



Research Report 1995

**Enhancing the Strategic Capability of the Army:
An Investigation of Strategic Thinking Tasks,
Skills, and Development**

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February 2016

**United States Army Research Institute
for the Behavioral and Social Sciences**

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ENHANCING THE STRATEGIC CAPABILITY OF THE ARMY: AN INVESTIGATION OF STRATEGIC THINKING TASKS, SKILLS, AND DEVELOPMENT

EXECUTIVE SUMMARY

Research Requirement:

Strategic thinking is a necessary capability in any successful organization. Unless strategic thinking is continuously developed and supported, an organization loses the ability to anticipate change. If Army leaders are not proactive, future-oriented, continuously scanning the environment, and actively envisioning how threatening developments are connected, then the Army will be less able to exploit opportunities and manage competing priorities to best serve national security interests. Without effective strategic thinking, resources may be wasted and operations may be conducted which, even when tactically successful, take the nation further from achieving national goals. However, when organizational leaders continually develop their ability to think strategically, they gain the power to explore all options and help “write the rules of the game” rather than reacting with last minute changes to existing plans in an outdated strategic environment.

Procedure:

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) conducted research investigating strategic thinking requirements, competencies, development, assessment, and cultural barriers in the Army. The literature on strategic thinking was reviewed, including military and academic literature from fields such as management, psychology, and education. ARI then conducted in-depth semi-structured interviews with Army leaders, civilian subject matter experts (SMEs), and Professional Military Education (PME) faculty to address the following research questions:

- (1) What kinds of tasks require Army leaders to engage in strategic thinking?
- (2) What are the knowledge, skills, and abilities (KSAs) required to accomplish those tasks?
- (3) What is the Army currently doing to develop the KSAs necessary for strategic thinking?
- (4) How does the Army assess its capacity for strategic thinking?
- (5) How does Army culture and/or policy promote or inhibit the development of strategic thinking?

Findings:

Army leaders are given immensely complex and dynamic missions that have serious implications in terms of resources, risks, and international relations. There are clear indications from the interviews that Army leaders were not prepared for the challenges they faced in recent conflicts. The recognition that tactical and operational environments are now converging with strategic environments points to the need for a concerted effort to identify and develop strategic thinkers.

The Army culture is not fully supportive of strategic thinking development. A strong focus on tactical excellence (at the cost of long-term future-oriented thinking and reflection), uniformity (rather than diversity of ability and perspective), and chain of command (to the detriment of questioning and candor) inhibit, rather than promote, strategic thinking development. Creating climates in which important aspects of strategic thinking (e.g., reflection, learning, questioning) are valued and promoted is crucial to shifting Army culture to support strategic thinking development.

Currently, it is difficult for Army leaders to talk about the cognition underlying strategic thinking because they lack a shared lexicon. Developing a shared lexicon for strategic thinking would enable Army leaders to more clearly and insightfully share their stories of strategic thinking success in action, thereby increasing the value placed on strategic thinking in Army culture. Adopting a common understanding of strategic thinking KSAs would also aid in developing strategic thinking.

Strategic thinking development takes time, and thus the Army could ensure the development starts earlier in the career so that Army leaders are prepared and comfortable thinking strategically when it is required. Currently, formal strategic thinking development in the Army is overly focused on increasing conceptual understanding. Ensuring all four of Conger's (1992) leader development approaches (conceptual understanding, skill building, feedback, and personal growth through reflection) are incorporated would increase the opportunities for Army leaders to develop strategic thinking KSAs through education, assignments, mentorship, and self-development. In particular, inculcating reflective practice into daily routines would greatly enhance developmental strategic thinking opportunities over the course of a leader's development.

Talent management practices could also be enhanced to promote strategic thinking development in the Army. The Army could ensure selection boards value important strategic thinking developmental experiences such as broadening assignments, teaching, and advanced civilian education to ensure diversity of thought in higher ranks. Developing strategic thinking assessments would also help with promotion decisions and as self-development tools for Army leaders. It is important that strategic thinkers are developed and utilized through talent management practices that place strategic thinkers in assignments that leverage strategic thinking.

Utilization and Dissemination of Findings:

The research findings can benefit a variety of stakeholders, including Army leaders interested in creating climates that promote strategic thinking, curriculum designers and faculty charged with teaching strategic thinking KSAs in the classroom, and policy makers involved with Army talent management. The findings can also help the individual Soldier interested in developing strategic thinking through self-development. The findings may also aid in crafting doctrine supporting the development of agile and adaptive Soldiers. Finally, the research findings can aid in identifying and developing future research needs in the area of strategic thinking.

ENHANCING THE STRATEGIC CAPABILITY OF THE ARMY: AN INVESTIGATION OF STRATEGIC THINKING TASKS, SKILLS, AND DEVELOPMENT

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ENHANCING THE STRATEGIC CAPABILITY OF THE ARMY: AN INVESTIGATION OF STRATEGIC THINKING TASKS, SKILLS, AND DEVELOPMENT

Introduction

What are the costs when Army leaders do not think strategically? Unless strategic thinking is continuously developed and supported, an organization loses the ability to anticipate change, which leaves less time to respond, and hence fewer options are developed. If Army leaders are not proactive, future-oriented, continuously scanning the environment, and actively envisioning how threatening developments are connected, then the Army will be less able to exploit opportunities and manage competing priorities to best serve national security interests. The Army will have to stop at the first feasible solution as time and available options become constrained. Without leaders who think strategically, resources are wasted – in some cases billions of dollars, months of time working the wrong problem or talking with the wrong people, developing the wrong talent, and most importantly the loss of Soldiers' lives. Operations may be conducted which, even when tactically successful, take the nation further from achieving national goals. However, when organizational leaders continually develop their ability to think strategically, they gain the power to explore all options and help “write the rules of the game,” rather than reacting with last minute changes to existing plans in an outdated strategic environment.

To provide an empirical basis for advancement of strategic thinking development, the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) hosted a workshop in 2011 with military, academic, and business experts to determine what is currently known regarding the assessment and development of strategic thinking, as well as the retention of strategic thinkers. The workshop provided a solid foundation for ARI's research on strategic thinking, but it did not detail strategic thinking requirements and competencies. The research described in this report is designed to support the identification and understanding of strategic thinking requirements, competencies, development, assessment, and cultural barriers in the Army. The present research did not involve a comprehensive job analysis, and can only attest to the types of Army tasks requiring strategic thinking. The sampling of activities reported by Army leaders provides context to understand the competencies needed.

Academic Background on Strategic Thinking

What is strategic thinking? There is no consistent, unified definition of strategic thinking in the literature, nor a definitive taxonomy of the characteristics or activities of strategic thinking. However, there are certainly common themes and a few seminal works that are commonly cited in the area. The most foundational and paradigm-shifting work on understanding strategic thinking came from Mintzberg (1994). Broadly speaking, Mintzberg (1994) argued that strategic *thinking* is something distinct from the more structured and procedural strategic *planning*. According to Mintzberg (1994), the organizational emphasis on analysis for the development of strategy was insufficient. Mintzberg (1994) advocated the primary role of learning in strategy development, describing strategic thinking as a “messy process of informal learning” (p. 108). This opened up the field to a new focus on strategy

development that is emergent and adaptive, rather than static. Although structured tools of strategic analysis can contribute to understanding, they should be complementary to an ongoing, creative, unstructured process of thinking and learning about the environment.

In the time since Mintzberg's reframing of the strategy development process, there have been many works providing more precise detail on what constitutes strategic thinking. One of the most important and widely-cited of these works was published by Liedtka (1998a) in which she describes five essential elements of strategic thinking: systems/holistic view, focus on intent, thinking in time, hypothesis-driven, and intelligent opportunism. Another widely-referenced description of strategic thinking published in the same year (Heracleous, 1998) summarizes the strategic thinking process as synthetic, divergent, and creative, with an emphasis on double-loop learning, i.e., the questioning of underlying assumptions and premises that define a set of alternatives. Several other useful works have been published that contribute new degrees of clarity to the understanding of strategic thinking, notably: Bonn (2001), Graetz (2002), Casey and Goldman (2010), and Yorks and Nicolaidis (2012). U.S. military scholars have also made contributions in a similar vein; works by Yarger (2008), Waters (2011), and McCauley (2012) provide scholarly conceptualizations of strategic thinking that align well with non-military academic work.

Rather than describing each of these models/frameworks in detail here, information on each is provided in Table 1. Below is a thematic summary describing the most prominent themes. Among these are themes of holistic understanding, iterative adaptation, creativity, divergent thinking, and thinking in time.

There is a clear consensus that strategic thinking requires a broad understanding of a strategic issue (i.e., holistic understanding), particularly as it exists within a system or environment. It is not enough to have knowledge of all the parts of the environment, e.g., geography, stakeholders, social groupings, and political, military, economic, social, infrastructural, or informational factors. Although gathering such knowledge and awareness is a difficult enough challenge, effective strategic thinking requires an ability to see the inter-relationships amongst all these factors and comprehend the systemic effects that result from changes to those factors.

Another important element of strategic thinking is the notion of iterative adaptation. Problems that require strategic thinking invariably present a complex system that is continuously dynamic, on its own energy, not merely in response to actions taken by one stakeholder. It is incumbent on strategic thinkers to track these changes repeatedly over time and assess their relevance to the appropriateness of a strategy. Additionally, for strategies to be optimally effective, strategic thinkers must be prepared to not only adapt to changes, but to turn them to a strategic advantage, i.e., learning and being opportunistic. As described by Liedtka (1998a):

Strategic thinking mirrors the "scientific method" in that it deals with hypothesis generating and testing as central activities. ...Hypothesis generation asks the creative question: "What if ___?" Hypothesis testing follows with the critical question: "If ___, then ___?" ...Taken together and repeated over time, this sequence allows us to pose ever-improving hypotheses, without forfeiting the ability to explore new ideas. (pp. 31-32)

Creativity is another critical element to strategic thinking. Though this concept may incline some to think of the fine arts and boundless self-expression, creativity in this context actually refers to the creation of something that is new and innovative, rather than a re-tooling of existing ideas or plans. Some propose that creativity is the most crucial and difficult to master element of strategic thinking. Strategic thinkers must be able to resist overly relying on pre-existing structures, analogies, or other concepts in understanding the environment and developing a strategic response.

To that end, creativity must be paired with divergent thinking, breaking free from any constraints that may not be contributing to developing a strategic understanding and generating novel strategies. This does not mean that strategic thinking requires abandoning all principles or concepts. Rather, strategic thinkers must be willing and able to honestly consider the merits of all alternatives and the assumptions and values that limit those alternatives.

One last theme of strategic thinking is the importance of thinking in time. Strategic thinkers must be able to disengage from short-term concerns and contemplate their organization as it is situated in time, considering influences of the past, the present, and movement toward a desired future. Although predicting the future is impossible in a complex dynamic system, there must be some shared understanding of a desired future toward which strategic thinkers can attempt to move the organization.

