Course, is conducted in a blended online format consisting of both synchronous and asynchronous instruction. This blended online format adds significantly to the learning environment over a purely asynchronous course (Yamagata-Lynch, 2014).

Realizing that the Army's professional military education will need to continue during the pandemic, leadership within the Combined Arms Center and Army University contacted DDE to develop a program for online education to apply across the enterprise. To distribute this capability across the many schools within the Combined Arms Center, members of DDE provided "train-the-trainer" faculty development in their newly developed Digital Learning Instructor's Course (DLIC), thereby creating a cadre of instructors at each institution to conduct dedicated faculty de-

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velopment for blended online courses. In support of this faculty development initiative, as Fortuna (2017) advocates, faculty and institutions also shared notable online learning successes with the broader Army educational community. A cornerstone of this program involves teaching instructors the importance of the CoI (Garrison et al., 2000). The CoI framework is built on socioconstructivism, reflective thinking, and practical inquiry (Tolu, 2013), combining the social dimension of community with inquiry to create engaging online or blended learning environments. During the DLIC course, instructors emphasize the elements of the CoI and provide examples to establish them. While several leadership theories can be applied to the virtual classroom environment, experience and research indicate that three leadership styles align particularly well with the CoI. These are authentic leadership, path-goal theory, and transformational leadership. As observed during the implementation of this program, the synthesis of CoI and leadership theory has a synergistic effect on the overall quality of the online or blended educational experience.
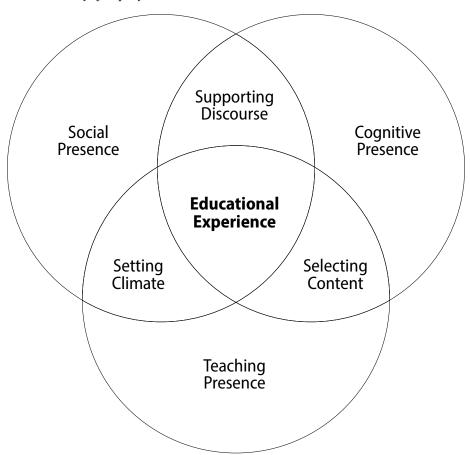
Review of Literature

Before describing the fusion of the various elements of the CoI with the proposed leadership theories, it is important to review foundational literature and supplementary studies explaining these elements. This will aid in understanding how they complement each other in later sections of this article.

Community of Inquiry

Garrison et al. (2000) first introduced the CoI framework (Figure 1, page 25) when studying computer-mediated communication and computer conferencing in support of an educational experience. This framework "identifies the core elements of a collaborative constructivist learning environment required to create and sustain a purposeful learning community" (Garrison et al., 2010, p. 2). The overlap of these elements provides an understanding of "the dynamics of deep and meaningful online learning experiences" (Garrison et al., 2010, p. 2). Garrison et al. (2001) describe the importance of this community: "Such a community involves (re)constructing experience and knowledge through the critical analysis of the subject matter, questioning, and the challenging of assumptions" (p. 2). Gutierrez-Santiuste et al. (2015) utilize their analysis of a study from Cleveland-Innes et al. (2007) to further describe the CoI as involving the public and personal search for meaning and understanding. Gutierrez-Santiuste et al. go on to illustrate their theoretical foundation in the view of teaching within a constructive-cooperative framework, citing Vygotsky's (1978) work in constructivism.

Figure 1
The Community of Inquiry

From Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education," by D. Garrison, T. Anderson, and W. Archer, 2000, *Internet and Higher Education, 2*(2-3), p. 88. (https://doi.org/10.1016/S1096-7516(00)00016-6).

Social Presence

The first element of the CoI is social presence, defined as creating an environment of collaborative, educational, and free discourse (Zilka et al., 2018). Social presence is the ability of participants to socially and emotionally project themselves and to promote direct communication as real people between individuals and make personal representation explicit (Akyol et al., 2009; Garrison & Anderson, 2003). With social presence,

students freely express their opinions and beliefs. Boettcher and Conrad (2016) describe it on a more personal level by stating that it creates connections between students and instructors as three-dimensional people with families, lives, ideas, and other personal details. Gutierrez-Santiuste et al. (2015) explain social presence as affective and open communication that leads to group cohesion and contributes to a learning community rich in participation, trust, and acceptance. Garrison et al. (2000) elaborate further by asserting that social presence illustrates a qualitative difference between a collaborative research community and the environment of merely downloading information.

Teaching Presence

The second element of teaching presence is defined as "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson et al., 2001, p. 5). Garrison et al. (2000) goes into a little more detail with three indicators of teaching presence consisting of instructional management, building understanding, and direct instruction. Gutierrez-Santiuste et al. (2015) define teaching presence as "the act of designing, facilitating, and orienting cognitive and social processes to obtain the results foreseen according to the students' needs and capabilities" (p. 351). They also use three elements from a Garrison and Anderson (2003) article to describe the three teachers' responsibilities as "design and organization, facilitating discourse, and direct teaching" (Gutierrez-Santiuste et al., 2015, p. 351). Even though the terminology is slightly different, the overall idea remains the same. The first component of this element deals with the encompassing structure of the learning environment and the process. Facilitating discourse involves understanding the role of the learning community as a promoter of the construction of knowledge and meaning where a convergence of interest, commitment, motivation, and learning takes place (Gutierrez-Santiuste et al., 2015). The last component of direct teaching is a less common occurrence and usually only required when there is a specific issue of content and the teacher's leadership is apparent. This is the first area where leadership is mentioned within the CoI framework. Leadership is key to achieving teaching presence, as the instructor must take control of the group in the sense that a guide leads a party along a quest. Studies show that teaching presence is the strongest indicator of cognitive presence in online educational experiences (Garrison et al., 2010; Kovanović et al., 2018).

Cognitive Presence

Finally, the most important element within the CoI model to the success of higher education is cognitive presence. Garrison et al. (2000) describe it as constructing mean-

ing using discussion, reflection, and critical thinking and contend that it is most essential to successful performance in higher education. Gutierrez-Santiuste et al. (2015) cite Maddrell et al.'s (2011) study that illustrates only cognitive presence correlates in a significant and positive manner with achievement measures. They reinforce the importance of cognitive presence as it "thus indicates the extent to which the learning objectives are achieved" (p. 350). Gutierrez-Santiuste et al. (2015) further explain that the goal of the cognitive processes "is to promote the analysis, construction, and confirmation of meaning and understanding within a community of students through reflection and discourse" (p. 350). They continue with the description of the model within cognitive presence as consisting of four nonsequential phases of activation, exploration, integration, and resolution (Garrison & Anderson, 2003; Garrison et al., 2000).

This model with the four phases of cognitive presence parallels Kolb's (1984) experiential learning model using concrete experience, reflective observation, abstract conceptualization, and active experimentation. There are further parallels to Dewey's (1938/1991) model consisting of impulse, observation, knowledge, and judgment. Comparing the three models, activation (which was previously described as a triggering event) very closely resembles Kolb's (1984) concrete experience and Dewey's (1938/1991) impulse (Garrison et al. 2000). Garrison and Anderson (2003) describe exploration as an inquisitive process that involves understanding the nature of the problem and then looking for important information and possible explanations. This correlates closely with Dewey's (1938/1991) element of observation and Kolb's (1984) component of reflective observation. The third element of the cognitive presence model is integration, described by Garrison and Anderson (2003) as a reflexive phase directed to the construction of meaning. Integration will happen several times during the learning process and will shift between private reflection and public discourse. Integration is related to Kolb's (1984) abstract conceptualization in which the individual forms abstract concepts based on observation and with Dewey's (1938/1991) third step in which knowledge is developing from observation. The fourth element of the cognitive presence model is resolution, described by Garrison and Anderson (2003) as a committed deductive process that typically also creates new questions. The deductive component of resolution is also present in Dewey (1938/1991) and Kolb (1984) with judgment and active experimentation as their fourth steps, respectively.

Leadership Theories

Leadership is a multifaceted subject into which the Army invests much thought, education, and literature. No article involving leadership and an Army school would be complete without an Army doctrinal definition. Army Doctrine Publication 6-22 defines leadership as "the process of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization" (U.S. Depart-

ment of the Army, 2012, p. 1). Not surprisingly, given the myriad tasks Army leaders face on a day-to-day basis, the Army does not prescribe any single leadership style or theory, as there is no one-size-fits-all solution. In this unique setting of the virtual classroom, instructors must adopt leadership approaches that foster the establishment of the three elements of the CoI.

Authentic Leadership

The first leadership theory for analysis is authentic leadership. Interestingly, there is no common definition for authentic leadership theory, but a good working definition comes from Avolio et al. (2004). In this definition, authentic leaders have gained high levels of authenticity by knowing who they are and what they value and believe in, and by demonstrating those values and beliefs in transparent interactions with others. By developing these qualities, leaders become authentic leaders. Studies show authentic leadership is desirable due to the higher levels of self-esteem and psychological well-being (Kernis, 2003), and higher levels of friendliness and elevated performance (Grandey et al., 2005). One could consider Dr. Martin Luther King Jr. and former U.S. President Barack Obama as strong examples of authentic leadership. Both men were regarded as authentic in the communication of their values and in the transparency of their interactions with others. Both stood for values they strongly believed in and challenged others to see issues from their point of view. Both men had high levels of self-esteem and were very friendly to other people. They also largely conducted themselves in a manner free from scandals and ethical questions.

Path-Goal Theory

The next leadership theory is the path-goal theory, which entered leadership literature in the 1970s from the writings of Evans (1970) and House (1971). Northouse (2016) describes path-goal leadership as leaders motivating followers to accomplish designated goals. Specifically, these leaders move followers along the path to their goals by choosing specific behaviors that are best suited to the followers' needs and their situations. This theory includes four leadership behaviors: directive, supportive, participative, and achievement-oriented (House & Mitchell, 1974). By choosing the behavior appropriate for the particular situation, leaders increase followers' expectations for success and satisfaction. A modern example of a leader in the path-goal theory could be Steve Jobs from Apple Corporation. By embodying the elements of the path-goal theory, Jobs was able to motivate his employees to accomplish amazing success through his use of high levels of support, participation, and achievement orientation.

Transformational Leadership

The final leadership theory for review is transformational leadership. The term "transformational leadership" was first used by Downton (1973); however, political sociologist James MacGregor Burns (1978) illustrated its importance to the study of leadership.

Transformational leadership involves engagement and interaction with others, creating a connection that raises motivation and morality in both the leader and the follower. This type of leader attends to the needs and motives of followers and tries to help them reach their fullest potential (Northouse, 2016). Transformational leadership is an extremely popular leadership model attributed to many prominent historical figures. Although transformational leadership is associated with elevated motivation and morality, transformative leaders are not necessarily positive role models. Certainly, Alexander the Great and Abraham Lincoln could be described as positive examples of transformational leadership for their ability to create a connection with their people and inspire them on a moral crusade. On the other hand, Adolf Hitler accomplished similar transformational motivation of the masses in 1930s Germany with a far more negative purpose. Thus, the aspect of morality in the leader can be highly subjective and dependent on the situation.

Synthesis of Theories within Elements of the Community of Inquiry

This section will discuss the synthesis of leadership theories with presence elements in a blended online educational environment. The Blended Online Community Leadership Model (Figure 2, page 30) was developed to graphically depict this synthesis. This model is based on three years of practical experience in leading the department within DDE responsible for the online blended courses in the Advanced Operations Course. This department consists of 38 instructors and approximately 1,270 students. At the end of this section is a discussion of the DLIC, which is a "train-the-trainer" faculty development course for instructors across the Army University enterprise.
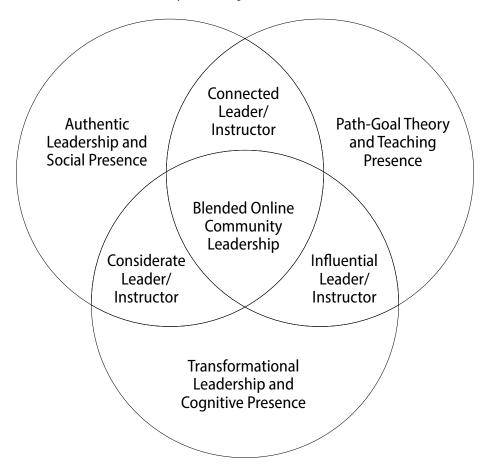
As mentioned earlier, this course is designed to teach the art of leading and instructing blended online education to other faculty development instructors. They will, in turn, teach instructors within their own educational institutions. From late April 2020 to July 2020, members of DDE conducted 10 iterations of this faculty development course to over 100 instructors representing 25 schools across the Army learning enterprise.

Authentic Leadership and Social Presence

The first combination of theory with presence is authentic leadership theory with social presence. In describing aspects of authentic leadership, Yukl (2013) describes these

Figure 2
The Blended Online Community Leadership Model

leaders as possessing positive leader values, self-awareness, and a trusting relationship with followers. He explains that authentic leaders have positive core values such as high ethical standards that enable them to create a special relationship with their followers. For social presence, Curtis and Lawson (2001, as cited in Nicholson & Uematsu, 2013) describe how collaboration in social presence provides scaffolding for student thinking and encourages a social interdependence and exchange of information and resources. Members of these collaborative groups challenge and encourage each other, adding a sense of teamwork and enhancing the social presence of the course. As de facto team leaders for their students, instructors should always display ethical decision-making to set an example for students. Anecdotal examples provided by participants in the DLIC help highlight the importance of this instructor role. As one instructor in the course

reminded his peers, instructors are constantly under scrutiny from their students, potentially impacting their position as authentic leaders. Another instructor shared an example in which a student made a comment in class that other members of the group might have found offensive. The instructor quickly addressed the comment and the student publicly, reminding everyone to be respectful and considerate of others, thereby reinforcing the ethical expectations of the group. Ethical leaders create ethical followers. The relationship between team leaders and team members requires high mutual trust and open and honest communication; for social presence to be ingrained within the group, there can be no question of the leader's ethics. As Avolio and Gardner (2005; as cited in Lyubovnikova et al., 2017) point out, using self-regulation allows authentic leaders to bring their true values and intentions into alignment with their actions, revealing their authentic selves to their followers. This facilitates positive social exchange and social information processing, resulting in improved quality and quantity of collaboration (Blau, 1964; Salancik & Pfeffer, 1977). This environment of trust within the group occurs when members feel they can speak honestly and openly, even when it may be on a controversial topic if the discussion remains professional. This honest discourse leads to better understanding among the group on a personal and professional level.

During DLIC, instructors participated in an exercise designed to institute trust and respect among the group. During the first online group session, all members introduced themselves to the entire team based not only on professional aspects of their lives but also on personal aspects as well. Team members were encouraged to spend a few minutes sharing their personal backgrounds, and the elements that have served to define their self-concept and character. To set the example, the instructors began the exercise by providing the first self-introductions, exposing some of their vulnerabilities as human beings. This allowed everyone to gain a more in-depth personal understanding of each member's perspective in the group, which led to greater respect and trust in each other by sharing their personal histories. Initially, the exercise was personally uncomfortable for some members of the group; however, as the exercise proceeded and more participants shared their personal perspectives, their inhibitions diminished, and they were able to reinforce a climate of honesty and transparency. Having the instructor initiate this process helped set this tone early and encouraged other group members to feel safe sharing their information. As the team members observed the leader sharing personal, self-reflective insights, they began to emulate this behavior. To further mitigate students' apprehensions about sharing potentially highly personal information and perspectives, instructors also established the class as a nonattribution setting in which anything said within the group remained within the group. To protect this environment, students were required to agree as a group before the online session would be recorded.

Continuing with additional techniques, instructors can utilize team reflexivity by periodically directing the group to reflect upon their status in the course. As Lyubovnikova et al. (2017) assert, authentic leaders foster a climate of team reflexivity. Their definition of reflexivity is derived from a West et al. (1997) study as "the extent to which group

members overtly reflect upon, and communicate about the group's objectives, strategies (e.g., decision making) and processes (e.g., communication), and adapt them to current or anticipated circumstances" (p. 296). Hannah et al. (2011) explain that this reflexivity will foster an authentic social-cognitive exchange relationship that manifests between the team and the leader characterized by phases of constructive open reflection pursuing shared goals. They also remind us that members of a team tend to imitate the behaviors and values of influential role models like authentic leaders (Bandura, 1977). In the DLIC, the lead instructor shared the technique of periodically holding a group discussion to determine if they felt learning objectives were met, and whether any adjustments should be made to group norms or processes. At various points in the course, he would ask the group for feedback on whether they felt the curriculum and instruction met their needs, and what changes they would like to incorporate. Anytime the group made a recommendation for change, the instructor incorporated the change where appropriate in the remainder of the course. This reinforced a sense of team among the students, significantly improving social presence within the group by giving them a voice in shaping their own academic environment.

Path-Goal Theory and Teaching Presence

As previously described, the path-goal theory includes four elements of directive, supportive, participative, and achievement-oriented leadership behaviors. Teachers who employ these four leadership behaviors have a high level of developmental leadership (Öqvist & Malmström, 2016). Teaching presence consists of the three components of design and organization, facilitating discourse, and direct instruction (Anderson et al., 2001). These behaviors and elements meld to improve the effectiveness of an online environment. The direct instructional method combines with the directive leadership behavior in which the instructor provides clear tasks and instructions. Within the DLIC course, one instructor illustrated the partnership of direct instruction and direct leadership behavior by highlighting the task and purpose for the group on every exercise the students conduct. When the instructor observes the group struggling with a facet of the exercise, the instructor should step in to provide further guidance and clarification. Another DLIC instructor reminded the class that as the subject matter expert for their course, instructors should be able to illustrate to the students "what right looks like."

The next combination of facilitating discourse with participative and supportive leadership behaviors was also highlighted within the instructors' discussion. The DLIC course encourages instructors to actively participate with their students using online discussion boards. As one instructor highlighted, this can help check on students' learning by observing when a student does not fully answer a discussion question. In these situations, the instructor can ask probing questions, pushing the student to expound upon his or her initial response and confirming the student's achievement of learning objec-

tives. Another instructor-provided example is to publicly provide positive feedback to a student who presents a well-constructed argument in an online discussion forum. This action by an instructor reinforces "what right looks like" for discussion board responses. Finally, design and organization combine with the directive and achievement-oriented leadership behaviors. This aspect is most evident in the DLIC with the focus on course structures, course maps, and course expectations. In the DLIC, several of the instructors shared their personal examples of using a course syllabus or a course map to ensure their students understand how the course will progress. One instructor preferred using course maps to demonstrate course flow as they connect better with visual learners. Not surprisingly, the instructor identified as a visual learner. Another instructor began a discussion regarding course expectations and assignment submission dates, asserting these dates must be adhered to. Another instructor agreed that due dates are important but suggested that case-by-case exceptions may be warranted if a student has extenuating circumstances. This approach can still meet the achievement-orientation leadership style by working with a student to overcome a personal issue.

Transformational Leadership and Cognitive Presence

The third combination for analysis is transformational leadership with cognitive presence. Transformational leadership can be broken down into four factors of idealized influence (or charisma), inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Avolio, 1990). Garrison (2007) defines cognitive presence as "the exploration, construction, resolution and confirmation of understanding through collaboration and reflection in a community of inquiry" (p. 65). Cognitive presence consists of four phases: activation, exploration, integration, and resolution. These subelements of transformational leadership and phases of cognitive presence can combine to increase their effect in an online classroom. The activation from cognitive presence takes place through the charisma and inspirational motivation of the instructor. This is achieved by presenting challenges or tasks and explaining why it is important for the group to take on this challenge. During the DLIC, instructors shared examples of charismatic leaders in history who activated their group, inspiring them to achieve unbelievable tasks. Henry V's St. Crispin's Day speech is a classic example cited by the group (Shakespeare, 1599/2002). The next phase of exploration involves elements of intellectual stimulation in which students should explore additional relevant information regarding the challenge at hand. Discourse between the groups brings more experience and knowledge into the community, allowing them to brainstorm and question the nature of the problem. In the DLIC, instructors discussed ideas to challenge students with divergent thinking to generate ideas and options. One instructor presented a technique used called "think-write-share" (U.S. Army Training and Doctrine Command, 2018, p. 199) in which students think about the problem at hand and write down whatever ideas

come to mind. After the students have recorded their individual ideas, they share these ideas with the group to explore additional possibilities.

The next phase of integration involves elements from the idealized influence, continued intellectual stimulation, and individualized consideration. Here instructors help students construct meaning from the ideas generated from the exploratory phase. The instructor uses charisma to stimulate the intellect of students and consider the input from individual students. The instructor then acts as a coach and advisor to assist the students in becoming fully actualized. Some of the instructors in the faculty development program course shared their experiences of leading groups through aspects of the military decision-making process in which students analyze data gathered in staff estimates to produce a formal, coordinated plan. Students apply critical thinking to the analysis of this data and organize that product into useful categories or lines of effort. These categories of information are then synthesized to create the formal plan addressing the problem to be solved. The last phase of resolution continues to incorporate inspirational motivation and intellectual stimulation. In this phase, a solution generated from exploration and integration is tested and implemented (Garrison et al., 2000). Instructors encourage the students to test their created solution to the problem, noting the strengths and weaknesses of their solution. Instructors continue to stress the importance of critical thinking to address issues in the implementation of their course of action. One instructor in the DLIC compared this to teaching a group of students the art of "wargaming" or comparing courses of action in military planning. As the students progress through the implementation of their plan, problems may arise, so the students must maintain the mental agility to address the problems as they appear. As the students solve the problem at hand, they may discover a new problem spawned from solving the current problem and may need to develop a sequel plan for use later.

Conclusion

The analysis of the CoI illustrates highly effective methods for conducting online education (Garrison et al., 2000). As this becomes the new norm in Army professional military education, the current faculty development program is under revision to teach this art to instructors across the Army University enterprise. This application of the CoI is not enough, however, as instructors need to fully understand their roles as leaders within their respective virtual classrooms. No one leadership theory applies equally to the three elements of social presence, teaching presence, and cognitive presence. A new dynamic leadership theory requires the synthesis of multiple leadership theories to fit the three presence elements within the CoI. The human aspects of authentic leadership interface well with establishing the personal, trusting relationships of social presence.

The motivation and direction of path-goal theory couples well with design and facilitation of teaching presence. Finally, the charisma, inspirational motivation, and intellectual stimulation of transformational leadership partners with the discussion, reflection, and critical thinking of cognitive presence. This amalgamation of leadership theories with the elements of presence within the CoI forges a stronger alloy for instructors to better teach and lead their courses. Elements of this approach are incorporated into the new DLIC program used for Army University faculty development to transfer this method to other instructors across the enterprise. The purpose is to develop not only better educators but also better leaders across the Army. ⠸

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Senior Service College Students' Sense of Belonging in a Problem-Based Learning Environment

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Abstract

This study explores students' sense of belonging in problem-based learning (PBL) environments at the senior service college level in professional military education. Two seminars of students from the resident education program at the United States Army War College participated in a PBL intervention in the school's five-day introductory course. Seeking to explore the influence of problem-based learning on individual student experiences, the inclusion of a sense of belonging measure was one part of this intervention. Adapted from Walton and Cohen's (2007) measure of sense of social and academic fit, the Sense of Belonging measure recorded students' attitudinal reactions to the PBL intervention in the context of their feelings of inclusion and cognitive conformity within their respective seminar groups. Overall, the implementation of a problem-based learning intervention does not appear to have had an adverse effect on the treatment group's sense of belonging, comfort, or agency in the course when compared to the control group.

With its emphasis on student-generated research, the integration of theory and practice, and application of knowledge and skills to realistic problems, problem-based learning (PBL) is an ideal instructional strategy for postgraduate and executive education environments (Savery, 2006). Recently, the U.S. Army War College (USAWC), the senior service college of the U.S. Army and a professional military education institution regionally accredited to award graduate

degrees, has explored PBL in curriculum design and facilitation as a way to develop and measure students' ability to translate their knowledge of strategy into the performance of strategic activities (Perez, 2018). To this end, two seminars of students from the resident education program at the USAWC were selected to participate in a PBL intervention in the school's Introduction to Strategic Studies course. Seeking to explore the influence of PBL on individual student experiences, the inclusion of a Sense of Belonging measure was one part of this intervention. Adapted from Walton and Cohen's (2007) measure of sense of social and academic fit, the Sense of Belonging measure recorded students' attitudinal reactions to the PBL intervention—one they had never experienced before—in the context of their feelings of inclusion and cognitive conformity within their respective seminar groups.