Table 1

Strategic Thinking Characteristics Identified in Academic Literature

Strategic Thinking Characteristics Identified in Academic Literature	
<p>Liedtka (1998a)</p> <ul style="list-style-type: none"> • Systems/holistic view • Focus on intent • Thinking in time • Hypothesis-driven • Intelligent opportunism <p>Heracleous (1998)</p> <ul style="list-style-type: none"> • Synthetic • Divergent • Creative • Double-loop learning <p>Bonn (2001)</p> <ul style="list-style-type: none"> • Holistic understanding • Creativity • Vision <p>Hanford (1995) Strategic Thinking (vs. Operational Thinking)</p> <ul style="list-style-type: none"> • Longer term (vs. Immediate Term) • Conceptual (vs. Concrete) • Reflective/learning (vs. Action/doing) • Identification of key opportunities (vs. Resolution of existing problems) • Breaking new ground (vs. Routine/on-going) • Effectiveness vs. (vs. Efficiency) • 'Hands-off' approach (vs. 'Hands-on') • 'Helicopter' perspective (vs. 'On-the-ground') <p>Casey & Goldman (2010)</p> <ul style="list-style-type: none"> • Systems-oriented • Conceptual • Directional • Opportunistic • Scanning • Conceptualizing • Questioning • Testing 	<p>Yorks & Nicolaidis (2012)</p> <ul style="list-style-type: none"> • Engaging with diverse perspectives • Assessing trends in divergent domains • Making assumptions explicit • Challenging assumptions <p>Yarger (2008)</p> <ul style="list-style-type: none"> • Systems thinking • Ethical thinking • Creative thinking • Thinking in time • Critical thinking <p>Waters (2011)</p> <ul style="list-style-type: none"> • Critical thinking • Thinking in time • Synthesis • Systems thinking • Creative thinking • Futuring • Convergent/Divergent thinking • Environmental scanning • Judgment of risk/reward • ST Foundation <ul style="list-style-type: none"> ○ Self-awareness of biases and assumptions ○ Consideration of ethics/values ○ Openness to discourse ○ Openness to reflection <p>McCauley (2012)</p> <ul style="list-style-type: none"> • Systems thinking • Visioning • Environmental scanning • Scenario planning

Method

ARI conducted research investigating strategic thinking requirements, competencies, development, assessment, and cultural barriers in the Army. First, the literature on strategic thinking was reviewed, including military and academic literature from fields such as management, psychology, and education. Then ARI conducted in-depth semi-structured interviews with Army leaders, civilian subject matter experts (SMEs), and professional military education (PME) faculty to address the following research questions:

- (1) What kinds of tasks require Army leaders to engage in strategic thinking?
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- (5) How does Army culture and/or policy promote or inhibit the development of strategic thinking?

The research team identified commanders, staff, and civilians who had operational experience with strategic-level planning and requested interviews by email. Some participants were referred to the research team by other participants, as well. A total of 30 commanders, staff, and civilians were interviewed (5 Lieutenant Colonels, 6 Colonels, 3 Brigadier Generals, 7 Major Generals, 4 Lieutenant Generals, 2 Generals, and 3 civilians). An additional 8 participants (1 Major, 2 Lieutenant Colonels, 1 Colonel, and 4 civilians) were interviewed because of their involvement in Army research centers, however they did not participate in the critical incident section of the interview. Their input provided support in understanding how the organization prepares itself for assessment of the strategic environment.

The interview protocol used a critical incident method in which participants were asked to recall a time when they were faced with a “very complex, unfamiliar problem that required strategic thinking and planning and your skills were challenged.” The incident-based interview method was adapted from the Critical Decision Method (Crandall, Klein, & Hoffman, 2006; Hoffman, Crandall, & Shadbolt, 1998). Additional questions about the incident were asked to ensure a rich description of the incident and provide a description of what Army leaders must do that requires strategic thinking.

For the critical incident analysis, three members of the research team reviewed all incidents independently and then held a consensus meeting. A list of critical incidents was created and the incidents were grouped together after conducting content analysis of all incidents provided by participants. Removal of identifying information that would threaten the anonymity of participants left a more generic final list of incidents.

Participants were also asked about strategic thinking KSAs. To analyze strategic thinking KSAs, three members of the research team reviewed all KSAs introduced in the academic literature and in the interviews independently. The team then came together for a consensus

meeting in which redundant KSAs were removed, KSAs were grouped, and the competencies were formed.

In addition, programs of instruction (POIs) from various Army PME institutions were requested and attained to gain understanding of how current Army leaders are being developed. The POIs used for analysis involved aspects of strategic thinking and/or planning. In addition, 17 instructors and curriculum designers were interviewed to get a more in depth understanding of the current courses related to strategic thinking and planning being taught within PME. The instructor participants consisted of 1 Major, 4 Lieutenant Colonels, 2 Colonels, and 10 civilians (some civilians were retired military). The instructor interview protocol covered the course content, definitions and/or models of strategic thinking and/or planning used in the course, strengths and weaknesses of the course, KSAs, course objectives, teaching methods, and methods of student assessment. The present research did not interview Observer/Controller/Trainers (OCT) from the Combat Training Centers (CTC) because it was beyond the scope of this research.

Information gleaned from POIs and interviews was reviewed against common best practices for instructional design and leadership development programs (including multi-course programs, individual courses, and seminars). Programs were reviewed according to a variety of dimensions, including definition(s) of strategic thinking, KSAs, course objectives, teaching methods and frameworks, assessment methods, and overall design in relation to Conger's (1992) leader development framework.

An overall review of programs was conducted to examine the balance of educational activities considering the four approaches recommended by Conger (1992) for leadership development programs: conceptual understanding, skill building, feedback, and personal growth. Conceptual understanding relates to mastery of content. For skills, the extent to which the course or program developed the strategic thinking abilities of scanning, questioning, conceptualization, and testing was considered (Casey and Goldman, 2010). For feedback, the focus was on the amount of formative vs. summative feedback and the presence of 360° feedback. For personal growth, the amount and nature of reflective work, on both an individual and collective basis was examined. Of specific concern was the inclusion of various forms of reflection, namely content, process, and premise reflection (Mezirow, 1990).

Participants were asked various questions about how strategic thinking capability is developed and what personally helped them develop into strategic thinkers. A number of areas were explored including PME (including analysis of programs of instruction), advanced civilian education, assignments and on-the-job experiences, mentorship, and non-job related experience.

The academic literature and interview data were reviewed for information on how the Army currently assesses strategic thinking. There was very little from the academic literature to guide analysis of an organization's ability to assess strategic thinking.

Finally, the academic literature on organizational culture was used to identify and analyze factors that may inhibit or promote strategic thinking within the Army. Specifically, Schein's (2010) embedding mechanisms were used to help analyze the interview data and identify and

understand the most relevant aspects of Army culture that affect strategic thinking. Schein’s (2010, p. 236) embedding mechanisms are shown in Table 2.

Table 2

Schein’s (2010) Embedding Mechanism

Schein’s (2010) Embedding Mechanisms
Primary Embedding Mechanisms:
<ul style="list-style-type: none"> - What leaders pay attention to, measure, and control on a regular basis - How leaders react to critical incidents and organizational crises - How leaders allocate resources - Deliberate role modeling, teaching, and coaching - How leaders allocate rewards and status - How leaders recruit, select, promote, and excommunicate
Secondary Articulation and Reinforcement Mechanisms:
<ul style="list-style-type: none"> - Organizational design and structure - Organizational systems and procedures - Rites and rituals of the organization - Design of physical space, facades, and buildings - Stories about important events and people - Formal statements of organizational philosophy, creeds, and charters

Throughout the report, quotations from the interviews are used to illustrate specific points. Participants were grouped so as to protect anonymity. For ease of interpretation, the following labels are used throughout the report (see Table 3).

Table 3

Labels for Quotations

Participant Titles	Status
Field Grade Officer	Majors, Lieutenant Colonels, and Colonels (active duty or retired)
General Officer	General Officers (active duty or retired)
Civilian	Civilians with operational experience or involved with research centers
Faculty	Instructors, faculty, curriculum designers (active duty, retired, or civilian)

Results

Strategic Thinking Tasks

The primary line of inquiry for this research was to determine the tasks performed by Army leaders that require them to think strategically. It is important to note that strategic

thinking does not only occur at strategic levels, but can also happen at tactical and operational levels, as was confirmed in the interviews. The tasks requiring strategic thinking were performed amidst many distractions and rarely, if ever, in a linear sequence. In other words, Army leaders discussed multiple, dynamic, and complex issues with strategic consequences happening simultaneously. There was little opportunity for Army leaders to pause and reflect on urgent issues to uncover seemingly less urgent strategic issues and opportunities.

Drawing from the interview data, Table 4 provides a sample of the broad tasks for which Army leaders reported needing to think strategically. Army leaders can expect to face similarly challenging requirements when confronted with complex, ambiguous problems.

Table 4

Broad Military Tasks that Require Strategic Thinking

Broad Military Tasks that Require Strategic Thinking
Develop an understanding of complex, dynamic environments; create historical framework; scan the environment to understand cultural/political landscape, policy, economics, diplomacy, etc.; diagnose the nature of conflict; actively seek multiple and opposing points of view; synthesize pieces of the problem into a coherent picture; fill information gaps; sort signal from noise
Lead strategic intellectual efforts with diverse actors while incorporating learning, group reflection, and various problem solving methods; explore, question, and test a wide range of options; take time for reflection and do not rush into action
Develop a campaign plan; visualize a desired outcome(s); envision multiple alternate futures
Determine key stakeholders; identify stakeholders' agendas, power sources, authorities, responsibilities, inter-relationships, religions; identify SMEs; build rapport, trust, relationships, alliances
Identify vital national interests and craft realistic policy goals/objectives consistent with those interests
Create new methods to display intelligence and visualize so articulation of complex problem is clear (as simple as it can be and no more simple)
Engage in strategic communications through organizations; create an organizational vision and communicate the vision to support Mission Command; engage in courageous, inclusive communication; assess communication/outreach & engagements; remove barriers to streamline communication
Convey the position of multiple distinct agencies in writing through strategic use of language to the President; describe appropriate broad context; conceptualize complex issues
Advise political authorities in the development of national policy and national strategy; convey and conceptualize the complexity of the problem to General Officers; write nuanced policy; interpret and plan implementation of a treaty with conflicting articles and insufficient guidance
Translate political policy; interpret and operate with insufficient guidance on implications and assumptions; make assumptions explicit; check assumptions
Conduct information operations; create culturally appropriate narratives; amplify the vision; understand the audience; operate through others (e.g., Joint Council of COLs, Interagency partners)

Table 4 (Continued)

During multilateral negotiations, determine authorizations to negotiate multiple different issues; manage conflict; work “un-winnable” situations while maintaining relations; manage competing demands; gain consensus on a position and maintain consistency
Build diverse teams; identify and utilize SMEs with divergent viewpoints; manage group dynamics; build alliances and trust; create and manage a climate of collaboration
Design a new organization to be stood up with no template and insufficient guidance; delineate boundaries of responsibilities in new interagency organization; lead organizational change
Given a multitude of uncontrollable factors, assess strategic risks; assess progress towards end state; create meaningful metrics; identify and assess short- and long-term indicators; question existing metrics and methods to reassess alignment with desired endstate; test assumptions
Synthesize impact and interaction of policy, governance, economy, security, etc. on multiple strategic security outcomes
Determine how to consolidate military gains and get to a sustainable political outcome
Coordinate communication and create dialogue with unified action partners; determine sequence of actions across multiple organizations and multiple levels; synchronize efforts and timelines
Use appropriate political and diplomatic arms to extend timelines laid out for the transition of authority and responsibility for security
Determine conditions necessary to achieve successful force drawdown and implications of varying courses of action

The tasks call for Army leaders to be capable of rapidly developing situational understanding by scanning the environment to find critical information about people, places, conditions, and events. Army leaders must then connect that information to other events that may not have happened yet, to people that may appear on the surface to be unrelated, and to conditions that are “outside their lane.” They must also be able to think critically about the information gathered to determine relevance and anticipate how the system may react to changes.