The Seminar Environment at the U.S. Army War College

The USAWC's 10-month resident education program features courses in the theory of war and strategy, strategic leadership, and military strategy and campaigning, among others, culminating in the completion of a master's degree in strategic studies. Most of the instruction in this program occurs in small seminars of 15–16 students each that run concurrently during the school day. Each seminar is taught by a faculty team charged to "establish a climate of innovation, tolerance, cooperation, and respect" (Hennessey, 2018, p. 25). An entire lesson in the Introduction to Strategic Studies course, the first required course of the academic year, is dedicated to establishing social and behavioral norms in seminar settings. The learning outcomes for that lesson are to "examine concepts associated with listening, discourse types, team learning, and reflection that influence interactions and enhance learning within the seminar" and "develop a set of seminar norms for the upcoming academic year" (Meinhart, 2018, p. 10). Such relationship building and social connectedness among students can predict favorable learning and work-

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place outcomes (Walton & Cohen, 2007). In fact, the value of seminar learning was recently emphasized again in the revised *Officer Professional Military Education Policy* (Chairman of the Joint Chiefs of Staff [CJCS], 2020).

Feelings of social exclusion can lead to deficits in cognitive processing and logical reasoning in a way that nonsocial obstacles cannot (Baumeister, Nuss, & Twenge, 2002). Ostensibly, in PBL environments wherein logical reasoning is key to the attainment of learning outcomes, students' sense of belonging and feelings of social inclusion may be foundational to student success. As Mason (2009) explains, cohort formation becomes extremely influential for learning in the context of complex problem-solving, and students' success is tied to the diverse perspectives shared within that cohort. Likewise, peer support, a natural element of belonging within a community, contributes to individual students' stress reduction, and, ultimately, their persistence in PBL (Bédard et al., 2012).

With the established understanding that sense of belonging could positively affect student experiences in PBL environments and that "specifics of the environment play a crucial role" (McGann & De Jaegher, 2007, p. 418) in self-perception of experience, this study sought to explore the inverse relationship: How does engagement in problem-based learning influence students' sense of belonging in a seminar environment? This was especially germane to the USAWC student experience in that the PBL intervention described earlier was the first curricular event of the academic year and could therefore set the tone for seminar cohort and individual student experiences in the remaining 10 months of the program of instruction. If found to have a negative effect on students' sense of belonging, the value and placement of these PBL exercises would require reconsideration in order to preserve the inclusive experience of seminar learning.

Method

To assess how engagement in PBL influenced students' sense of belonging in a seminar environment, a pre- and posttest model was applied before and after completion of the five-day Introduction to Strategic Studies course. The instrument for both the pre- and posttest was a Sense of Belonging measure adapted from Walton and Cohen's (2007) instrument and included 17 questions on a Likert scale that assessed students' self-perception of their inclusion in the seminar learning environment as well as their feelings of cognitive conformity with their classmates (see Appendix A). Two seminars (one treatment seminar and one control seminar) of 15-16 students each were purposefully selected so that each included two women students—who are underrepresented at the institution—and at least three international students (the maximum amount per seminar assignment policies at the time) who each had scored no lower than the intermediate skill range on the Test of English as

a Foreign Language (TOEFL) exam before coming to the college. Four out of the 24 seminars met these inclusion criteria. The research team approached these seminars in numerical order (e.g., Seminar 1, Seminar 2) until two seminars' teaching teams consented to participate in the study.

Findings

The small sample size of 31 total students who took both pre- and posttests in the two seminars dictated descriptive statistics as the appropriate method to illuminate trends in the data. Means and standard deviations were computed and then compared using a two-tailed t-test to discern differences in pre- and posttest means within each of the treatment and control groups, as well as to check for differences between the pretest scores of both groups and the posttest scores of both groups.

Comparing the pretests of the treatment and control groups revealed little of significance, with one exception: treatment group students initially rated the phrase "I get along well with people in my seminar" significantly ($p < 0.1$) lower than the control group. Comparison of the posttests of the treatment and control groups yielded nothing of significance. Next, we compared pre- and posttests within both the treatment and control groups. In the control group, there was a mildly significant decrease ($p < 0.1$) between the pre- and posttests on the following statements: "People in my seminar accept me" and "If I wanted to, I could potentially do very well in my seminar." In the treatment group, between the pre- and posttests, we found a mildly significant increase ($p < 0.1$) in student self-reports on the statement, "I am similar to the kind of people who succeed in my seminar." This indicates that these senior service college students may do one of two things: (1) they initially overestimate their belonging within seminar and appropriately correct downward in the first week of class, or (2) they correctly estimate their initial sense of belonging and experience something causing their belonging to decrease. In either case, PBL seems to mitigate the decrease in some aspects of sense of belonging and slightly increase other aspects of belonging among students. For complete statistical results, see Appendix B.

Overall, the implementation of a PBL intervention does not appear to have had an adverse effect on the treatment group's sense of belonging, comfort, or agency in the course when compared to the control group. In fact, evidence points slightly to the contrary. Consistent with the PBL literature, we saw a small decrease in student level of comfort and a small increase in student sense of ambiguity reported by the treatment group (Jonassen, 2007, 2011). However, as evidenced by student performance on the summative assessment of the Introduction to Strategic Studies course and on final oral comprehensive exams, these effects did not compromise the attainment of course or lesson learning outcomes.

Concluding Discussion

The Sense of Belonging measure has not previously been used in combination with problem-based learning interventions and so represents a novel approach to assessing student integration and experience within PBL environments, specifically within a professional military education context. It is vital to examine student experiences within transformative educational interventions, in addition to academic outcomes, to ensure students receive the intended effects of the intervention with limited risk or disadvantages.

A limitation of this study included the small sample size, a byproduct of the pilot nature of the PBL intervention. Future iterations of the study could use the same Sense of Belonging instrument adapted from Walter and Cohen (2007) across multiple test and control seminars, bolstered by qualitative data from semistructured interviews or focus groups that explore student experience of inclusion even further.

Future studies might also draw on the work of Lohman and Finkelstein (2000) to further explore self-directedness in conjunction with sense of belonging in PBL environments and in various sizes of learning groups. While Lohman and Finkelstein found that medium-sized groups of around six students are the most effective for gains in overall learning transfer in PBL environments, more research is needed. Findings of such research could inform the sizes of future seminars in professional military education institutions and at senior service colleges. Finally, the connection between students' sense of belonging and instructor immediacy behaviors is a natural next step for investigation and could have actionable effects on faculty development in PBL environments (Arbaugh, 2001; Mehrabian, 1966; Richmond, McCroskey, & Johnson, 2003).

The renewed focus on problem-based learning as an aspect of outcomes-based military education seen in the *Officer Professional Military Education Policy* (CJCS, 2020) necessitates more clarity and empirical data regarding student experiences in PBL environments. Students' sense of belonging in seminar is one such data point, and one that informs the way educators and student peers in these environments can interact and encourage each other's mutual learning. ☙

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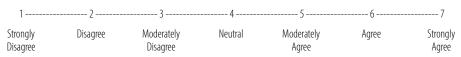
Appendix A
Sense of Belonging Instrument

Instructions:

Answer the following questions about *what [school name] is like for you*. Indicate the extent to which you agree or disagree with each statement using the scales below. Please use the whole range of each scale.

Scale:

1 ----------------- 2 ----------------- 3 ----------------- 4 ----------------- 5 ----------------- 6 ----------------- 7

| Strongly
Disagree | Disagree | Moderately
Disagree | Neutral | Moderately
Agree | Agree | Strongly
Agree |

Items:

1. People in my seminar accept me.

2. I feel like an outsider in my seminar.

3. Other people understand more than I do about what is going on in my seminar.

4. I think in the same way as do people who do well in my seminar.

5. It is a mystery to me how my seminar works.

6. I feel alienated from my seminar.

7. I fit in well in my seminar.

8. I am similar to the kind of people who succeed in my seminar.

9. I know what kind of people my teaching team faculty instructors are.

10. I get along well with people in my seminar.

11. I belong in my seminar.

12. I know how to do well in my seminar.

13. I do not know what I would need to do to make one of my teaching team faculty instructors like me.

14. I feel comfortable in my seminar.

15. People in my seminar like me.

16. If I wanted to, I could potentially do very well in my seminar.

17. People in my seminar are a lot like me.

Adapted from "A Question of Belonging: Race, Social Fit, and Achievement," by G. M. Walton and G. L. Cohen, 2007, *Journal of Personality and Social Psychology, 92*, pp. 82–96.

Appendix B
Complete Statistical Results

	Control Group				
	Pretest Mean	Pretest *SD*	Posttest Mean	Posttest *SD*	T-Test of Difference in Pre-Posttest
People in my seminar accept me.	6.467	0.834	5.875	0.957	0.076+
I feel like an outsider in my seminar.	1.933	1.387	1.750	1.000	0.678
Other people understand more than I do about what is going on in my seminar.	3.200	1.612	3.563	1.931	0.574
I think in the same way as do people who do well in my seminar.	4.600	1.298	5.063	1.289	0.328
It is a mystery to me how my seminar works.	2.133	1.552	2.000	1.549	0.813
I feel alienated from my seminar.	1.533	1.060	1.875	1.360	0.440
I fit in well in my seminar.	6.200	0.676	5.813	0.981	0.209
I am similar to the kind of people who succeed in my seminar.	5.267	1.100	5.188	1.377	0.860
I know what kind of people my teaching team faculty instructors are.	5.733	0.799	5.500	1.095	0.502
I get along well with people in my seminar.	6.267	0.594	6.188	0.750	0.746
I belong in my seminar.	5.667	1.543	6.000	0.730	0.456
I know how to do well in my seminar.	5.600	0.917	5.688	1.014	0.500
I do not know what I would need to do to make one of my teaching team faculty instructors like me.	2.400	1.920	2.688	1.448	0.643
I feel comfortable in my seminar.	6.133	1.302	5.938	1.124	0.658
People in my seminar like me.	5.600	1.183	5.750	0.856	0.691
If I wanted to, I could potentially do very well in my seminar.	6.333	0.816	5.750	0.931	0.073+
People in my seminar are a lot like me.	4.267	1.335	4.688	1.401	0.399

Appendix B

Complete Statistical Results (continued)

	Treatment Group				
	Pretest Mean	Pretest *SD*	Posttest Mean	Posttest *SD*	T–Test of Difference in Pre–Posttest
People in my seminar accept me.	6.067	1.534	6.267	0.594	0.643
I feel like an outsider in my seminar.	2.267	1.163	2.231	1.481	0.944
Other people understand more than I do about what is going on in my seminar.	3.933	1.486	3.133	1.821	0.664
I think in the same way as do people who do well in my seminar.	4.600	1.404	4.467	1.457	0.800
It is a mystery to me how my seminar works.	2.429	1.089	2.071	0.730	0.319
I feel alienated from my seminar.	1.667	0.816	2.133	1.246	0.237
I fit in well in my seminar.	5.643	1.216	5.357	1.008	0.505
I am similar to the kind of people who succeed in my seminar.	4.800	1.568	5.667	0.724	0.066+
I know what kind of people my teaching team faculty instructors are.	5.267	0.961	5.600	0.910	0.338
I get along well with people in my seminar.	5.800	0.862	6.067	0.594	0.333
I belong in my seminar.	5.929	0.616	5.667	1.345	0.503
I know how to do well in my seminar.	5.400	0.986	5.600	0.737	0.535
I do not know what I would need to do to make one of my teaching team faculty instructors like me.	2.267	0.961	2.800	1.265	0.205
I feel comfortable in my seminar.	6.267	0.594	5.733	1.534	0.225
People in my seminar like me.	5.786	0.579	5.600	0.737	0.456
If I wanted to, I could potentially do very well in my seminar.	6.200	0.676	5.733	1.534	0.294
People in my seminar are a lot like me.	4.533	1.457	4.933	1.387	0.448

Teaching Professional Use of Critical Thinking to Officer-Cadets

Reflection on the Intellectual Training of Young Officers at Military Academies

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Abstract

This article reflects on the teaching of critical thinking to officer-cadets at military academies by showing that it should be done from the perspective of its professional use. Teaching critical thinking should not only aim at developing the mastery of this intellectual competence, but it must also lead officer-cadets to learn its use within the framework of their future duties and responsibilities as officers. Framed by clear guidelines and guided by professional purpose, critical thinking can be a very effective tool in the military decision-making process.