In addition, when developing situational understanding and tackling complex issues, Army leaders cannot expect that all the critical and desired information will be on hand to aid in developing understanding. Besides learning the complex systems and official processes associated with a Joint, Interagency, Intergovernmental, and Multinational (JIIM) environment, interviewees also had to learn the unwritten rules regarding how things really work, which required asking the right questions of the right people in the right way and not rushing into solutions. Thus, Army leaders are required to fill the information gaps using their own resources and must make assumptions during the process due to a lack of specific guidance from above. It is important to understand what assumptions are being made so that when sending information back up through the chain of command, assumptions are clearly stated and can be modified and adjusted from higher. Because information gaps will exist, it is also important for Army leaders to create a climate in which subordinates can contribute to ensure comprehensive information gathering.

The tasks described indicate that leaders need to be prepared to create their own campaign plans, strategies, visions, and solutions. “Create” is a key term because leaders saw situations for which they had no doctrine, no template, no intuitive right answer, no historical

example that fit the context, and little leader development that sufficiently prepared them for the challenges of developing appropriate and innovative solutions. As risky as it sounds to tactical leaders, strategic thinkers have to think beyond the immediate threat and create new concepts, new methods, and new ways of doing business. Further, the tasks were performed in dynamic environments in which there was a need to constantly adjust and adapt. Therefore, Army leaders will most likely be involved in developing plans as they are implemented, and if plans are not having the desired effects, Army leaders need to learn from the process and adapt as needed.

In the interviews, participants explained that attempts to gain situational understanding were often frustrated by a lack of internal expertise and not knowing where to turn for comprehensive and qualified opinions. In many cases, civilian advisors and lower ranking Army personnel with more particular subject matter expertise and/or strategic thinking skills had to be relied on to generate strategic understanding. Meanwhile, a strong grasp of military resources, authorities, feasibility, etc. was essential to move from strategic thinking to strategic planning. Thus, most civilian advisors and lower ranking officers who were needed for their subject matter expertise and/or strategic thinking skills could not then support the next step towards execution, increasing the need for coordination and more time to develop understanding and make decisions. This illustrates the need for the Army to develop strategic thinking skills more broadly to streamline the process of developing situational understanding and approaching complex, dynamic issues.

In recalling the tasks, many Army leaders described a very steep learning curve when they first began dealing with new complex and dynamic issues. Even the very highly educated and trained General Officers (GOs) expressed feelings of being less than fully prepared for the tasks. The immense variety in this sampling of tasks conveys the degree to which it is difficult to prepare leaders for every possible issue they may encounter. More important than any particular base of knowledge to a leader's ability to handle these kinds of tasks is the ability to think strategically and learn in a complex and dynamic environment when confronted with these types of issues. However, focusing on developing strategic thinking knowledge, skills, and abilities (KSAs) will provide leaders with the necessary intellectual tools needed to approach issues that require strategic thinking. Descriptions of the critical incidents along with consideration of the academic literature led to the identification of strategic thinking KSAs needed to tackle the complex issues described. The following section explores strategic thinking KSAs in more detail.

Strategic Thinking Competencies and Enablers

During the description of critical incidents, it was surprising how many Army leaders had a difficult time articulating the cognitive activities required to accomplish the tasks. Participants understood strategic leadership and often strayed into discussions of leadership, as opposed to strategic thinking. Regarding what it takes to think strategically, there simply was not a shared lexicon for them to speak from. Few leaders found it easy to talk about thinking activities; most could simply identify the *tasks* that needed to be carried out. In the interest of contributing to a shared strategic thinking lexicon in the Army, both the academic literature and the interview data were reviewed to identify the underlying KSAs that are required to effectively deal with the kinds of tasks presented in Table 4.

As the data were analyzed, a distinction was discovered: some of the KSAs described are required for the cognitive process of strategic thinking, whereas others are better described as strategic thinking enablers. Strategic thinking enablers are KSAs that either help the strategic thinking process (e.g., knowledge of the region) or help translate strategic thinking to others (e.g., communication), but are not necessarily required for the cognitive process of thinking strategically. Hence, the KSAs that fit under enablers were identified, grouped, and categorized separately. A total of 58 distinct KSAs were identified. For the sake of simplicity, 30 KSAs were further consolidated and grouped into six strategic thinking competencies and 28 KSAs were further consolidated and grouped into the four strategic thinking enablers. The strategic thinking competencies are described as follows:

- Comprehensive Information Gathering
A strategic thinker continually scans the environment, seeks information from disparate sources, suspends judgment and remains open minded, considers other perspectives, and possesses listening and research skills.
- Learning
A strategic thinker is a lifelong learner who iteratively tests, reflects upon, conceptualizes, and manages knowledge to gain insights on the environment and continually examines one's own thinking.
- Critical Thinking
A strategic thinker identifies the essential aspects of a situation, questions assumptions, asks relevant questions, explains meaningful connections and distinctions, understands nuance, and considers the limits of data.
- Innovative Thinking
A strategic thinker generates creative and novel ideas, concepts, and approaches, independent of conventional norms.
- Thinking in Time
A strategic thinker understands historical and contemporary contexts, recognizes patterns, forecasts possible futures, anticipates second and third order effects, and has a long-term perspective.
- Systems Thinking
A strategic thinker uses a holistic perspective of the dynamic and complex environment to identify interrelationships and integrate disparate factors into a comprehensive whole.

(Strategy Education Community of Interest [SE CoI], 2015)

The strategic thinking KSAs identified in the interviews are listed in Table 5 under the corresponding strategic thinking competencies.

Table 5

Strategic Thinking Competencies and KSAs

Strategic Thinking Competencies and KSAs	
Comprehensive Information Gathering	
<ul style="list-style-type: none"> - Scanning the environment - Seeking information from disparate sources - Open mindedness, suspension of judgment 	<ul style="list-style-type: none"> - Considering other perspectives - Research skills - Active listening
Learning	
<ul style="list-style-type: none"> - Iterative testing, continuous learning - Reflection and metacognition - Conceptual ability 	<ul style="list-style-type: none"> - Agility - Adaptability - Information/knowledge management
Critical Thinking	
<ul style="list-style-type: none"> - Identifying the central and peripheral elements of a situation - Questioning, challenging assumptions - Comfort with nuance 	<ul style="list-style-type: none"> - Understanding meaningful connections and distinctions - Understanding limits of data
Innovative Thinking	
<ul style="list-style-type: none"> - Generating creative and novel ideas and approaches - Reframing understanding when existing concepts falter 	<ul style="list-style-type: none"> - Re-evaluating and challenging conventional norms
Thinking in Time	
<ul style="list-style-type: none"> - Understanding historical and contemporary contexts - Pattern recognition 	<ul style="list-style-type: none"> - Maintaining a long-term future perspective - Anticipating 2nd and 3rd order effects
Systems Thinking	
<ul style="list-style-type: none"> - Identifying and comprehending complex and dynamic interdependencies between entities 	<ul style="list-style-type: none"> - Holistic perspective, synthesizing interdependencies into a concept of a comprehensive whole

The strategic thinking KSAs listed above are crucial to the ability to think effectively about complex issues. However, as noted consistently in the interviews, strategic thinking does little good unless it is translated to others. To maintain our concept of strategic *thinking* as an individual cognitive process, strategic thinking *enablers*, which serve to support and translate strategic thinking, were also identified. Strategic thinking enabler KSAs are defined as KSAs that either help the strategic thinking process (e.g., knowledge of the region) or help translate strategic thinking to others (e.g., communication skills), but are not necessarily required for the cognitive process of thinking strategically. Again, the 28 strategic thinking enabler KSAs were further consolidated and grouped into four strategic thinking enablers.

The strategic thinking enablers are described as follows:

- Knowledge
A strategic thinker has both a broad general knowledge of many disciplines (e.g., geopolitics, world religions/cultures, economics, technology, sociology) and knowledge specific to a strategic environment (e.g., local/regional customs, history, stakeholders) that provides a foundation for strategic thinking.
- Collaboration
A strategic thinker leverages the capabilities of others in a team or informal network (e.g., through cooperation, leadership, building trust, conflict management) to supplement one's own strategic thinking, given inherent individual limitations and time constraints.
- Communication
A strategic thinker communicates candidly and effectively in multiple media (oral, written, visual) to gain individual understanding and move to the shared understanding required for strategy implementation by diverse audiences that require tailored and persuasive messages.
- Emotional Regulation
A strategic thinker is intellectually humble and accounts for his/her own natural limitations and biases related to emotion, perspective, and self-interest, while maintaining respect for differing values and priorities.

The strategic thinking enabler KSAs identified in the interviews are listed in Table 6.

Table 6:

Strategic Thinking Enablers and KSAs

Strategic Thinking Enablers and KSAs
<p>Knowledge</p> <ul style="list-style-type: none"> - Broad general knowledge forming a foundation of awareness, e.g., of general history, global trends, geo-politics, socio-cultural forces, economics, military, technology, etc. - Deep knowledge of the context of a strategic problem, e.g., relevant groups, stakeholders, cultures, relationships, regional history, capabilities, processes, public opinion, etc.
<p>Collaboration</p> <ul style="list-style-type: none"> - Team building (e.g., team composition, identifying and balancing strengths and weaknesses) - Team leadership, managing conflict, interpersonal dynamics, climate, trust, consensus - Networking and relationship building - Organization, project management
<p>Communication</p> <ul style="list-style-type: none"> - Message tailoring, understanding the audience, creating narratives - Effective oral, written, and visual communication skills - Interpersonal tact and professionalism, especially during debate or disagreement - Candor and self-confidence - Concisely communicating complex issues - Narrative ability, storytelling, engaging an audience - Influence skills, persuasion, negotiation
<p>Emotional Regulation</p> <ul style="list-style-type: none"> - Self-awareness and self-control - Respectful of others - Intellectual humility, controlling the impact of personal biases, self-interest, and values - Understanding limits of control and responsibility

It is important to note that knowledge is important for strategic thinking, but it can also be attained through comprehensive information gathering and/or building a team with diverse knowledge to make up for each other’s gaps in knowledge. Therefore, while it is helpful to have the enabler of deep knowledge ahead of time, the strategic thinking skills of information gathering and building diverse teams can augment or even substitute for existing knowledge.

Most KSAs mentioned in the literature were mentioned in at least a few of the interviews. The KSAs mentioned most often, unsolicited, included: critical thinking, analysis, and enablers such as knowledge of history, team building, and communication skills. However, important KSAs mentioned rarely, or only in response to a question, included: creative thinking or innovation, scanning, questioning, testing, synthesis, empathy, reflection, and the enabler of

“I really feel that we, in uniform, and in commissioning sources, overemphasize leadership to the determinant or exclusion of judgment. In a lot of ways, we value the heroic warrior and the leader of that band of brothers so to speak. And that’s really good, but I don’t think we do enough to look at judgment. I think we do it to a fault. We spend so much time on leadership and not enough on decision-making.”

– Faculty

emotional regulation. The fact that some important KSAs were rarely mentioned may indicate that these KSAs are not well understood or valued, or it may reflect the need for a shared lexicon from which Army leaders can speak about strategic thinking. The implications of this finding for Army leader development are discussed further in the Recommendations section below (under “Develop a shared lexicon”).

Strategic Thinking Development

Background. The literature identified a wide variety of KSAs relevant to strategic thinking; these KSAs require multiple methods for their development. Conger’s (1992) leadership development framework was used to help assess and understand strategic thinking development in the Army. The basic concept is that there are four general approaches used in developing leaders: providing conceptual understanding, opportunities for skill building, feedback, and opportunities for personal growth. Allen and Hartman (2008) provide a useful summary of how the most common sources of learning in leader development programs (e.g., group reflection, assessment centers, developmental assignments, classroom-based learning) link to these four approaches. For effective leader development, Conger (1992) states that all four approaches should be incorporated.

Conceptual understanding refers to the general dissemination of theory and concepts, often classroom based, where leaders are exposed to best practices and theories that govern leadership and/or the discipline in which they are operating. Skill building involves breaking down leadership into more specific behaviors and providing safe opportunities to practice and refine those behaviors with developmental feedback. Feedback, from both faculty and peers, focuses on assessment of a leader’s actual performance, noting particular strengths and suggesting ways to capitalize on those strengths as well as improve on relative weaknesses. Finally, personal growth focuses on reflection (individually or as a group) and self-awareness of basic behaviors, values, and guiding principles.

Casey and Goldman (2010) provide a perspective of strategic thinking as a dynamic, interactive, and iterative experiential learning process with individual and organizational factors as equally interactive parts. Casey and Goldman (2010) identify four key activities that comprise strategic thinking in action: scanning, questioning, conceptualizing, and testing. Scanning refers to ongoing information search to identify patterns in the environment. Questioning refers to the process of inquiry to gain perspectives. Conceptualizing is the process of developing possibilities and high-level alternative courses of action. Finally, testing refers to putting an idea into action to examine the results and generate new insights and questions. These four activities represent what individuals are doing when they are thinking strategically. They are recursive and can occur in any order.

Results. To provide structure to the analysis of the development of strategic thinkers in the Army, Conger’s (1992) leader development framework is referenced throughout the following section (as described above).

“Quite honestly, there are a lot of people making strategic decisions that don’t have a lot of background in strategic thinking.”
– General Officer

Professional Military Education. As discussed in the methodology section, programs of instruction (POIs) were reviewed and instructors and curriculum designers were interviewed. Because there is variation across instructors, courses, programs, and schools, analyses are not universally applicable, but all programs should consider whether they can improve in the areas described below. The overall finding was clear – Professional Military Education (PME) is central to Army leaders’ development, including the development of strategic thinking. The POI analyses are organized by the following topics: definitions, KSAs, course objectives, teaching strategies and course frameworks, assessment of learning, and balance in educational activities.

Definitions. The definition(s) of strategic thinking and related competencies serving as the basis for each program were compared and contrasted with those in the literature. Additionally, the degree of internal consistency of these definitions within and across military programs was considered, as well as their alignment with program content and instructional design. The term “strategic” is used before many other words to refer to individuals: advisor, planner, leader, as well as topics: theory, art. The term strategic is also used to refer to both the individual’s ability and the context, contributing to further confusion in terms. Faculty that were interviewed provided a variety of opinions as to what the various terms mean, but there is little consistency. In addition, program materials do not generally indicate if faculty align their definitions of these terms with the academic literature. The academic literature proposes numerous definitions and models for strategic thinking and related terms, so it is not expected that turning to academia would result in a clear cut resolution to this issue.

Knowledge, skills, abilities. As described above, the academic literature and commanders and staff described numerous KSAs for strategic thinking. Faculty were also asked about KSAs, and course content was reviewed for the KSAs forming the foundation for instruction. In addition, the degree of consistency across programs and faculty was considered.

Several of the KSAs mentioned more frequently by faculty fit under the “Comprehensive Information Gathering” competency (e.g., open minded, research skills, tolerance for ambiguity), which is closely associated with understanding the environment. The faculty largely agreed that a broad understanding, analysis, and evaluation of the environment is key. This includes knowing when the environment is changing and plans should be reassessed. There was consensus that the approach taken to understanding the environment was more important than a particular area of knowledge. All focused on environmental complexity, including economic, social, technological, and relational factors in addition to political and military.

Most faculty identified critical thinking as essential for strategic thinking, mirroring the results leading to the “Critical Thinking” competency. A few mentioned “critical and creative thinking” as one concept, but creative thinking is distinct from critical thinking. Further, those who identified “creative” aspects of strategic thinking primarily spoke about critical thinking. Thus, critical thinking appears to be a central KSA the faculty agree on, while the uniqueness of creative or “Innovative Thinking” seems to be missing.

Aspects of “Thinking in Time” (e.g., long-term orientation, historical understanding) and “Systems Thinking” were mentioned as well, but key elements were missing when discussed by

faculty (e.g., forecasting and synthesis were rarely mentioned). KSAs from the “Learning” competency were mentioned infrequently. Faculty also mentioned other KSAs that are identified as strategic thinking *enablers* above, including aspects of “Knowledge,” “Communication” (e.g., oral and written communication skills were discussed frequently), “Collaboration” (e.g., relationship building, collaborative skills) and “Emotional Regulation.”

While faculty agree these KSAs are important they are not necessarily aligning teaching methods to the objectives for effective learning. In addition, there were an array of other KSAs mentioned by individual faculty members such as ethical reasoning, intelligence, habits of mind, intuition, insight, and military skills. These KSAs are either not malleable for development or are only marginally related to strategic thinking. The range and variety of KSAs described by the faculty would suggest that the lack of consensus on the definition of strategic thinking extends to a certain level of inconsistency about what is required to do strategic thinking, presenting a hindrance to formal education programs designed to develop strategic thinking.

Course objectives. Course objectives were reviewed for clarity and purpose. The overwhelming majority of course objectives use verbs such as “comprehend” (understand), “analyze,” or “evaluate.” While these terms represent the complete range of cognitive processing associated with taxonomy-based learning objectives (i.e., Bloom’s Taxonomy: Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956; Anderson & Krathwohl, 2000), they also indicate that material is largely being *reviewed* by students, with very little material *generated* by students. Objectives that require students to create, propose, or design (versus summarize, analyze, or evaluate) are oriented to developing strategic thinking generally, and Casey and Goldman’s (2010) strategic thinking activities of scanning, conceptualizing, and testing abilities specifically. In some cases, course objectives focus on original contributions through research and writing (e.g., “contribute,” “create”). However, there is a notable imbalance between objectives emphasizing analysis of past or current strategy and those for students to “create,” “propose,” “design,” or “formulate” strategy. There is also an apparent disconnect between course purposes as described by faculty (to “open up their thinking,” “develop new perspectives,” “develop habits of mind”) and the heavily analytical approach embedded in the learning objectives.

Generally speaking, many course objectives communicate intent to change mental habits through words such as “appreciation,” “inculcation,” and “mastery.” These terms match the purposes of the courses, which call for understanding the complexity of current environments and in the advanced level courses, “developing plans for a way forward.” It may be beneficial for faculty to add or modify program/course/seminar objectives to reflect a future focus to include another strategic thinking competency, thinking in time.

Course objectives were also reviewed for clarity and a focus on students. A common weakness in the framing of educational learning objectives is an orientation around what the teacher is teaching or how they are teaching it. Student-focused learning objectives are framed around what the student will know or be able to do after taking the course. Therefore, it is important to ensure course objectives are written from a learning standpoint (i.e., what the student should know or be able to do at the end) versus a teaching standpoint (i.e., what the instructor is doing).

Teaching strategies and course frameworks. Teaching strategies were examined for consideration of variety and the appropriateness of the strategies for each objective. The vast majority of programs rely on heavy amounts of daily reading, leaving little time for reflection on the readings. Most of the faculty indicate there is little lecture, aside from guest speakers, and that the readings are the basis of class discussion. One principle of good instructional design is to provide questions for students to answer as they read, focusing students' effort and making better use of class time because they are prepared for discussion. Some faculty provide such questions, but this could be done more to enhance learning.

A variety of other teaching strategies are used, including case studies, small group exercises, role-play, observations, site visits (staff rides), diagramming, and debate. However, technology is largely under-utilized in teaching, with exceptions. There was little mention of videos, film, or interactive media in or out of the classroom, except for one course that relied heavily on incorporating video and audio recordings and blog sites. The Army may want to improve their leveraging of technology to enhance the learning process by appealing to visual learners. Simulations, games, and virtual reality could be used to address learning objectives related to creating and designing strategy, and also provide the means for testing it. In addition, a learning management system (e.g., Blackboard) can provide students a means to connect with one another outside of class through discussion boards to facilitate group work and knowledge sharing. Including technology could also link seminars across schoolhouses so that younger leaders could learn as higher ranking leaders go through strategic practical exercises. The focus could remain on the Colonels, but younger leaders would have the opportunity to learn from them.

Faculty indicated they use one or more guiding frameworks, models, and/or tools for students to analyze history, case studies, materials, etc. Some of these were associated with critical thinking, others center on a set of economic principles, while others were not defined in terms of their origins or use. It is generally unclear how the frameworks are tied to strategic thinking or exactly how they are applied to the course material. Thus, it is not known how these frameworks facilitate the development of strategic thinking. In addition, it is not clear that all program faculty are familiar with each other's frameworks in order to share and build upon them.