There is a fairly large consensus in the literature on the importance of critical thinking for officers (Ayers, 2016; Emilio, 2000; Fischer et al., 2009b; Paparone, 2014). The current operational environment is characterized by great instability, complexity, uncertainty, and unprecedented threats. In this new context, critical thinking undoubtedly constitutes a valuable asset in an officer's arsenal of decision-making abilities. In recent years, most military academies have integrated critical thinking among the learning objectives of their academic curriculum to meet this need. This integration takes a variety of forms, such as specific training dedicated to this intellectual skill, the integration of this educational objective within the framework of courses of existing academic programs, or the development of dedicated workshops. Critical thinking is thus one of the various intellectual skills that officer-cadets must now develop during their initial training.

Learning critical thinking should be done from the perspective of its professional use. Critical thinking training should aim to develop the mastery of this intellectual competence—the university framework of the military academy lends itself well to

this. In an equally fundamental way, it must also lead officer-cadets to *learn how to use it professionally*; that is, within the framework of their future duties and responsibilities as officers. If properly conceived and framed by clear guidelines, critical thinking can be an effective tool in the military decision-making process.

This article does not claim to lay the basis for a pedagogical program to integrate critical thinking in the curriculum at military academies; there exist already several initiatives to this similar end, especially in the United States (Fischer et al., 2009b; Guillot, 2006; McKown, 2012). Rather, it aims to employ a more philosophical perspective to reflect on how to make critical thinking an intellectual tool of choice in the military decision-making process for officers and how to conceive its teaching in military academies. In doing so, I will attempt to counter certain resistances that detract from the development of critical thinking among officer-cadets—specifically, from critics who see this intellectual skill as a potential risk to the integrity of the military chain of command.

Critical Thinking: Intellectual Autonomy

There is no scientific consensus on the meaning of critical thinking. Fischer et al. (2009a) provide an extensive overview of the numerous definitions used throughout the literature, each with specificity, and most of them complementary to the others. For this article, critical thinking is defined as a type of intellectual capacity: the ability to think accurately and reflexively using a wide variety of intellectual tools. In Benjamin Bloom's well-established taxonomy of learning domains, critical thinking occupies the upper part of this hierarchy of cognitive skills (Ennis, 1985). Critical thinking mobilizes a high level of evaluative and creative skills. Above all, the "critical" dimension derives from the ability to reflect upon one's thinking processes. Critical thinking thus implies a high level of intellectual autonomy.

Most studies emphasize logic as the dominant aspect of critical thinking. A critical thinker is capable of avoiding the logical pitfalls of sophistry. Logic is assuredly a central dimension of critical thinking and certainly the most easily measurable one. Critical thinking tests that currently dominate the market focus almost entirely upon this dimension, as is the case with the Cornell Critical Thinking Test, the Military and Defense Critical Thinking Inventory, and the Watson Glaser Critical Thinking Test, among others. However, critical thinking should not be reduced in a "logico-scientific approach" to a simple "algorithm" (Maggart, 2000; Paparone, 2014). Frankly, there is

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nothing particularly critical in following the rules of logic, even though these rules can sometimes show a high level of complexity. More broadly, the "critical" dimension that characterizes critical thinking requires *the ability to reflect upon one's thinking process.* Its true potential for officers lies precisely in the intellectual autonomy it provides. To think critically is to take a step back and look at one's thoughts to avoid certain prejudices and reflexes of thought that lead to a superficial or impartial grasping of reality.

To be critical is to show autonomy in thinking. Autonomy has two dimensions. First, it involves the ability to engage one's thoughts beyond simple ways of thinking, which can be called "automatic mode of cognitive thought" (Gerras, 2011, p. 5). Throughout our lives, few of the daily actions we undertake are the result of critical thinking processes. Most of these actions simply derive from certain thinking habits that stem from the stable, repetitive, and predictable framework in which we live our lives. For example, choosing what clothes to wear to work, what meal we are going to eat for supper, or when we plan our weekend activities only involves a limited thinking process. Critical thinking mobilizes deeper and more complex intellectual processes, enabling subjects through self-reflection to distance themselves from these "automatic" thinking processes.

The second dimension of autonomy inherent to critical thinking is much more crucial for the military institution: the capacity to think outside of the commonly shared points of view of one's milieu. Critical thinking allows the individual to engage one's thoughts regardless of what others think. To be clear, this is not limited to the narrow view as often applied in the social sciences. Critical thinking predominantly refers to an intellectual posture consisting of systematic rejection of the dominant or mainstream theories in favor of precisely labeled "critical" social theories. On some occasions, to share the majority's point of view when it is the right thing to do and when it results from a thoughtful and reflexive process is to think critically. To be able to resist social pressure—particularly strong within the military—to engage one's point of view independently, through thoughtful, rational arguments, and self-reflection, is to think critically.

Critical Thinking as an Effective Element of the Military Decision-Making Process

Military organizations generally exhibit a high level of social conformity among members. Several factors explain this trend. Their unique nature as "process-driven organizations," their particular end-mission that involves the potential use of lethal force, and the rigid structure of authority that frames the social relationships between members, military organizations inevitably tend to a "standardization of thought" (Maggart, 2000, p. 7) among soldiers, noncommissioned officers, and commissioned officers alike. Moreover, the professionalization of armies during the 20th century, which has led to the bureaucratization of the organization—a phe-

nomenon that has grown in recent years—through the imposition of standardization of tools, training, methods, and procedures, has undoubtedly contributed to this phenomenon. Studies show that this tendency is reinforced by the fact that general and flag officers, whose influence in the maintenance of such a culture is determinant, tend to demonstrate personalities more reluctant to change their minds (Gerras & Wong, 2013). Military institutions are institutions within which we find more commonly a form of "group thinking" (Gerras, 2011, p. 26). This social conformity assuredly serves a purpose, as it contributes to strengthening the esprit de corps and the bond of trust between military personnel, a fundamental requirement of this singular profession. But the downside is that it leads to an organizational culture in which members are less capable of showing autonomy of thinking and thus, in turn, to a form of institutional immobility. Resistance to innovation generally characterized military organizations, as new ideas find it harder to break through in such an environment (Hill, 2015).

This social conformity, the resistance to innovation, and the resulting institutional immobility are highly problematic for organizations that need to adapt to new realities as threats and operational requirements evolve. History books are filled with examples of military powers that were defeated on the battlefield because of their officer's inability or refusal to question their procedures, their techniques, and more fundamentally, their ways of thinking. Criticism shared in discussions and debates helps challenge traditions and established ways of thinking, allowing the rejection of outdated or inadequate ways of doing things and enabling new ideas and innovative decisions. This intellectual skill is crucial for innovation through the creation of new ideas and new ways of thinking when confronted with unpredictable or previously unknown realities. Institutions in which members can exercise critical thinking show a higher potential for innovation than institutions that show a strong attachment to unquestioned habits of thought (Guillot, 2006). In the present operational context marked by complexity, uncertainty, and unprecedented threats, critical thinking among officers is crucial for military organizations.

Professional Use of Critical Thinking in the Military Decision-Making Process

Critical thinking is essential to the military institution in the current operational environment. Some might argue that despite its advantages, critical thinking nevertheless remains hardly compatible with military authority requirements, which implies the duty to obey, as some form of skepticism, curiosity, and imagination fuels this intellectual skill. Isn't this contradiction truer in the military academy's context, in which the primary training objective is to help young men and women understand the true meaning of authority and command? Isn't this training objective presently

more crucial, given that the dominant culture in Western liberal societies manifests a crisis of authority in general? In this case, doesn't the teaching of critical thinking to officer-cadets risk undermining their training as future officers, and ultimately, the military chain of command altogether? In fact, encouraging officer-cadets at military academies to develop their critical thinking skills is highly compatible with learning how to obey and to command. When used to serve the profession of arms, as part of a well-marked practice, *critical thinking can strengthen leadership skills and thus the military institution's authority as a whole*. Even in an organization in which the decision-making process emerges from a power relationship exercised from the top down such as the military institution, critical thinking can be a real asset.

As previously discussed, critical thinking comes with the ability to formulate views contrary to those of a military's milieu; that is, opinions that may differ from those of peers or colleagues and those belonging to a superior. Critical thinking implies the possibility, when appropriate, of questioning the views of one's chain of command. Without such a provision, the benefits of critical thinking for the military institution would only be limited. That said, in order to be a real asset in the military decision-making process and to actually contribute to innovative decisions, this must be done in accordance with some key parameters that every officer-cadet must learn early in his or her career and at the same time as he or she learns to obey authority and to command. The acquisition of this framework in which critical thinking must be exercised for a professional purpose is essential because it guarantees its overall compatibility with the military chain of command and its effectiveness in the decision-making process.

The first parameter is that critical thinking must never undermine the legitimacy of the chain of command. To feed discussion, critiques should always focus upon views, ideas, and opinions and never be directed toward the person formulating these views, ideas, or opinions. To clarify, to issue an opinion contrary to that of one's superior must never imply, directly or indirectly, any rejection of this superior's authority as the holder of command responsibility. Early in their careers, officer-cadets must learn that commanding always comes with great responsibility, which makes commanding officers fully accountable for their decisions. Whether a decision has been taken by a commanding officer alone without discussion, or whether it follows extensive consultation with colleagues or even subordinates, the *ultimate responsibility* for this decision always rests upon the shoulders of the officer in command. Critical thinking should never challenge this fundamental principle of the chain of command. In other words, the use of critical thinking in the military decision-making process does not involve any kind of devolution of authority or any change in the traditional top-down structure of command. It should always serve to reinforce the decision-making process by providing views that help to inform a decision.

The second parameter for the professional use of critical thinking in the military decision-making process acknowledges that decision-making is not an exact science. This parameter serves to reinforce the first. Even a well-respected officer can some-

times come up with plans that fail. Failure does not always entirely rest upon the person who made the plan—though some officers may be "better" than others at planning—but upon the elementary fact that any plan, however well thought out, involves a certain level of uncertainty or unpredictability. This situation not only derives from the nature of the information upon which the planning is based, which is inherently imperfect—but it is also an even truer reality on the battlefield, under the effect of the so-called "fog of war." It results from the very nature of reality itself. Without engaging this article into ontological discussions, we must admit that the real inevitably escapes perfect conceptualization. Reality is always elusive. To predict with perfect certainty the effects of an action upon the real is impossible. Accepting that makes it easier to understand that critical thinking should always be directed only toward an idea or a plan and never toward the subject who formulated the idea or conceived of the plan. Criticism must always aim at the potential degree of success of a plan, admitting from the outset that an infallible plan is impossible. Thus, the failure of a plan does not automatically imply the incompetence of the officer who designed it—that said, this in no way affects the fact that this officer remains fully and legally accountable for his or her decision, as discussed earlier.

The third parameter is that critical thinking should never undermine the duty to obey. Critically expressing thought in a decision-making process is a professional responsibility for any officer, including junior officers. But when discussion of an issue has come to an end, as indicated by the commanding officer, all parties must cease criticism and follow the issued orders. Within the decision-making process, there is a time to criticize and a time to obey. When orders are issued, all personnel must do everything in their power to contribute to the success of the mission, even if they may have had some initial reservations on the final decision. All parties must fully commit themselves to the task entrusted to them in their area of responsibilities and authority. Success in military operations, or any type of operations, always depends upon the commitment of everyone toward the achievement of the mission ordered by the commanding officer.

The development of critical thinking for officer-cadets at military academies should always coincide with the acquisition of these three parameters, which can only guarantee its professional application in the decision-making process and its overall compatibility with the military chain of command.

Furthermore, if correctly applied, critical thinking can reinforce the military chain of command, particularly the relationship of trust that must exist between leaders and subordinates at every echelon. The hierarchical chain of command has proven in history to be the most effective management system for military organizations. It is the most capable of mobilizing the resources and forces needed to defeat an enemy on the battlefield and conduct military operations in general. But its effectiveness largely derives from the bond of trust that holds together the hierarchical structure of authority. It rests on the confidence subordinates place in their leaders and vice versa.