Assessment of learning. The formal assessment methods built into each program were reviewed to verify that the methods would provide an appropriate indication that students had met the learning objectives. Most courses use some combination of oral and written assignments, including presentations, argument critiques, papers, and briefings. Most also have oral and/or written exams, occasionally in a take-home format. Most work is graded, and in some cases, include class participation. Given that the faculty interviewed valued presentation skills, consideration should be given to making this a separate grade (not part of general class participation). Some courses include grading rubrics, but faculty indicated they were not always used and evaluation was subjective.

An improvement would be to ensure assessments are aligned with learning objectives. Further, summative assessments should be based on clear grading rubrics that align with the learning objectives (and therefore the KSAs). Therefore, a best practice is to provide rubrics so

students know what is expected of them. Currently, inconsistencies in grading practices are magnified by the aforementioned lack of consistency in strategic thinking definitions and KSAs.

Balance in educational activities. When considering the four approaches (conceptual understanding, skill building, feedback, personal growth) to leader development, it is important to note that incorporating all four approaches is the best practice, although specific practical guidance on timing or order of each approach is not provided in the academic literature (Conger, 1992). Therefore, the focus should be to incorporate each approach into course designs to maximize leader development.

A major focus of the programs examined is that most courses are heavily focused on conceptual understanding of the environment, especially in regard to U.S. and world history, politics, government, and the military itself. Some courses include economics. Demographics, socio-cultural factors, and technology are not generally emphasized. Skill-building activities focus heavily on analysis of information provided by the instructor in writing or verbally, and effectively develop the ability to question and conceptualize the material. However, there is limited identification and development of new material by students. This limits the development of scanning and testing abilities that Casey and Goldman (2010) suggest are required to develop strategic thinking.

Feedback was described as individual and predominately summative in nature. The extent of formative feedback and its nature was not clear. A best practice would be to provide frequent formal formative feedback to all students, providing students with an idea of what they need to focus on improving. There were many small group activities and group assignments; however, no team feedback was identified, nor was there any mention of 360° feedback. Most faculty acknowledged that Army work takes place in groups, yet did not describe the skills required for effective collaboration and cooperation.

When Allen and Hartman (2008) describe Conger's (1992) personal growth approach, they focus on how well programs induce reflection on behaviors and values. In the courses reviewed, reflection was seldom mentioned in formal descriptions of course-related activity. When reflection was used, it seemed to encompass content reflection only, rather than reflection on process (how something was done) or premise (underlying assumptions: Mezirow, 1990). Deep learning requires all three types of reflection. Providing guidance and feedback that deepens reflection beyond content to process and premise would improve personal growth potential. In addition, there was no mention of group reflection (on group processes), so incorporating opportunities for team reflection would also foster personal growth. Thus, the personal growth potential from the courses could be greatly enhanced if more and deeper reflective practices were included in the curriculum.

Advanced civilian education. Advanced civilian education was highly touted as developmental for Army leaders in building strategic thinking skills. However, it is important to note that it is not civilian education per se that develops strategic thinking skills, it is the academic rigor, exposure to perspectives outside the military, increased amount of

“The most important foundation for strategic thinking capabilities is, I would argue, advanced civil schooling.”
– Field Grade Officer

feedback, and reflection that helps develop strategic thinking, as is detailed below. Drawing from analysis of the literature, the interviews, and Conger’s (1992) leader development framework, the benefits of civilian education are outlined below in regards to conceptual understanding, skill building, feedback, and personal growth.

The most obvious benefit of advanced civilian education is the academic rigor and educational experience of the programs attended which leads to increased conceptual understanding. Civilian education also builds strategic thinking skills, such as critical thinking skills, research skills, synthesis, open mindedness, and communication skills. Critical thinking skills are a central strategic thinking skill gained from strong civilian graduate school programs. Further, another specific strength of civilian graduate school is building research skills (falling under the strategic thinking competency of “Comprehensive Information Gathering”) including learning and practicing how to gather, analyze, and draw conclusions from a wide range of data and synthesize the data into a coherent narrative. Synthesizing information is especially important when advising Army leaders who are constantly bombarded by information.

The exposure to civilian’s perspectives and experiences broadens Army leaders’ ability to think differently in new contexts and provides opportunity to practice remaining open minded. Further, Army leaders are exposed to a new set of ideas and resources.

“...the opportunity to go to civilian education [was] very, very important as far as getting you to [consider a] broader range of resources.”
– General Officer

In addition, the writing skills required from strong graduate school programs teach students not only how to be precise with word selection, but also offers practice in making thinking explicit. Having to articulate thought processes for others with different experience and different schemas facilitates analysis and personal reflection. It is difficult to check one’s thinking if thoughts don’t have to be clearly articulated. Army leaders may find themselves asking, “Why do I think this way?” and “Why don’t others see it this way?” Having time for reflection during advanced civilian education can lead to personal growth in a way not likely to occur in regular Army assignments or current PME.

“[Students] are very good at pulling factual observations out of reading. They are typically very poor about doing the logical inference in getting from the observation in the reading to a logical finding.... In class, I can point out to them – A doesn’t establish B, force them to fill in the gaps and when they say something that is logically contradictory, I’ll point that out and gradually I can map on the white board the logic going from factual findings in this reading to an analytical conclusion but it’s developed in conversation with the group where I force them to fill in logic gaps, I correct errors in deduction and what I hope that does is it starts to develop a style of thought that they’ll apply in other settings.”

– Faculty

Finally, advanced civilian education provides opportunities for explicit and candid feedback, the fourth approach to leader development in Conger’s (1992) framework. Feedback comes from assignments, tests, and interaction with different students, faculty, and academic advisors. One aspect of climate in institutions of higher education is the open environment of critique and intellectual challenge that is encouraged. The environment suggests that no one is expected to have all the right answers and speaking with humility is encouraged. Programs that have more academic rigor tend to have higher standards which often result in more feedback to the learner.

One participant talked about the value of having diversity in the degrees attained through civilian education. When discussing his critical incident, he explained that having a mix of social science disciplines on the team greatly enhanced the team’s performance. Further, he explained that a mix of Ph.D.s., non-Ph.D.s, and people with a PME background are a good group to do strategic thinking, making the point that Ph.D.s should not run the war – a mix of backgrounds is better.

Overall, participants were very positive toward advanced civilian education, but it is important to note that the Army can mimic the benefits of academic rigor, exposure to perspectives outside the military, increased amounts of feedback, and reflection that helps develop strategic thinking, through means other than providing civilian educational opportunities. For example, the academic rigor in PME could be increased and exposure to perspectives outside the military can be attained through broadening experiences or a student body including more representatives from coalition and North Atlantic Treaty Organization (NATO) partners.

Assignments. Assignments are a key area in which strategic thinking development occurs. Considering the amount of time an Army leader’s career is spent in the classroom, compared to the amount of time spent in the field, this is no surprise. The most commonly mentioned theme when discussing assignments was the importance of having a diversity of assignments, i.e., assignments that broaden perspectives or provide exposure to different processes, organizations, leaders, etc. which lead to increased conceptual understanding. Broadening experiences help develop strategic thinking because they push Army leaders to get out of their comfort zones and gain new experiences that contribute to a broader knowledge base, which enables strategic thinking in the future. Some think broadening should happen as early as one’s second assignment.

“I have never been assigned to the same place twice.... I know how a lot of things are done in other places and I can draw from those experiences and I often do to try something, and it might work here, and it might not. So I think that diversity of background and experience helps a lot.”
– General Officer

“Personally, probably some of the biggest growth I’ve had to deal with thinking strategically has been when I’ve not been in a traditional Army organization.”
– General Officer

One of the benefits of a diverse range of assignments is that it helps Army leaders avoid getting in a rut on how things *should* be done. Varied backgrounds and experiences expose Army leaders to a variety of ways in which something can be done. In turn, this should reduce biases for familiar processes and keep leaders open to new and/or different ways of doing things. This also supports the development of strategic thinking KSAs such as open-mindedness.

The more commonly mentioned assignments or characteristics of assignments that were considered most developmental for strategic thinking were:

- Teaching
- Joint and Interagency assignments
- Exposure to General Officers (GOs)
- Strategic-level assignments and exposure to strategic and/or complex problems (e.g., combat experience in a complex environment, dealing with complex and/or strategic problems on an Army staff, doing strategic planning, etc.)

As with other developmental opportunities, assignments can develop strategic thinking through increasing conceptual understanding and opportunities for skill building, feedback, and personal growth (Conger, 1992).

Teaching. Teaching was an assignment that came up as valuable for the development of strategic thinking in many interviews and is the only assignment discussed that provides opportunities for all four of Conger’s (1992) leader development approaches. Teaching can occur in other places, but for the purposes of the following description, teaching in a classroom is considered.

One way in which teaching develops strategic thinking is through conceptual understanding. It is necessary for teachers to gain conceptual understanding of the topic they are going to teach before they ever step in front of students. Teaching also helps develop deep knowledge of a topic area because faculty must process the information repeatedly through the teaching process which facilitates learning and builds intellectual capital. Developing deep knowledge also enables the process of strategic thinking.

Further, teaching in the classroom provides the opportunity to build and practice a wide variety of strategic thinking KSAs. First of all, the act of teaching tends to take Army leaders out of their comfort zone, giving them a new experience that broadens their perspectives and the “opportunity to think more broadly,” which directly relates to the strategic thinking competency “Comprehensive Information Gathering” (e.g., considering broad inputs, scanning the environment). Similarly, teaching tends to incubate curiosity which is helpful in subsequent assignments when applied to new situations.

“...intellectually I had to be on my game every day I went into that classroom because I had to know where that class was gonna go, what are the objectives I was trying to [achieve], and how I was going to get there.”
– Field Grade Officer

Leading students through the learning process also helps leaders practice critical thinking, including logical and analytical thinking skills, and conceptual ability (which falls under the “Learning” competency). Forecasting skills (a subcomponent of the “Thinking in Time” competency) also help prepare for student questions. Others agreed that sitting in front of a classroom for several hours a day explaining concepts and bringing students through the learning process and exploring ideas in depth is very challenging, especially because it is so different from most Army assignments. Teaching can also help develop visualization skills and innovative thinking through the use of certain teaching methods.

In addition to teaching, faculty members also have to develop and plan syllabi and assess if students are learning what they intend for them to learn, which helps develop strategic thinking, planning, and advising, specifically through strategic thinking KSAs such as researching skills and iterative assessment. Strategic thinking skill building is key to developing strategic thinking capability (Casey & Goldman, 2010), so this is a major strength of teaching as a broadening assignment.

Another way teaching is developmental is that feedback is inherent in the teaching process. When teaching, the teacher receives feedback from students in and outside of the classroom, through various means, such as students' questions and comments, class discussion, assignments, and tests. For example, teachers can tell how well they are teaching the material if all the students are confused or if they all score poorly on an assignment or test. Feedback is the only component of leader development that was not discussed in most other assignments.

Finally, teaching is developmental through personal growth. Unlike many assignments, teaching tends to be an assignment that allowed time for reflection, a key component of personal growth in leader development (Conger, 1992). Further, one participant said he had the "freedom to think" when teaching, another indicator that reflection can occur in teaching assignments.

It is important to note that teaching is not exclusive to the classroom; teaching also occurs at the training centers and when serving as an advisor, where similar benefits can be accrued. One strategist (Functional Area 59; FA59) explained that strategic advisors often are helping facilitate the learning of whomever they are advising. Participants discussed assignments at the training centers and as advisors as developmental for strategic thinking competencies, as well.

"I think a huge part of what we do as [FA] 59s is teach."
– Field Grade Officer

Conceptual understanding. In addition to teaching, other assignments are developmental through Conger's (1992) four leader development approaches, as well. Joint and Interagency assignments, exposure to GOs, strategic-level assignments, exposure to strategic and/or complex problems, and fellowships increase conceptual understanding by exposing leaders to other services, DOD, other government agencies, NATO organizations, different processes (e.g., resource allocation, personnel management, policy making, interagency planning), and a diverse range of people from other organizations who have different backgrounds, educations, agendas, etc. Deployments also provide an opportunity to increase conceptual understanding in that deployments allow Soldiers to serve outside the continental U.S. and provide the opportunity to work with another culture. Conceptual understanding is increased because Soldiers are exposed to different values and ways of doing things.

In addition to the many benefits of teaching described above, the climate at educational institutions increases conceptual understanding because of the exposure to different people, and the benefits do not end after the assignment is completed. Many participants who taught said they utilized the strong network for comprehensive information gathering in future assignments.

"It was a group where everybody was excited about the profession and learned from each other."
– General Officer

“It was not only teaching the cadets, it was the interaction with other faculty members who I thought were brilliant. Learning from them, it felt like every lunch was a professional development seminar, dealing with some of those folks. So I think I was hugely benefited by that process.”

– General Officer

Skill building. Assignments also provide skill-building opportunities. For example, repeated exposure to dealing with complex problems is developmental because leaders are able to practice the skills required to tackle such problems repeatedly until they are more comfortable with the skills required. Some of the specific strategic thinking KSAs built through exposure to complex problems that were mentioned in the interviews were visualization skills, forecasting, anticipating 2nd and 3rd order effects, synthesis, and innovation. For example, several participants mentioned experience with strategic communications as being developmental. Being involved with strategic communications not only develops communication skills (one of the strategic thinking enablers), but it also builds KSAs such as forecasting, anticipating 2nd and 3rd order effects, and critical thinking.

In addition, one way synthesis was practiced in high level assignments was through needing to glean strategic guidance from high-level documents. Further, assignments at the strategic level are also developmental because the focus tends to be more on thinking rather than routine or standard operating procedures (SOP), thus developing innovative thinking, rather than simply re-using or re-purposing something someone else created as is often the case in other assignments.

Deployments also offer skill-building opportunities. Soldiers can practice important strategic thinking skills when working with another culture. For example, to understand another culture takes comprehensive information gathering by scanning the environment, seeking information from disparate sources, remaining open minded, perspective taking, and tolerance for ambiguity and complexity. In addition, other KSAs under the strategic thinking competencies of “Learning” (e.g., adaptability, continuous learning), “Critical Thinking” (e.g., analytical thinking, questioning, understanding nuance) and “Systems Thinking” (e.g., synthesis) are developed.

Feedback and personal growth. Feedback and personal growth opportunities also exist within assignments, but to a lesser extent. In some cases, when working closely with a GO, participants described learning from being exposed to the leader’s thought processes and vision. Such exposure can develop strategic thinking to some extent, if reflection and personal growth result from the exposure. However, the extent to which exposure to GOs develops strategic thinking depends on the leader, the climate, and the level of interaction in which feedback is given (e.g., getting the opportunity to meet many great leaders and ask for advice), or a relationship develops that allows for mentorship. Mentorship will be discussed in the following section.

GOs can also serve as role models who embody specific strategic thinking competencies. When GOs demonstrate such competencies, their subordinates are more likely to reflect on their own competencies and model themselves after their leader, resulting in personal growth. One

participant described an event in which his boss who was a GO decided to pilot a new idea, even though everyone else was certain it would never work. As it turned out, the new idea worked great, illustrating a perfect example of the strategic thinking KSA of testing. The GO was also exhibiting innovative thinking by trying something new.

Fellowships can also provide opportunities for personal growth, but the experience is only beneficial if leaders understand what they are supposed to be getting out of it. Therefore, it is important to include exercises, such as weekly journaling about the strategic appreciations that were made and how they were made. Such exercises ensure that reflection is occurring, so the benefits of the experience are maximized. Working with another culture also causes Soldiers to reflect on their own culture and assumptions, resulting in personal growth.

Developmental characteristics. Besides specific assignments that participants discussed as developmental for strategic thinking, there were also some common characteristics that were mentioned as developmental. Time for reflection is one characteristic that develops strategic thinking in assignments. However, most assignments do not allow time for reflection, which is a barrier to strategic thinking development and will be elaborated on in the Cultural Barriers section. Nevertheless, most if not all assignments have the potential to develop leaders through personal growth. For example, one participant described a tactical level assignment that he found developmental because he spent time thinking through the connection between what he was doing at the tactical level and what was happening at strategic levels. This kind of reflective practice could be inculcated into Army culture and facilitate many more opportunities for leader development.

Another characteristic of assignments that is developmental for strategic thinking is being allowed to take risks. As will be discussed in the Cultural Barriers section, most Soldiers do not feel comfortable taking risks because risk taking is discouraged by Army culture. This makes sense because in many situations Soldiers encounter, risk taking could have serious if not fatal consequences. However, in certain circumstances, risk taking is important so Soldiers can try new things and innovate without fear of making mistakes or jeopardizing their careers. One example from the interviews was being sent to an assignment in which it seems failure is imminent. In this type of situation, risk taking becomes more likely because the situation facilitates a “nothing to lose” attitude. Therefore, when participants discussed situations like this, they talked about how they were free to try new things and were more creative and innovative, which are valuable strategic thinking skills that are rarely practiced in assignments.

Further, facing major constraints, such as dealing with limited resources was described as a characteristic of assignments that helped develop creativity and innovation. When resources are limited, Soldiers are forced to find innovative approaches to accomplish tasks and goals. New assignments that did not previously exist are another chance for innovative thinking to be developed because there is no precedent for how the job should be done.

There are a few final things that should be noted about developmental assignments. First of all, many times participants described experiences that developed their strategic thinking capability in assignments happening early in their careers, which was especially beneficial because the early exposure shaped them throughout the rest of their careers. Therefore, it is

important to ensure strategic thinking development starts early, even if it is just through exposure to strategic and/or complex problems. It is also important to note that while experience is invaluable, Army leaders can make up for lack of experience by forming teams with people who have the diverse range of skills and experience needed for the task. Finally, it is important to note that feedback was the least mentioned leader development method by participants.

Mentorship. Mentorship was not discussed as frequently or in as much depth as PME, advanced civilian education, or assignments, but some Army leaders discussed mentors who aided in their strategic thinking development. Mentorship is the voluntary developmental relationship that exists between a person of greater experience and a person of lesser experience that is characterized by mutual trust and respect (AR 600-100). Considering Conger’s (1992) framework again, mentorship can help develop leaders through increasing conceptual understanding, skill building, feedback, and personal growth.

“I think having discussions about what does reflection mean, because I think it means something different to every person and people do it differently, but what I’ve come to value, as I’ve become more experienced, is to have people share with me how they reflect, what they reflect on.”
– General Officer

The most unique aspect of mentorship is the emphasis on feedback, which is less present in other developmental opportunities as described above. Several participants specifically mentioned the valuable feedback they received from mentors helped them become better strategic thinkers. On the other hand, conceptual understanding was the least mentioned benefit of mentorship, as opposed to being the most prevalent in all other developmental experiences. Skill building and personal growth opportunities also exist through mentorship.

When asked how mentorship is helpful, many participants explained that gaining access to others’ perspectives and thought processes helped them develop their strategic thinking ability. The exposure helps serve as a model for other ways to think, which can help mentees learn about strategic thinking KSAs they should be working on developing, and also creating opportunities for self-reflection when comparing their own perspectives and thought processes to those of their mentors.

A problem-based approach to mentorship is also valuable in developing individuals’ strategic thinking ability. For example, the mentee can learn from the mentor’s understanding of the context of the problem he/she is trying to solve. In addition, working through strategic problems with a mentor and discussing potential solutions provides an opportunity for mentees to practice the strategic thinking KSAs needed to solve the problem. The most commonly mentioned strategic thinking KSAs that can be learned and practiced in a problem-based approach to mentorship are: seeking information (including input from those known to have differing opinions), considering broad inputs (remaining open minded), creativity/innovation, flexibility/adaptability, synthesis, and conceptual ability. Mentorship also tends to encourage the practice of the reflective practitioner – taking time to stop and think about difficult problems and reflect on them to achieve a better solution.

Some participants added a caveat about the opportunity to develop strategic thinking ability through mentorship. When asked if strategic thinking can be mentored, one General Officer stated, “If you have the traits and attributes piece of it, absolutely.... But I don’t think you can mentor someone who has no inclination and little exposure.” This sentiment was shared by some, but not all participants.

Self-development. Self-development is another area that is key to developing strategic thinking ability. Many participants discussed the importance of self-development in strategic thinking development, which is in part due to a deficiency of strategic thinking developmental opportunities elsewhere. In addition, the current Army culture prioritizes other activities above strategic thinking development at this time, putting more responsibility on Army leaders to develop strategic thinking KSAs on their own time. Therefore, to increase strategic thinking ability, more self-development opportunities could be developed and disseminated across the Army.

“You have to do more to develop yourself for those higher level responsibilities.”
– General Officer

Other experiences. In addition to PME, advanced civilian education, assignments, and mentorship, participants mentioned a few other experiences that helped them develop their strategic thinking ability. These experiences tended to develop strategic thinking through conceptual understanding, skill building, or a combination of the two. Reading voraciously as a child and throughout life was one example of a commonly mentioned experience that increases conceptual understanding and builds broad knowledge important for strategic thinking. A natural inclination toward history (which tended to lead to more reading) and talking to a wide range of people were also mentioned. Therefore, reading broadly, studying history, and interacting with diverse people all serve as excellent sources of self-development for strategic thinking ability.

Exposure to other cultures in childhood or early adulthood is developmental for strategic thinking ability, as well. For example, moving around a lot as a child (with or without parents in the military), or studying abroad in high school or college can help develop strategic thinking ability through increasing conceptual understanding of different cultures, values, and perspectives, similarly to how working with another culture during an assignment develops strategic thinking. Living in a variety of places or studying abroad can also develop key strategic thinking KSAs such as open mindedness, perspective taking, adaptability, and communication skills (a strategic thinking enabler), along with the KSAs described above when discussing working with another culture. Seeking information from disparate sources is another strategic thinking KSA that can be developed when exposed to new cultures; scanning the environment and researching the culture are skills used to learn how to fit in. Finally, living in another culture tends to create many opportunities for reflection and personal growth as observations about the new culture are made and compared to the native culture.