As previously mentioned, critical thinking refers to the ability to question asserted truths or norms in one's milieu, and above all, the ability to formulate critiques as part of the decision-making process. Critical thinking thus inevitably implies a certain level of self-confidence; for a young officer, for example, to be able to criticize the idea expressed by a more senior officer, all the more so by the commanding officer. But at the same time, it strengthens one's self-confidence; even in junior roles, officers can take an active, even modest, role in the decision-making process. We all know how capital self-confidence is in the exercise of leadership. It is always crucial for an officer to maintain a certain level of doubt; overconfidence can weaken one's authority, as officers are, above all, human beings. But in general, a high level of self-confidence inspires respect and incites obedience in subordinates. An organizational culture in which all officers, including junior officers, can take an active role in the decision-making process through the use of professional critical thinking can only reinforce the obedience subordinates demonstrate toward their leaders. Thus, they are inevitably less likely to perceive their leading officers as mere "pawns" in a command structure that exceeds them. This requirement is all the more crucial in the current context of the bureaucratization of military organizations, a phenomenon that tends to undermine the officer's authority, and in particular, junior officers. Instead, in an organizational culture in which critical thinking is encouraged, officers, including junior ones, can be seen by their subordinates as real actors capable of playing a sometimes even modest but real role in the military decision-making process.

Critical Thinking for Officer-Cadets?

Let us admit that critical thinking can be an effective tool in the military decision-making process. But why include it in training offered at military academies? And why so early in an officer's career? Some may claim that it is only much later in one's career that an officer will be called upon to make real use of critical thinking. Junior officers' field of duties and responsibilities are usually limited to enforcing orders at the tactical level. It does not normally include a contribution to the design of strategic plans. Why bother trying to teach critical thinking at military schools, where officer-cadets already have so many other skills to acquire?

The first reason has to do with the way one conceives of the primary mission of military academies and the professional development of officers. Are military academies established first and foremost to train officer-cadets within the limits of the tasks, duties, and responsibilities that await them immediately upon graduation; for example, as infantry platoon commanders? Or is it rather to prepare them for the broader range of tasks, duties, and responsibilities that await them on a longer perspective throughout their careers as officers? In other words, are military academies primarily producing lieutenants or career officers?

If it is primarily to train lieutenants, one could question the overall investment needed to support these institutions. On the one hand, training at military academies usually lasts four or five years. On the other hand, an officer may hold a junior position only for a few years during his or her career. How can such a long training for such a short job assignment be justified? There are undoubtedly differences in the qualities and skills required by flag or general officers for the accomplishment of tasks and duties and those required by junior officers. However, these differences remain within the general requirements of the officer's profession; they are not absolute. Young lieutenants are potential generals, and generals were once young lieutenants. In my opinion, military academies are institutions that provide the initial training for officers to prepare them for their first command responsibilities at a junior level, but more fundamentally, to be ready, through further training and education combined with practical experience in units and selection processes, to occupy all the great variety of positions reserved for officers, up to senior military appointments.[1]

The second reason why critical thinking should be part of the training curriculum at military academies derives from the admission that this intellectual skill can only be learned or acquired through an extensive learning process and diverse life experiences (Halpern, 2014). Unlike the intelligence quotient, which remains relatively stable in a person throughout life, critical thinking can be developed through education and training (Paul & Elder, 2019). Cognitive research tends to show that critical thinking is hard to teach; it is not an intellectual competence one acquires as a technique, like knowing how to knit, swim, or drive a car (Willingham, 2008). Critical thinking teaching represents an undeniable pedagogical challenge if one compares it to other subjects taught in the classroom. Furthermore, this difficult-to-acquire intellectual capacity has a better chance of being strengthened if individuals are exposed to it earlier in life and if military institutions provide them with actual opportunities to exercise it regularly during their professional career. Military academies that welcome young candidates for their initial training are thus the ideal milieu in which future officers can develop their critical thinking skills and acquire the professional framework so that this type of thinking contributes to the military decision-making process.

Conclusion

In the current operational environment, military institutions must remain agile and innovative. To that end, they must rely on an officer corps, which has developed the ability to think critically, so that they may quickly adapt to new realities and introduce changes when needed by criticizing outdated thinking habits. Professional use of critical thinking training should thus constitute an integral part of the education provided to officer-cadets during their initial training at military academies so that

they can be provided with all the opportunities to develop this difficult to acquire, intellectual skill and to put it to good use in the military decision-making process.

The teaching of critical thinking to officer-cadets in military academies does not guarantee the actual use of critical thinking by all officers. Nor does it guarantee the dissemination within the entire military organization of its use in the decision-making process. Military academies must acknowledge the difference between acquiring the ability to think critically and developing the disposition or the willingness to apply critical thinking (Halpern, 2000). This skill refers to an attitude, a disposition, or habit of thought that can develop and strengthen throughout one's life. Still, teaching critical thinking to officer-cadets in military academies and encouraging them to make good professional use of it after graduation does not mean that it will automatically translate into a chain of command willing to make greater room for this intellectual skill in its decision-making processes. Critical thinking thrives only when a milieu or organizational culture encourages its free expression. Critical thinking should be part of a well-established professional practice and guided by well-integrated procedures governing its usage. The chain of command at every echelon must embrace this practice so that officers of all ranks may apply it and provide the military with an increased capacity for innovation. ☙

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Note

Leveraging Metaphor in Professional and Military Education

Linking Ideas to Experience via Story, Symbol, and Simulation

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Abstract

Metaphors are critical tools for human understanding, bringing to light ideas and relationships that might otherwise remain unseen. In this article, we discuss how faculty creativity can help to unlock student learning through the use of specialized artifacts like an ancient Roman sword, or even everyday items like a ball of yarn or a bowl of crackers. Additionally, the value of sharing popular culture references and playing games in class are discussed as innovative means to leverage metaphors and exemplify complex academic concepts. The article explores the use of story, symbol, and simulation to support professional and military education.

Word pictures like "billiard balls," "red lines," "pivot to Asia," "failed states," and "balance of power" are critical to how faculty understand and frame the profession: "They provide the narrative structure through which facts are sorted into categories, assumptions are made, hypotheses are derived, and theories are formulated" (Marks, 2018, p. 3). Educators, military professionals, and sociopolitical players all make use of metaphor to clarify and deepen their understanding of the actors "on the stage."

According to cognitive linguists Lakoff and Johnson (1980), "metaphors play a central role in the construction of social and political reality" (p. 159). Most English speakers use more than 3,000 metaphors each week and up to four metaphors per minute in everyday conversations (Hoffman, 1983). Metaphors and analogies—while critiqued by

classical political theorists like Hobbes (1996) for potential abuse—remain critical to how humans attempt to conceptualize and explain the world.[1]

For educators, metaphors serve a wide variety of purposes. Most important perhaps is the ability to bring to light ideas and relationships that otherwise might remain unseen. South African educator Botha (2009) defines a metaphor as "seeing, describing or interpreting some unfamiliar educational phenomenon, event or action" (pp. 431–432) in terms of something far more familiar.[2] Metaphors help us to draw out necessary connections, especially within a professional military education (PME).

Three modalities to leverage metaphors in the classroom are story, symbol, and simulation. Each offers promise for enhanced student engagement, and practical examples are provided from our broad teaching experience in traditional higher education environments (undergraduate and graduate) as well as diplomatic and PME settings.[3]

Leveraging Story in the Classroom: Personal Experience, Critical Reflection, and Popular Culture

"Story" is the first modality explored here. Stories can be utilized to unpack one's own experience, to catalyze students' critical reflection, and as discussed a bit later in this section, engage proactively with popular culture.

Personal Experience and Critical Reflection

Storytelling about personal experience may begin as an individual task. For example, "reflective essays" are a common writing assignment used to challenge students to explicitly link personal and professional experiences to the learning outcomes and "critically

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interrogate lessons learned in the context of assigned and complementary readings and other course activities and content" (Inter-American Defense College, 2018, p. 16). This type of essay allows students—especially military officers—to synthesize ideas from diverse sources of knowledge, increasing retention and the application of concepts.

Storytelling can also take place in groups, as participants reveal information about themselves and consider how it fits into a larger context. Storytelling exercises tend to contribute to stronger learning communities, facilitate group dialogue, and allow participants to uncover possible biases (Tilly, 2002). This is especially valuable in cross-cultural and diverse PME contexts, as participants may not be conscious of their own biases and cultural constructs.

Another powerful tool for storytelling is the "who am I" exercise associated with "red teaming" and alternative futures analysis.[4] Individuals are asked to share with their peers about intimate personal experiences and visualize their lives as a series of "peaks and valleys" (Burke, 2008). The exercise requires radical honesty from participants and may not be appropriate in all settings. Still, it offers opportunity for critical self-reflection and development of empathy, engaging events from the past.

Storytelling can involve exploration of not just the past but also the present and future. Thinking of the future as a counterfactual is a well-established scenario development technique in PME environments (Junio & Mahnken, 2013). Asking students to create future scenarios provides a safe place for them to discuss some of the most uncomfortable facts about the present. Techniques can range from "critical uncertainty" and "alternative futures methodology" to use of "pre-mortems" and "demonstration scenarios" (Clark, 2004; Schwartz, 1996). These scenarios work best when exploring counterintuitive pathways and weak signals, scanning the horizon for plausible and possible alternative futures as opposed to narrowing in only on the most likely outcomes. Two specific examples of our classes "storytelling the future" show the potential.

First, one of us worked closely with the U.S. Army Futures Command to mobilize diverse groups of students, including nonmilitary actors, to "imagine the future" (Hollenbeck & Jensen, 2017; Jensen, 2016; Norwood et al., 2016). Students started with a baseline study on the changing character of war and then were asked to test their core assumptions. Groups evaluated whether they thought the future was evolving in a given direction or if there might be alternative pathways. This collective storytelling project allowed students at multiple levels (both professionally and educationally) to apply research methods and core insights from international relations, while also connecting their work to a major external partner.

In another instance, four classes of graduate and undergraduate students applied a similar methodology of "storytelling the future" to engage the new U.S. Space Force. Groups participated in seminars on research methods, larger questions in political science and sociology, and the evolution of space technologies in order to imagine alternative futures. Contrary to the headlines, these discussions allowed students to think critically about the implications for space economics,

law, piracy, and alternative actors as well as domains of interaction that could present new roles and missions.

One final narrative activity we employed is a "faculty confessional." It can be used to introduce difficult themes in class, mitigate foreseen cognitive dissonance, and humanize responses likely experienced by participants. For example, to stimulate student reflection and catalyze classroom discussion about systemic challenges and "durable inequalities" in a diverse educational environment, one of us—a tall, white male—tells personal stories about how he has benefitted and perhaps contributed (even unwittingly) over time to otherwise abstract mechanisms of "exploitation" and "opportunity hoarding," as explored by the late historical sociologist Charles Tilly (1998). Use of this type of faculty confessional, while potentially risky, opens the door for students to be more self-reflective about their own personal narratives and consider how their lives have been shaped by these otherwise "distancing" sociopolitical categories.

Popular Culture

Another means of storytelling in higher education and PME settings is via popular culture references. There is an emergent literature and academic community within the social sciences linking academic content and theory to popular film and literature (Buzan, 2010; Dixit, 2012; Freedman, 2000; Jackson, 2013; Neumann & Nexon, 2006; Weldes, 2003; Weldes & Rowley, 2015). According to international relations scholars Lobasz and Valeriano (2015), "Stories, whether written in books or projected onto screens, serve as compelling points of entry to our discipline. Fiction, perversely, makes the stakes of global politics appear real to our students" (p. 400).

We have explored popular culture-political science links in diverse writings and class engagements. For example, one of us uses science fiction television to analyze military, commercial, and identity tensions that influence modern space politics. "Sci-Fi offers policymakers and citizens a reflective lens to consider 'real world' events, a creative stage to explore every day and apocalyptic dilemmas, and a simulation to juxtapose alternative futures" (Hamilton, 2009, p. 208).

We also encourage students to engage popular culture cases in order to practice application of conflict analysis tools, including stakeholder mapping, "conflict as tree" problem analysis, and "conflict as fire" life cycle analysis (Hamilton, 2015; Neufeldt et al., 2002). Students enjoy the chance to tell stories and apply tools to a wide range of cases: from an interpersonal conflict pitting Harry Potter versus Voldemort to an intergroup conflict between the Rebel Alliance and the Evil Empire (*Star Wars*), from an intragroup "civil war" among the superhero Avengers (Iron Man vs. Captain America) to intrafamilial tensions in *Keeping up With the Kardashians*.

Whether personal or cultural, stories allow students to interact in a more deeply felt and empathetic way with the course content. Stories also provide a sense of con-

nection or shared experience, even if the actual experience or perceived importance is not exactly the same: "Metaphor and narrative reassure us that things hang together" (Berger, 2010, p. 275).