Family experiences when growing up or early job experiences help develop strategic thinking skills, as well. The skills mentioned were perspective taking, open mindedness, tolerance for ambiguity (e.g., encouraged to think in the gray, not the black and white), flexibility, creativity, and listening skills (important for information gathering and

communication). Being rewarded as a child for challenging conventional wisdom was also mentioned as developmental. It is important to note that experiences prior to joining the Army can be especially developmental, considering that if the skill was developed in childhood, there are many opportunities to practice and build the skill throughout a lifetime.

Overall themes for strategic thinking development. In addition to the numerous developmental experiences described above, there were some broad themes that emerged from the data. One of the most commonly discussed themes was that the development of strategic thinking should start earlier in a Soldier's career. There was consensus with participants that a person cannot simply "flip a switch" once they reach a certain level and become a strategic thinker; strategic thinking develops over time.

"I think we have to start much earlier. Sending Lieutenant Colonels to [the Army] war college is not going to solve this problem. It's too late. We have to start in commissioning programs."
– General Officer

A foundation for strategic thinking could be laid as early as pre-commissioning by focusing on developing strategic thinking KSAs such as critical thinking, openness to other points of view and information, conceptual ability, innovative and creative thinking, and research skills. Starting to build the KSAs early would allow for more opportunities to practice the skills, and thus more time to achieve higher levels of proficiency by the time strategic thinking is required. In addition, it is especially important to develop strategic thinking earlier because, through the global interconnectedness brought about by the internet, tactical and operational decisions and actions can be presented to an international audience very rapidly. Therefore, starting earlier on developing strategic thinking KSAs, strategic understanding, and strategic context would benefit individual Soldiers and the Army.

"Ten years ago, fifteen years ago, it was clear cut, strategic level will never touch operational level and never touch tactical. But now, a decision [a private] makes within seconds can be strategic.... We've got to realize how the world has changed, how we have to create strategic leaders earlier because they're being involved in it early on."
– General Officer

While some participants noted that not everyone has the inclination or propensity to become a great strategic thinker, as noted above, it is still important for all Soldiers to have strategic understanding. With increased strategic understanding, Soldiers are able to make better decisions about the best actions to take in a variety of situations.

Assessment of Strategic Thinking

Background. In the academic literature, assessing the ability to think strategically has not been covered in much depth. Briefly touched on in the POI analysis section, the assessment of the output of strategic thinking (i.e., the strategy developed) is a particularly thorny issue as it requires a determination of how well the strategy worked. By most accounts, strategy is a long-term, macro-level process of managing and adapting to change. This change occurs through the interaction of a multitude of variables, some of which are under the strategic thinker's control, some of which are under an adversary's control, and some of which are, or appear to be, random. Furthermore, there will always be limitations to the quantity and quality of information available about those variables.

Therefore, assessing strategic thinking solely based on evaluations or metrics about the success of a strategy is problematic. There are too many interceding variables that separate a strategic thinker from the result of a strategy. Furthermore, there is a large separation in time between the act/process of strategic thinking and the point at which a strategy can reasonably be evaluated by its results. This is not to say that evaluating results is unnecessary. It is, however, insufficient to evaluate how well someone is conducting strategic thinking.

The assessment of strategic thinking could be attempted in real organizational strategy-making settings (e.g., the case studies described in Acur & Englyst, 2006) or in a simulated re-creation of those settings for the purpose of education and/or assessment (e.g., the assessment center described in Dragoni, Oh, VanKatwyk, & Tesluk, 2011). In either case, there are costs and weaknesses, most notably the significant resources required to assess this way, thereby restricting the number of candidates for assessment.

To cast a wider net and assess more candidates, other approaches can be taken. Goldman (2013) identifies the attempts to assess strategic thinking into four approaches. One approach is to look at typologies or styles of strategic thinking that attempt to measure strategic thinking ability and disposition to use it (e.g., Bates & Dillard, 1993; Dagher & Al Zaydie, 2005). These types are based on personality theory. Unfortunately both theoretical underpinnings linking strategic thinking with personality types and studies associated with them are missing.

A related approach to assessing strategic thinking has used proxies of cognitive and behavioral processes and related personal characteristics (Goldman, 2013). Measures such as critical thinking, creative thinking, Meyers-Briggs Type, and leadership profiles have been suggested (e.g., Pellegrino, 1996; Rosche, 2003). The primary conflict with this approach is coming to an agreement on what competencies are appropriate to measure and how to combine them. For example, should general cognitive ability and creative thinking carry greater weight? Consistent with this approach, some have attempted to identify and assess cognitive sub-components of the strategic thinking process. For example, some work has been done on conceptualizing (Weyhrauch & Culbertson, 2014; Yorks & Nicolaides, 2012) and assessing (Pisapia, Reyes-Guerra, & Coukos-Semmel, 2005; Weyhrauch, in preparation) the mindset of a strategic thinker.

A third approach to assessing strategic thinking ability relies on the perceptions of informed others, such as such as supervisors (e.g. Stumpf, 1989) or those deemed to be experts by others (e.g. Goldman, 2005). These approaches may have merit, but they rely on others' understanding of strategic thinking.

A final approach considers behaviors of the individual. Tools which purport to measure this, however, often score things such as "having a vision" or "communicating a plan" (Goldman, 2013). These are technically outcomes of strategic thinking, rather than the specific strategic thinking behaviors that lead to those outcomes. It may be unlikely that all aspects of strategic thinking can be identified in either self-reported or observable behaviors.

Thus, there remains a general lack of evidence, and thus agreement, about how to assess strategic thinking, whether directly or indirectly. The dearth of carefully developed and

empirically validated assessment tools designed for the purpose of assessing strategic thinking creates a situation for the Army in which assessment can only be done by educational instructors or training Observer/Controller/Trainers (OCT) on an ad hoc basis, with little or no standardization of a shared approach.

Results. Participants who were asked about assessment (whether commanders, staff officers, civilians, or faculty) typically had little to say on the topic, compared to other topics covered. Part of the issue may be that assessing strategic thinking is more qualitative than quantitative, whereas quantitative assessments tend to be more straightforward. In addition, assessing strategic thinking through the success of the strategies produced must occur in the long-term, yet Army leaders tend to be focused on day-to-day tactical issues (an issue expanded on in the Cultural Barriers section). Further, like the academic literature, the Army does not have an agreed upon definition of strategic thinking, and it is difficult to assess something that is not clearly defined.

One area that participants commented on when asked about how to assess strategic thinking was indicators of good and bad strategic thinkers. While these indicators have not been validated they provide guidance on what Army leaders look for in their staffs (see Table 7).

“The biggest one that I look for is perception. In other words, one of the strongest comments I ever write on anybody’s OER [Officer Evaluation Report] and NCOER [Non-Commissioned Officer Evaluation Report] is ‘this person perceives connections that others miss.’”
 – General Officer

Table 7

Descriptions of Strategic Thinkers Provided by Participants

Good strategic thinkers:
<ul style="list-style-type: none"> - Try to understand the big picture - Always operate within a strategic framework (try to understand all demands, stakeholders, etc.) - Perceive connections that others miss - Communicate persuasively from a point of view, developing evidence and arguments to support their points - Get to the heart of the matter without being distracted by extraneous information - Have a proven track record of dealing with complex issues - Perform well throughout difficult assignments - Have some academic or institutional exposure to strategic thinking and strategic planning - Have experienced a broad range of assignments not necessarily in one particular track - Have relevant experience in more than one assignment - Have some degree of PME that goes above the tactical level
Bad strategic thinkers:
<ul style="list-style-type: none"> - Won’t recognize historical examples - Come up with something that doesn’t “marry its time” [i.e., indicates a lack of contextual understanding] - Lack broader appreciation and integration of all factors - Focus too much on tactical details because it’s comfortable and familiar (“They tend to pole vault over mouse turds.”)

The Army could use the information from Table 7 as a point of departure for developing strategic thinking assessments tailored to the Army that could be used as part of selection decisions. The lack of consensus on how to assess strategic thinking indicates a major issue because if one cannot assess strategic thinking, how can the Army select strategic thinkers when they are needed in specific situations?

Developing strategic thinking ability is a long-term process, as discussed above. It is important to reinforce strategic thinking potential with the right opportunities, experience, and education to develop strategic thinking ability. Therefore, identifying and assessing Soldiers' strategic thinking potential early in their careers would allow Soldiers to be intentionally developed throughout their careers so they are ready to do high level strategic thinking when they are required to at higher ranks and levels.

"[Strategic thinking assessment] should be a factor in considering what positions you put people in and what positions you don't put people in."
– General Officer

In addition, assessments of strategic thinking could also be used to help identify an individual's gaps in specific KSAs related to strategic thinking for self-development purposes and to aid in team building. For example, if a team is being formed to tackle a strategically complex problem, individuals' assessments could be used to ensure the team is well-balanced to perform optimally. Finally, strategic thinking could be assessed through mentorship. Some leaders can identify young leaders with strategic thinking potential, mentor them, and help pull them through the system, although relying on supervisors has weaknesses as noted in the background section.

Cultural Barriers to Strategic Thinking

Organizational culture background. The Army's organizational culture plays a critical role in whether development and assessment are incorporated into the organization. Organizational culture can be defined as "a pattern of shared basic assumptions learned by a group... which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel" (Schein, 2010, p.18). There is a robust literature dedicated to organizational culture research. Gerras, Wong, and Allen (2008) examined the organizational culture literature and recommended a hybrid model for the U.S. Army combining work by Cameron and Quinn (1999) and Schein (1999). The hybrid model uses Schein's artifacts to indicate the critical assumptions identified by House, Hanges, Javidan, Dorfman, & Gupta (2004). The five GLOBE assumptions (out of nine total) examined by Gerras and colleagues (2008) were high performance orientation, in-group collectivism, institutional collectivism, power distance, and assertiveness. The hybrid model then explores ways to change those assumptions using mechanisms suggested by Schein and incorporating Cameron and Quinn's competing values (Gerras et al., 2008).

Army cultural barriers. Participants were asked about aspects of the Army organizational culture that promote and inhibit strategic thinking. There were three main themes that came out of the interviews that describe Army culture as it pertains to strategic thinking, which include tactical excellence, uniformity, and chain of command.

“I don’t think we need exquisite new programs, I think we need a new culture.”

– Civilian

Tactical excellence. It cannot be denied that the Army organizational culture values strong tactical excellence. This is at the core of the purpose and identity of the Army. However, Army culture is so focused on tactical excellence that other forms of excellence are undervalued, which can be detrimental to strategic thinking. When asked about an incident that required strategic thinking, the majority of participants talked about a tactical incident or an operational-level problem that was an immediate threat. Certainly, many tactical- and operational-level problems can have strategic implications, but focusing on the pieces of the problem that are most immediate seemed to preclude future-oriented thinking.