Leveraging Symbols in the Classroom: Artifacts and Physical Metaphors

Artifacts

While stories create entire contexts and imagined realities, some simple objects offer powerful connotations all by themselves. As physical symbols, "artifacts" often help students see larger connections. Beyond simple novelty, they invoke a particular configuration of forces across multiple levels of analysis. For example, a lecture on war and political conflict in a PME classroom may invoke a "war in society" perspective by focusing on an individual weapon. This invites students to consider some of the larger political, economic, and social factors in play (Citino, 2007).

One of us uses a roman sword, a "gladius," as an artifact to this end. Particularly in classes with military audiences, this weapon provides initial allure to draw students into the conversation. Their academic journey begins with several symbol-focused questions: "What is this?" "How was it used?" "When did people start using it?" "What types of formation did it support?" Such simple questions link to a common seminar learning and "red teaming" approach called the "Five Whys" (U.S. Army Training and Doctrine Command, 2019, pp. 81–82).

Asking "why" and "how" questions about a weapon's usage can transition to a much broader discussion about the economic logic of war in a particular historical moment and how this relates to political aims and strategy. This creates space to discuss war in society, its social and environmental characteristics, and how social attitudes and practices intersect with drill, ceremony and understandings across the military ranks.

Physical Metaphors

Closely related to artifacts is another symbol-focused teaching tool: the employment of physical metaphors, also discussed as "embodied learning" (Channon et al., 2018). Physical metaphors are more participative than artifacts per se, as students are asked to move around in class and manipulate everyday physical objects to engage abstract themes (Asher, 1969; Gardner, 2006; Kolb, 1984).

For example, Asal (2005) has shared a classroom exercise that brings to life the concept of Hobbesian Classical Realism. His "Survive or Die" activity uses the child-

hood game of "rock, paper, scissors." The game's objective is to survive, and participants must duel when challenged. Following the exercise, students explore why so many of them chose to "fight" their classmates to win (often against the odds) rather than to prioritize their survival. This simple exercise, which takes minimal class time, has been adapted in other classroom environments (including ours) to initiate discussion on the difference between "conflict" and "violence," among other themes.

As discussed in a prior article published in this journal, we leverage another exercise to exemplify the "Tragedy of the Commons" (Hamilton, 2019). This core concept in environmental security has been applied to cattle grazing, fisheries, and communal forests but tends to be unfamiliar to many PME students (Berkes, 1985; Buffam, 2012; Hardin, 1968). Using "physical metaphor," students are asked to manipulate everyday objects like goldfish crackers (representing fish), bowls (lakes/fisheries), cups (boats), and forks/spoons (fishing poles/nets) to simulate fishery management challenges in a relatively "dry" classroom environment (adapted from Szerlip, 2003). Students are challenged to think outside the box and seek creative and often cooperative means to avoid environmental tragedy and mitigate resource scarcity dilemmas, which are increasingly relevant (Feeny et al., 1990; McClintock, 2017; Ostrom, 1990, 2010).

Another physical metaphor uses strings to represent "Networks of Power" and their role in reinforcing systemic inequality (Hamilton, 2020). The activity, adapted from Ansoms and Geenen (2012), takes place in a large space (like a courtyard) and physically maps and reproduces mechanisms of "durable inequality" (Tilly, 1998). Students are handed five strings (tied together on one end) and are expected to strategically connect their loose ends to other players during the course of the game. Each player receives a different length of string (from one to five meters), with point values assigned to each connection corresponding to this length. The goal for individual players is to maximize the points they gain through "high-value" connections. Participants provided longer strings have some key advantages, as they can move more freely and are sought out by peers as a connection. Those with short strings are trapped as soon as they make one or two connections, often at the margins of the class network: they are unattractive to other players and unable to move to make all of their connections. Through participation in the activity, students experience some of the structural implications of inequality and can see the perverse incentives facing marginalized actors. The closing debrief for the "Networks" game is often both content- and reflection-rich, and it provides opportunities for students to engage other narrative tools described already in the context of "story."

A final example of physical metaphors is "Kinesthetic Mapping," incorporating the ideas of total physical response in a given physical classroom space (Asher, 1969). It can be used to engage competing theories for violent youth mobilization in militant and/or criminal organizations. One of us uses it to introduce theories of violent mobilization: a sociological/anthropological lens prioritizing "groups and identity" factors, a political science lens privileging "grievances and (perceived) injustices," and

an economics lens focused on "greed and incentives" (Hamilton, 2018). Students are given a moment to reflect silently on which of the theory clusters best explains why people join violent groups in cases relevant to their own experience. Next, they are asked to "take a stand" in the classroom: those who claim Groups as a primary causal factor move to the front of the room, while advocates for Grievances and Greed shift to corners toward the back. To address combined causes, students seek out a location between extremes; however, no one is allowed to occupy the exact middle. Targeted faculty questions (while students are standing in place) allow them to share and reflect on the primary causes of "their" conflicts. During debrief, students discuss the value-added and relative limits of each theory, drawing on their experiences, which are especially rich in a diverse or multinational PME learning environment.

Symbol, through the use of artifacts or physical metaphors, can enhance the students' experience. It also can be incorporated into a final teaching modality—simulations—to fully unleash the power of metaphor in higher learning and PME environments.

Leveraging Simulations in the Classroom: Role-Play and Experiential Learning

Simulations are another valuable tool available to educators who are interested in using metaphors in the PME classroom. They offer participants "a sense of how things work in the real world" (Wiggins, 2011, p. 557) and a means to engage course content and practice relevant skills within a "safe" learning environment (Gee, 2005).

The value of incorporating simulations in higher and professional education is quite well explored in the academic literature (Asal, 2005; Burch, 2000; Glasgow, 2014; Greenblat, 1973; Hamilton, 2019; Lira & Beurskens, 2017; Richardson, 2003; Sawyer et al., 2017; Shaw, 2010; Thatcher, 1990; Westler & French, 2019). These activities "represent something which is abstract by simulating it as something that is accessible, known, and/or familiar" to participants (Wiggins, 2011, pp. 552–553).

One simulation we employed is a negotiation exercise developed by Leguizamon (2005). It has been adapted for classroom use in a multilingual, multicultural environment with security officials from across the Americas (Hamilton, 2016). The exercise allows students to role-play as voting actors in a controversial highway approval project. Actors include a private engineering firm, environmental nongovernmental organization, local community organization, state governor, local port authority, and national public works office. Students representing each actor are provided (privately) a quantitative breakdown of the points for varied outcomes across preestablished negotiation criteria. During the simulation, carried out via formal and informal debate sessions and subsequent debrief, participants hone their understanding of conflict resolution concepts like interest-based negotiation, BATNA (best alternative to a negotiated agreement), and "shadow of the future" (Axelrod, 1984; Fisher & Ury, 2011).

The exercise consistently rates well in student surveys for reinforcing course learning outcomes and is often referenced in subsequent oral and written products.[5]

In PME settings, simulations can range from foreign policy deliberations to operational decision games and "staff rides." These activities allow participants to experience decision-making dilemmas, often operating with incomplete information. Simulations draw on a long history in military preparation (Jensen, 2017). We have advocated for "sims" to consume more space in PME curricula and championed new societies, drawing volunteers from across forces (Hamilton, 2019; Jensen, 2019a, 2019b). Simulated settings, which usually involve dynamic interaction, help PME students to test assumptions about strategy, war, and decision-making. More often than not, they reveal limits of participants' own strategies, and thus tend to moderate hard-line views (Jensen & Van Echo, 2020).

Simulations can be employed in diverse classroom environments, allowing students to engage in a hands-on way with a wide array of complex concepts and scenarios. They also are more cost effective than military training situations that necessitate logistics and supply on a large scale.[6]

Conclusions

As discussed in the introduction, metaphors serve as a critical tool to support understanding. They frame everyday relationships and help people process complex sociopolitical phenomena. We have introduced three modalities—story, symbol, and simulation—to support active learning in PME settings and link abstract ideas to experience. Diverse classroom examples shared in the article, such as offering a faculty confessional, wielding a Roman gladius as symbol, or participating in a cyber-crisis exercise, demonstrate how metaphorical tools can support student comprehension and enhance their critical reflection.

The use of metaphors seems especially well-suited for today's PME sector, which faces diverse and ever-increasing challenges from within and without, targeting its relevance and effectiveness. Metaphors may serve as a sort of antidote to staid methods; they draw students' engagement with linkages to familiar concepts and experiences and, once engaged, can "transport" them to imagine new and often unexpected horizons. ☙

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Notes

1. For Hobbes (1996), "Metaphors, and senseless and ambiguous words, are like ignes fatui; and reasoning upon them, is wandering amongst innumerable absurdities" (p. 36). Musolff (2004) challenges the view of Hobbes as a "metaphor-basher" and emphasizes a "critical attitude towards seemingly unproblematic analogies that lead to dangerous conclusions" (p. 171).

2. Some authors highlight the differences between metaphor and analogy (Aubusson et al., 2006; Harrison, 2006, etc.); however, the authors agree with Garner (2005): "An analogy, although technically distinct, is really only an extended metaphor."

3. We adapted this article from a recent conference paper on the educational use of simulations and games (Hamilton & Jensen, 2020). The opinions, conclusions, and recommendations expressed or implied here are those of the authors and do not reflect the official policy of the Inter-American Defense College, Marine Corps University, American University, Inter-American Defense Board, Organization of American States, or Department of Defense.

4. Red teaming "uses structured tools and techniques to help us ask better questions, challenge explicit and implicit assumptions, expose information we might otherwise have missed, and develop alternatives we might not have realized" (U.S. Army Training and Doctrine Command, 2019, p. 3). Principles include development of soldiers' "self-awareness and reflection," "groupthink mitigation and decision support," "fostering cultural empathy," and "applied critical thinking" (pp. 3–5).

5. A similar simulation analyzed previously in this journal (Hamilton, 2019) highlights the value of interagency cooperation, relationship development, and clear protocols to respond to and mitigate cyberattacks. Developed in conjunction with tech professionals from the Organization of American States, the simulation allows students to experience some of the challenges and benefits of multisector collaboration.

6. This does not suggest that military training operations are unimportant to readiness but simply that simulations may be considered a supplemental component of considerable value.

The Challenge and Opportunity of Scholars Programs at the Command and General Staff College

One Example

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Abstract

This article examines the purpose for creating scholars' programs at the U.S. Army Command and General Staff College (CGSC). It discusses the CGSC Art of War Scholars program as an example of a successful CGSC scholars program, the elements of the program, the qualities and performance of the scholars and graduates, and how the program meets the intent of current Army and joint professional military education initiatives. This article clarifies the characteristics of the Art of War Scholars program and the joint and combined leaders that it develops.

One of the critical issues for the Department of Defense as it evolves strategic landpower to meet the needs of the 21st century is the intellectual ability of leaders to meet both the demands of a complex international operating environment and the changing character of warfare. In a time of potentially austere national security budgets, the mental software, or intellectual capacity, of the leaders of the land force is critical to sustaining readiness over the long term as great-power competition reemerges. Murray and Millett (2000) compared the present with peacetime inflection points in the past where leaders had to adapt their individual education to stay current, despite shortages of equipment or lack of training. The American Army's school system in the interwar years helped to prepare officers for the rigors of global combat in World War II, even while the size of the force, its readiness, and modernization dwindled. One of the key components of that education system was the U.S. Army Command and General Staff College (CGSC), which was critical to the development of midgrade officers' intellectual capacity.

Officers attending the Command and General Staff Officer Course (CGSOC) at CGSC at Fort Leavenworth, Kansas, come from a variety of backgrounds and levels of experience who represent an Army multibranch, joint, and combined population. Whatever background officers have coming into the course serves as the bedrock of their professional military education for the second half of their careers, until they either retire or attend senior service college. While the standard curriculum meets the needs of the vast majority of officers, there is a small group of officers who arrive at the college desiring to do more, to learn more, and to enable their performance during their field grade years.

Many readers may not be aware that since 2010, the CGSC has offered a series of scholars' programs designed to meet the professional development needs of the officers who desired something more from the intermediate-level educational experience. This alternative approach to education has taken a variety of forms and evolved over time based on the needs of students and the availability of faculty. The basic idea of all the scholars programs was to allow students to develop expertise in focused areas and to conduct in-depth research into areas beyond those afforded in the standard CGSOC curriculum. The Army needs a capability for officers to conduct research in the operational arts, and this research should be informed by professional practitioners. Officer students involved in this research can reach a depth of knowledge on important operational issues and increase their ability to solve tough problems. The Army benefits by the growth of these officers in their contributions to the body of knowledge of the military profession. The officers benefit in their personal development of critical thinking and demonstrated research abilities.

The CGSC Scholars program meets the need for a program where officer students can do more to accomplish research into the operational art or the current operating environment. Each seminar is directed by a highly qualified CGSC faculty member with the special expertise in the topic under consideration. Seminar design and conduct come under the supervision of the leadership of the college, with the dean as proponent. The focus is always on the educational development of the students.

Publication of research findings is important but is secondary to the design and implementation of each scholar's seminar to investigate the chosen subject field.

Some of the CGSC Scholars course offerings offered since 2010 include

- **Art of War**. This course began with a counterinsurgency focus and later transitioned to understanding operational art and strategy across the spectrum of conflict. This course will be described in some detail below.
- **The Local Dynamics of War**. This course examines how to develop workable interventions that involve lethal power, governance, economics, ethics, and culture.
- **Homeland Security**. This course is a case study focused on southwest border security.
- **National Intelligence Studies**. This course is a focused elective on contemporary intelligence issues and is directed by the chair of National Intelligence Studies.
- **Genocide and Mass Atrocity Prevention**. This course addresses historical cases to identify nations on the path to genocide or mass atrocities.
- **Warrior Logistician**. This course requires a graduate degree in business in global supply chain management from an affiliated university.
- **West Africa/Liberia Strategic Study.** This focused elective course provides the opportunity to conduct an in-depth study on a real-world issue and to provide recommendations to decision-makers.
- **Irregular Warfare.** This course is focused on the development of adept irregular warfare planners for interagency, joint, and special mission assignments at the strategic, operational, and tactical levels.

All of these studies involved a small number of selected students for a specific and confined period. The studies exposed the selected scholars to experts in their field and offered the opportunity for individual research. Over time, most of these programs ceased when the faculty expertise required to sustain them moved on. Despite the reduced number of active programs, the CGSC Scholars concept proved to be adaptive to changing operational environments and warfighting requirements. A new scholars program titled Information Warfare Scholars is under development with command guidance to account for new warfighting domains, joint and Army concepts, and the criticality of cyber operations and big data. The CGSC Scholars concept continues to be relevant.

This article describes the Art of War Scholars program. This program has existed since the inception of the CGSC Scholars program, has evolved, and continues presently. The specifics outlined here illustrate the potential of all CGSC scholars programs, whether past or future. Many of the course dynamics and considerations are the same. The basis of this article is the author's eight years of experience in writing and revising the curriculum of the Art of War Scholars program, monitoring the Art of War Scholars' successful completion of a hundred master's theses, publishing dozens of those findings as articles and Art of War papers, and tracking the postgraduation professional development and career success to the level of each assignment of each Scholar graduate.

The Art of War Scholars program offers a small number of selected officers a chance to participate in intensive, graduate-level seminars and in-depth personal research focused primarily on understanding strategy and operational art through modern military history. The purpose of the program is to produce officers with critical-thinking skills and advanced understanding of the art of warfighting. These abilities are honed by reading, researching, debating, and writing about complex issues across the full spectrum of modern warfare, from the lessons of the Russo-Japanese War through village-level counterinsurgency in Afghanistan, with an eye to the future evolution of the art of war. All Art of War scholars complete a Master of Military Art and Science (MMAS) thesis, and the development of this thesis through primary source research and publishable-quality writing is the foundation of the program.

The main theme for the seminars is the art of warfighting based on the analysis of the history of warfare. The variety of seminars in the curriculum includes capstone doctrine with direct engagement of doctrine writers, organizational-level leadership, national strategy, visits to key combined arms agencies and selected archives, observation of a mission command training seminar, and a series of staff rides. The Art of War scholars enjoy the daily opportunity to engage distinguished art of war "practitioners," noted historians, and combined arms leaders. There is normally a distinguished guest for every seminar. Blocks of instruction include national ways of war, total war, doctrine, Cold War, counterinsurgency theory and experience, art of command, and current experience. There are approximately 100 graduate-level seminars in this curriculum, each with an intensive preparatory reading load.

The Art of War seminar is composed of up to 12 scholars and is directed by the college's Ike Skelton Distinguished Chair for the Art of War. The program begins upon the completion of the common core curriculum and takes the place of the Advanced Operational Warfighting block and the elective periods. The selection process to be an Art of War scholar is highly competitive, requires written application, and considers academic performance in the core curriculum. The recommendation of the staff group advisor, team leader, and thesis chair is required. The selection process carefully assesses the potential for the prospective scholar to complete a high-quality thesis and to daily support the graduate-level discussion of the scholar's seminar. Screened candidates are interviewed and selected by a board of CGSC leaders. Experience shows that those officers who are selected perform without exception to the high level of scholarship and professionalism expected of them. Graduates of the program perform their field-grade duties to the exceptional quality required for promotion to lieutenant colonel and selection for battalion command.

Graduates of the program receive a unique perspective on senior leadership, national ways of war, national and military strategy for a variety of national cultures, current Army doctrine, campaign planning, the problems of innovation and adaptation on

the modern battlefield, and the complex linkages between the tactical, operational, and strategic levels of war. Graduates will be uniquely prepared for entry into the School of Advanced Military Studies or selection to later competitive fellowships, and a variety of future assignments demanding strategic, operational, and command capability. Given the expected level of scholarship for Art of War theses, the Ike Skelton distinguished chair automatically considers them for publication as an Art of War paper. Published Art of War papers are available at the Army University Press website for use by professionals across the force in solving difficult operational issues or in understanding complex historical context. Reaching these goals of personal and professional development fulfills the purposes outlined in the original concept papers by the deputy commandant of CGSC, and dean of academics for CGSC Scholars programs.

The opportunity for these scholars to qualify for selection to the Advanced Military Studies program, the Advanced Strategic Planning and Policy program, the secretary of defense's Strategic Thinkers program, or other additional funded graduate-level education or senior service college fellowships is one of the purposes and advantages of this program (U.S. Army Command and General Staff College [CGSC], 2016). This is an environment wherein many defense senior leaders desire to develop additional officers with PhD degrees so that they are able to engage civilian leaders coherently on complex national security issues. Eventually, these officers capable of strategic thinking may naturally rise to be capable joint task force commanders who adapt and lead in the evolving joint operational environment. Officers develop both the initial skills and the confidence to continue to pursue such difficult endeavors and reach the limits of their great professional potential.

Why Such a Program?

The basic premise behind the CGSC Scholars programs and the Art of War Scholars program itself is that for each CGSC course there are a small number of highly motivated officers who simply want more from their staff college experience and are willing to invest significant time and effort to achieve it. This investment takes the form of preparation and scholarship. Along with this willingness is the expectation that the same individuals who seek more and are willing to invest more are often uniquely equipped by motivation, aptitude, and experience to achieve more. A careful selection process can identify the officers who have the motivation and aptitude to best benefit from the scholars' opportunity. Selection of such scholars is a form of talent management and capitalization on potential (U.S. Department of the Army [DA], 2014b). The goal is to achieve maximum potential over the last half of a professional officer's career.

The focus of the curriculum itself is long-term rather than short-term. It is not designed to equip battalion and brigade operations and executive officers, though it does that. It is designed to develop future strategists and operational artists by ap-

propriating an intense focus on research and applied graduate military history. The seminar debate is designed to identify and develop leadership traits leading to command. The CGSC leadership curriculum is in fact closely integrated with the history curriculum so that scholars discuss key historical leaders in the historical context of their events (U.S. Army CGSC, 2016).

Much of the discussion is about national culture leading to ways of war, the interface of politics and military commitment, and the practice of operational art by leaders over time. This high-level focus matches the type of issues and places of duty over the second half of a graduate's career. This in-depth understanding of the interface of national strategy and operational art is exactly what future joint and combined leaders need. Connecting history to a dialogue about national ways of war as they evolve over time is productive for military officers who can relate well to civilian leaders (Chairman of the Joint Chiefs of Staff, 2015). Graduation from the Art of War Scholars program accelerates the understanding of strategy needed in the national capital region or at the combatant commands. Completion of the Art of War Scholars program is designed to enhance the capacities that make officers excellent contributors to military think tanks or high-level service and joint staffs later in their careers. It directly fulfills one of the new joint professional military education end states by educating joint officers who

> are strategically minded warfighters or applied strategists who can execute and adapt strategy through campaigns and operations. All graduates should possess critical and creative thinking skills, emotional intelligence, and effective written, verbal, and visual communications skills to support the development and implementation of strategies and complex operations. (Joint Chiefs of Staff, 2020)

Art of War scholars focus on the development of strategic thinking, critical thinking, and clear communication skills. These same skills enable the graduate's professional development over the second half of their careers and are in keeping with what is needed for joint operations in the current environment.

Given these high goals over the long term, many of the enduring effects of this program honestly remain to be determined.

The performance of Art of War scholars is high in seminar performance, thesis quality, and postgraduation assignments through the first decade of the program. Art of War scholars are regularly recognized for their achievements at CGSC graduation, with several winning such graduation recognition as the top U.S. or international graduate, the best thesis or military history thesis, and other writing achievement awards in the areas of leadership, interagency, or communications. Art of War scholars compete at a high rate for recognition as either master strategists or master tacticians. The best of their Master of Military Art and Science theses are published as Art of War papers. The findings of their research are published in article length by *Proceedings*, *Military Review*, and the Association of the U.S. Army's Institute of

Land Warfare. They are engaged and competent competitors for the highest levels of achievement in their CGSOC classes. Graduates of the first four classes of this curriculum accede to battalion command at rates well above the Army average; they receive assignments to strategic and commanding general's initiatives groups and are selected for funded attendance to the Advanced Strategic Planning and Policy program.

Key Elements of Art of War Scholars Program Design as Representative of CGSC Scholars Potential

Built Around Thesis Research

The Art of War Scholars program is built around the fundamental premise that enhanced research benefits the profession of arms. All scholars complete an MMAS thesis. This is a program requirement and now distinguishes the scholar from those officers who complete a Master of Operational Studies. The thesis is the permanent intellectual evidence of the student's intellectual effort remaining after graduation. Based on personal experience in completing letters of recommendation, thesis work is fundamental to the application to terminal degree programs as the officer's career progresses. The thesis reflects the deeper level of inquiry engendered by the program. All scholars have the opportunity to complete primary source research at a variety of archives and libraries. Examples include the National Archives at its various locations, the various presidential libraries, and archival repositories such as the Army Heritage and Education Center and the Combined Arms Research Library Archives. This primary source research experience is a key learning outcome itself. The ability to conduct original and effective research and writing is also fundamental to staff effectiveness as the officer progresses to future assignments. Based on my seven years' experience on high-level staffs and in leading two strategic initiatives groups, the crafting of a coherent argument from research from sources is a critical-thinking skill required of our very best officers.

Focused on Deep Reading

The syllabus for the Art of War Scholars course shows that the Art of War scholars accomplish an extensive program of graduate-level reading to prepare for their seminars, comparable to that for the Advanced Military Studies program or graduate programs at America's elite universities. This is the educational benefit and professional development benefit of reading widely and deeply and to compare alternative views of the same argument. It is the advanced ability to master and harness vast

quantities of reading. The Art of War scholars cover the expanse of modern military history from the Russo-Japanese War to Afghanistan and Iraq episode by episode in rich historical context. Both the volume of reading and the complexity of reconciling opposing points of view develop in the scholar higher order academic skills. Reading for understanding is a practiced graduate school skill.

Writing for Effect

The master's theses written by Art of War scholars over 10 cohorts, including multiple CGSC writing award winners, show that they master the art of academic prose and the powers of persuasive academic writing. Their master's theses, under direction of their original MMAS thesis committee chairs, argue persuasively on a variety of topics related to the art of war. The Scholars seminar encourages peer review and collaboration on improving the quality and logic of argument. Scholars challenge and encourage each other to higher quality writing. The process of working with a thesis committee and a peer review group enhances the scholars' writing and thinking skills and improves the quality of the finished product.

Contributing to the Body of Knowledge

The Combined Arms Research Library Digital Collection online shows that Art of War scholars' MMAS theses, like all other theses written at the CGSC, are filed in the Ike Skelton Combined Arms Research Library and available through the Defense Technical Information Center to other national security researchers and academic research institutions. Selected theses are published as Art of War papers. Beyond this, many Art of War Scholar theses are extracted or summarized for article-length publication in military professional journals such as *Military Review*, *Interagency Journal*, and Association of the United States Army Land Warfare Papers. Increasingly, this condensation of thesis research into article-length findings appears to be the way that Art of War scholars work will be offered to the force. In these, and through professional blogs, Art of War scholars contribute their findings to the professional body of knowledge.

Seminar Dialogue and Debate

End-of-course surveys and dialogue in thesis peer review groups show that scholars benefit from the perceptions and honest disagreements of their peers in an environment that encourages respectful debate from the standpoint of individual

insight. Iron sharpens iron. Scholars benefit from the synthesis of prepared material offered in seminar discussion through shared insights from their peers. They spur each other on to higher levels of inquiry and intellectual achievement. The organizing principle in making selection of Art of War scholars is that they will reinforce and challenge each other's learning to the highest degree possible in an adult learning environment. Scholars recognize each other's strengths and learn to appreciate alternative, even conflicting, points of view in an environment grounded in mutual encouragement and mutual respect.

The Benefit of Subject-Matter Experts

The Art of War Scholars course schedule shows that whatever the seminar topic of the day, the Art of War scholars normally have a subject-matter expert present to introduce the subject and set the tone of the day's discussion. This allows for a variety of presentation styles, pedagogical approaches, and academic philosophies to inform the discussion and challenge the scholars to engage and react. These subject-matter experts include several respected civilian professors who develop deeper knowledge on the part of the scholars. Not only are scholars exposed to subject expertise, but they are also exposed to published authors with recognized work. This encourages the process of research and writing through the provision of scholarly role models. The Art of War scholars are also acquainted in this manner with practitioners of the art of war, who are mentors with long experience in the profession. These practitioners are normally previous general officers who have clearly mastered the concepts under discussion or who have lived firsthand through the historical episode under study.

Developing Joint and Combined Thinkers

The rosters of scholars over 10 cohorts show that one of the hallmarks of the Scholars seminar composition is the reliable representation of the variety of U.S. military services and selected scholars from the international military student cohort. The norm is an officer from each of the services with an international student officer. This allows for representative dialogue from each service perspective, often reflecting each service culture, and a viewpoint from a key ally in the world. This usually broadens the perspective of the Army scholars as they reflectively consider alternative, even conflicting, strategic and operational viewpoints.

Not only is the seminar composition joint and combined, but the subject matter in the curriculum is also. Graduate military history seminars are not confined to landpower or the United States. Instead, Art of War scholars discover several other national ways of war and the application of sea and airpower over the course of the

20th century. When integrated with the theory of war from the broadest perspective, this course truly begins to build the foundation for joint and combined thought.

Developing Strategic Leaders

The mix of modern military history consumed by the Art of War Scholars contains strong doses of operational art and national military strategy. In reconciling competing points of view regarding successes and failures of national strategy over the course of the most recent century, for a variety of national experiences, not just the United States, the Art of War scholar develops an advanced perception of the practice of national strategy. This anticipates the amount of strategic thinking required to excel in positions of increasing responsibility over the second half of an officer's career.

The combination of these educational factors means that the Art of War scholars have unique intermediate level education experiences that both challenge and reward them. They bear a heavy burden academically but reach a depth of learning that endures and leads them to a higher plateau of understanding for the rest of their careers. An emerging trend, judged by their record of assignments and promotion, is that their investment pays off with professional dividends. It directly fulfills the goal of developing strategic thinkers, which is part of the major theme of optimizing human performance in the current *U.S. Army Learning Concept for Training and Education* (U.S. DA, 2017).

Implications for the Future

The Art of War Scholars program, as illustrative of the possibilities representative of the CGSC Scholars program, meets a continuing need for some officers to reach a higher level of contribution and learning than the majority of their peers in the CGSOC. The officers themselves determine this need. Thankfully, the framework for CGSC Scholars allows continued evolution to meet operational and environmental requirements at the same time as it offers an enhanced learning opportunity for those who desire it. Former Secretary of Defense James Mattis stated that there is a need across the force to develop officers who are strategic thinkers (U.S. Department of Defense, 2019). The Art of War Scholars program is a subset of CGSC Scholars programs, but its curriculum, process, and outcomes develop officers who meet this requirement for strategic thinkers. The program's strong professional development meets the need for officers who are also versed in operational art. The program develops officers who have the individual capacity to communicate, research, and write about the most complex issues confronting our senior leaders in national defense today. It amply fulfills this higher purpose and is a proven vehicle for developing the best leaders for the Department of Defense and internationally into the future. ☙

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Upcoming Conferences of Note

May 11, 2021: Joint PME Scholarship of Teaching and Learning Forum

Virtual conference

https://www.airuniversity.af.edu/TLC/JSOTL-Forum/

This conference focuses on professional military education. We welcome attendees from military and government backgrounds, both in the United States and internationally, as well as our colleagues in civilian higher education and K-12 education. Some presentations may also interest those who work in the educational technology industry.

August 2–5, 2021: Distance Teaching and Learning Conference

Madison, Wisconsin

https://dtlconference.wisc.edu/

This conference emphasizes evidence-based practice, educational innovation, and practical applications of theories and research findings in the field of distance education and online learning.

August 12–14, 2021: American Psychological Association (APA) Convention

Virtual conference (In-person conference TBD)

https://convention.apa.org/

The APA convention is the world's largest gathering of psychologists, psychology students, and other mental and behavioral health professionals. This is an opportunity to discuss education and behavioral sciences specifically tailored to the military population with a wide variety of experts.

August 30–September 1, 2021: iFest

Virtual conference (In-person conference TBD · Arlington, Virginia)

https://www.trainingsystems.org/

The Department of Defense Advanced Distributed Learning (ADL) Initiative in collaboration with the National Training and Simulation Association provides unique opportunities for military, government, industry, and academia professionals to share the latest in distributed learning innovations.

September 28–30, 2021: TechLearn Conference 2021

New Orleans, Louisiana

https://www.techlearnconference.com/2021/index.cfm

This event features the most promising innovation and trends in the training industry including mobile learning, elearning, augmented reality, artificial intelligence, gamification, and instructional design. The TechLearn Conference is produced by Lakewood Media Group and *Training Magazine*.

October 5–8, 2021: American Association for Adult and Continuing Education Conference (AAACE)

Miramar Beach, Florida

https://www.aaace.org/page/2021conference

This is the annual conference of one of the nation's largest organizations for adult and continuing education. AAACE is the publisher of three leading adult education journals: *Adult Education Quarterly*, *Adult Learning*, and the *Journal of Transformative Education*.

October 11–13, 2021: Association for Continuing Higher Education (ACHE)

New Orleans, Louisiana

https://www.acheinc.org/ACHE-2021

ACHE is a dynamic network of diverse professionals who are dedicated to promoting excellence in continuing higher education and to sharing their expertise and experience with one another.

October 11–13, 2021: Association of the United States Army (AUSA) Annual Meeting

Washington, D.C.

https://meetings.ausa.org/annual/2021/index.cfm

The AUSA Annual Meeting and Exposition is the largest landpower exposition and professional development forum in North America. The annual meeting is designed to deliver the Army's message by highlighting the capabilities of Army organizations and presenting a wide range of industry products and services. AUSA accomplishes this task throughout the entire event by providing informative and relevant presentations on the state of the Army, panel discussions and seminars on pertinent military and national security subjects, and a variety of valuable networking events available to all that attend.

November 15–18, 2021: Institute for Credentialing Excellence (ICE) Exchange

Nashville, Tennessee

https://www.credentialingexcellence.org/page/call-for-abstract-proposals

The ICE Exchange conference is the conference for the credentialing community. The name ICE Exchange reflects what is valued most by our annual conference attendees: the exchange of industry trends and best practice through live education and networking.

November 17–19, 2021: Council for Adult and Experiential Learning (CAEL) Conference

San Diego, California

https://www.cael.org/events

The annual conference brings together over 500 participants to learn, network, and work together to make lifelong learning accessible to adults around the world. Attendees include college faculty and administrators, human resources professionals, workforce developers, and representatives from labor and government.

November (TBD), 2021: Professional and Organizational Development (POD) Network Conference

Location TBD

https://podnetwork.org/updates-events/

The POD Network conference focuses on the community of scholars and practitioners that advance the scholarship of teaching and learning through faculty development.

November 29–December 3, 2021: Interservice/Industry Training, Simulation & Education (I/ITSEC) Conference

Orlando, Florida

https://exhibits.iitsec.org/2021/public/enter.aspx

This is the world's largest modeling, simulation, training, and education conference allowing participation in education paper presentations and networking among government, industry, and academia peers and subject-matter experts.

December 6–10, 2021: Reimagine Education Conference 2021

Virtual conference

https://www.reimagine-education.com

Reimagine Education is a global conference and competition, open to educational innovators from all around the world. The conference brings together edtech startups, academic faculty from top institutions, chief innovation officers, university leadership, teachers, and other stakeholders in the future of higher education teaching and learning. The Reimagine Education Conference is also the venue where the most prestigious awards in educational innovation are presented.

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Call for Papers

The *Journal of Military Learning* (*JML*) is a peer-reviewed, semiannual publication that supports efforts to improve education and training for the U.S. Army and the overall profession of arms.

We continuously accept manuscripts for subsequent editions with editorial board evaluations held in April and October. The *JML* invites practitioners, researchers, academics, and military professionals to submit manuscripts that address the issues and challenges of adult education and training, such as education technology, adult learning models and theory, distance learning, training development, and other subjects relevant to the field. Submissions related to competency-based learning will be given special consideration.

Submissions should be between 3,500 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.

Do you have a "best practice" to share on how to optimize learning outcomes for military learners? Please submit a one- to two-page summary of the practice to share with the military learning enterprise. 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.

Manuscripts should be submitted to usarmy.leavenworth.tradoc.mbx.armyu-journal-of-military-learning@mail.mil by 1 April and 1 October for the October and April editions respectively. For additional information, call 913-684-9331 or send an email to the address above. ❧

Author Submission Guidelines

Manuscripts should contain between 3,500 to 5,000 words in the body text. Submissions should be in Microsoft Word, double-spaced in Courier New, 12-point font.

Manuscripts will use editorial style outlined in *The Publication Manual of the American Psychological Association*, 7th edition. References must be manually typed. (The automatically generated references employed by Microsoft Word have proven to be extremely problematic during conversion into final layout format for publication, causing delays and additional rekeying of material.) Manuscripts that arrive with automated references will be returned to the authors for compliance with submission requirements. Bibliographies will not be used and should not be submitted with manuscripts.

Submissions must include a one-paragraph abstract and a biography not to exceed 175 words in length for each author. Such biographies might include significant positions or assignments, notes on civilian and military education together with degrees attained, and brief allusions to other qualifications that establish the bona fides of the author with regard to the subject discussed in the article. Do not submit manuscripts that have been published elsewhere or are under consideration for publication elsewhere.

Authors are encouraged to supply relevant artwork with their work (e.g., maps, charts, tables, and figures that support the major points of the manuscript. Illustrations may be submitted in the following formats: PowerPoint, Adobe Illustrator, SVG, EPS, PDF, PNG, JPEG, or TIFF. The author must specify the origin of any supporting material to be used and must obtain and submit with the article permission in writing authorizing use of copyrighted material. Provide a legend explaining all acronyms and abbreviations used in supplied artwork.

Photo imagery is discouraged but will be considered if it is germane to the article. Authors wanting to submit original photographs need to do so in JPEG format with a resolution of 300 DPI or higher. Each submitted photo must be accompanied by a caption identifying the date it was taken, the location, any unit or personnel in the photo, a description of the action, and a photo credit specifying who took the photo. Captions should generally be between 25 and 50 words.

The *Journal of Military Learning* (*JML*) will not consider for publication a manuscript failing to conform to the guidelines above.

The editors may suggest changes in the interest of clarity and economy of expression; such changes will be made in consultation with the author. The editors are the final arbiters of usage, grammar, style, and length of article.

As a U.S. government publication, the *JML* does not have copyright protection; published articles become public domain. As a result, other publications both in and out of the military have the prerogative of republishing manuscripts published in the *JML*.

Manuscripts should be submitted to us-army.leavenworth.tradoc.mbx.armyu-journal-of-military-learning@mail.mil by 1 April and 1 October for the October and April editions respectively. For additional information, call 913-684-9331 or send an email to the address above. ❧

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