“We are losing our ability to look beyond the ‘tactical fight of the day.’”

– General Officer

“We tend to produce a lot of tacticians who are very comfortable thinking tactically and solving tactical problems, but not necessarily engaging at a strategic level.”

– Field Grade Officer

The main reason tactical excellence may be out of balance with other measures of success is because the Army rewards tactical excellence above and beyond anything else. The common example mentioned in the interviews was that if Dwight Eisenhower was in today’s Army, he would not have been promoted past major because the promotion system is geared toward tactical excellence and undervalues other experiences. However, research shows that to develop the ability to think strategically, exposure to a broad range of assignments is key.

Participants expressed concern that those who may thrive at the strategic level, as Eisenhower did, are not being promoted because they do not exhibit tactical excellence early in their careers. Further, the developmental experiences that reinforce tactical excellence are not necessarily the same experiences needed to develop strategic thinking. For example, many expressed concern with taking broadening assignments that would help develop their strategic thinking ability because it would take them off the career path needed for promotion. Thus, there is a fundamental tension because most high-level jobs are institutional and strategic, but leaders get there through tactical excellence, which takes a different set of skills to be successful.

“We breed into our leaders a very tactical, near-term problem-solving approach and culture, as opposed to a problem management over time culture. The thing is I believe the Army needs both, but right now our culture is heavily weighted towards the immediate, near-term problem-solving.”

– Field Grade Officer

“From the time I come in to the time I go home, I’m doing. I’m going. [But] ‘If I’m doing, who’s thinking?’ ...I just sometimes wonder, who is helping the boss think? If I’m the chief of staff and I’m doing, and I know everybody below me is doing, then I go ‘who’s thinking?’ Well, the boss is thinking. That’s good. That’s what he’s supposed to do, but we’re supposed to help him think.”

– General Officer

In the assessment section, the difficulty of assessing strategic thinking and success in dealing with strategic issues was described. Tactical success is much easier to measure and assess, leaving Army leaders with a feeling of accomplishment and satisfaction when completing day-to-day tasks. It is also easier to rate Soldiers on technical and tactical tasks.

“Army leaders are hard-wired to solve problems. That’s what leaders do. So if you give me a captain’s problem, I’ll solve it, but I shouldn’t. I should be dealing with only those things that only I can do.... one thing I can guarantee is that the Company Commander and First Sergeant cannot interface with the Joint staff, the office of the SECDEF [Secretary of Defense], and all the under and assistant secretaries, nor can they interface with Congress on a daily basis, nor with the rest of the executive branch. So everybody is running to these problems that frankly ought to be handled several levels below them. ...on any given day I vote yes that the chief and the secretary and the under and the vice and the SMA [Sergeant Major of the Army] are dealing with strategic issues. I know they are, I know they’re thinking about it every day. I’m not sure the institution has organized itself in its practice or behavior to support that. Everybody’s trying to do something that somebody else is already doing. We’re back to almost this characterization of five year olds playing soccer. We’re all running to the problem of the day.”

Further, Army leaders are well prepared to address technical and tactical issues, so they tend to spend most of their time on these issues. The strong drive to complete tactical day-to-day tasks leads to a focus on *doing* rather than *thinking*. Rather than facing complex, challenging strategic issues that are difficult to assess and for which Army leaders may not be prepared to face, Army leaders tend to focus on the technical and tactical issues they have been prepared to solve. This leads to an Army culture that rewards immediate success and feedback, breeding a tactical, short-term problem-solving approach and culture that focuses more on speed and efficiency than on strategic thinking and long-term solutions. Essentially, this leaves most Army leaders looking down and in, and not enough Army leaders looking up and out to face the complex, long-term issues.

When Army leaders are overly focused on solving problems quickly, they do not allow enough time to think strategically about the issue and explore alternatives, which would help ensure the best solution is implemented. If a decision is made too quickly, it may be detrimental if the context changes over time or new information comes to light. Further, alternatives are not fully developed or even considered – the recommended solution is often the first thing to come to mind that is feasible. Some leaders indicated a tendency to stay on the edge

“You don’t have to work hard to avoid the immediate. You have to work hard, especially the more senior rank you get, if you want to think long-term and think through unintended consequences, something like that, the system is not going to force that. It is not. The system will drag you to the immediate. ...It really takes great discipline not to get involved at many levels. ...It’s generally the General’s fault either way; he’s either letting them suck him down to that level, or he’s going there by himself because he’s familiar with it.”
– General Officer

“They tell you this almost from the first day you’re in action here in the Army: ‘it’s better to take action than do nothing.’ ...But in some cases, at the strategic level, you’re a lot better to do nothing until you absolutely have to.”
– General Officer

of ambiguity, where they could clearly see the complexity of issues, but dealt with the tactical problem as if it were a bounded issue. Others were driven to get out ahead of the tactical, enter the complex and ambiguous, make sense of what could be anticipated, and to shape it in a useful direction. However, Army leaders who were motivated to tackle strategic issues required a strong will and

a lot of discipline. Therefore, instilling a leadership climate and culture of “strategic patience” in which leaders take time to think and reflect on strategic decisions would be beneficial for all.

Another issue that complicates matters is that Army leaders are very busy. The attitude of not having enough time in the day leads Army leaders to want to solve problems as fast as possible, which fosters a bias toward the 25-meter target and precludes long-term strategic thinking about the 500-meter target. In other words, there is a bias toward being reactive, rather than proactive. Even with motivation and discipline, Army leaders struggle to find time for personal and operationally focused reflection because of their busy schedules. Organizational culture dictates how activities are prioritized, and the Army culture’s task-oriented focus means reflection is not prioritized. There is also little time for self-development, which is necessary to develop strategic thinking skills in the Army at this time.

I worked in the Pentagon, the E-ring. You know what happens in the Pentagon, the E-ring? You open up the Early bird, the crisis of the day, the E-ring vortex kicks in, and everyone starts swirling around, and that’s it... You’ve turned over your priorities to whoever wrote the article in the Early Bird.”

– General Officer

“The Army crams so much activity into a day that if you’re a young leader you literally have five, or six, or seven graded events in a day, things that you are held accountable for the success or failure of each day. What that does is it limits the amount of cognitive space or time for reflective thinking which is a necessary component of strategic thinking.”

– Field Grade Officer

Therefore, more time should be spent on understanding the problem, reflecting on it, and developing multiple viable courses of action while the situation unfolds.

Thus, it is not surprising that many Army officers prefer operational assignments over institutional- and strategic-level assignments and would prefer to stay at the operational and tactical levels for a variety of reasons. In many cases, people join the Army with these types of assignments in mind. However, with the up-or-out system, at some point, Army leaders are forced to leave the tactical and operational realm and take on strategic-level assignments or leave the Army. Because of the Army culture’s focus on tactical excellence, this leaves many unprepared for strategic-level assignments.

“When is it time for action, when is it time for reflection and how do you tell the difference? ...I think reflection gives you the opportunity to see... whether or not there is an alternative.... So I think reflection is hugely important.”

– General Officer

Uniformity. Another issue that stems from focusing promotion decisions on tactical and operational excellence is that it creates less diversity of experience and thought in top-level leaders. Participants expressed concern that the Army culture creates “a homogenous force”

“I don’t think we have mechanisms today that force the best and brightest we’ve got out of their comfort zone. We tend to reward them for plodding through the gates we’ve established.”

– General Officer

because of similar PME, the “cookie-cutter approach” to leader development, and that most have had similar experiences since 9-11. Lack of diversity in background, experience, and thought is detrimental to strategic thinking in which broad inputs must be considered.

“I think the more inclusive you are in [strategic thinking], the better. So avoid homogeneous staffs. My HQ, we used to call it ‘the freak show.’ It really did look like the bar scene from Star Wars. It had the most incredible array of people there. All services, Marines, Air Force, Navy, Army, lots of Guard, lots of Reserve, lots of civilians, lots of DA civilians, some contractors. That was all very very powerful. I tried to be as inclusive as possible and I tried to allow people the freedom to speak and contribute. I think we got a lot out of that.... The more heterogeneous, the more diversity of opinions and backgrounds and skill sets you have the better off you are. Those are all things that can be done [by the Army]. You can organize yourself with diversity in thinking and background.”

– General Officer

“There are great things about our military culture and we need it for a purpose, but it can also restrict you and make you more narrow-minded than you need to be. Strategy is much broader than that because you’re taking into context all of the elements of national power, public opinion, and political pieces of it and where does the military fit in this big equation along with State Department and how Executive Branch sees it and how Congress will resource it and how [the Pentagon] will either stifle you or help you.”

– Field Grade Officer

“There’s something about the norming effect of existing in a bureaucracy this big that weeds out those kinds of characteristics of strategic thinkers.”

– Faculty

Participants expressed concerns that Army culture does not distinguish individuals enough (e.g., in Officer Evaluation Reports (OERs), promotion, development, etc.). Especially at lower echelons, it is understandable why everyone must be held to the same standard as they are inculcated into the Army, but at some point, that kind of conformity becomes a hindrance to developing strategic thinking skills needed at higher levels. In addition, as mentioned previously, it is not possible to simply flip a switch and start thinking strategically once a certain level or job requires it. The Army has begun to address this concern by emphasizing the importance of broadening experiences. However, promotion boards must also recognize the value of broadening experiences by considering those experiences in their decisions or the culture will not change.

“[The Army culture] doesn’t encourage people to want to step outside the lines and build a capability beyond the tactical level.”

– Field Grade Officer

The promotion system may also be creating an anti-intellectual bias, whether intentionally or not, because graduate school and broadening assignments such as teaching are undervalued despite the many reasons such assignments are beneficial for strategic thinking development and otherwise. Many participants were highly discouraged from teaching or attending graduate school because it would be a risk and could possibly be a career-ending decision.

“In fact, you will hear the conventional wisdom from branch which [says] ‘If you’re really going to do a Ph.D. you’re taking a lot of risk because you’re going to be so far out of the operational realm, and people don’t know what you are and what you bring to the table, it is a risk. It is absolutely a promotion risk to get a Ph.D.’”

– Field Grade Officer

“The risk there is that we are an Army that follows a mold. If you can’t then find someone to help you shepherd you along, mentor you through the path, I think you’ll grind off those strategic leaders. The last 10-15 years, the people that wanted to go to West Point found themselves going to grad school, teaching at West Point, having a hard time getting back into the fight, having a hard time getting credibility or kept out because you hadn’t deployed recently or not getting the optimal jobs when you deploy. It was very very hard for them to navigate the system. So some of the people that were given special opportunities, weren’t then embraced when they came back. So there are risks.”

– General Officer

“Ok, so when we start talking about instructors... perfect cultural issue. Where do I want to have my best folks? I want them in the field. Ok, so who's left to teach? Not my best folks. What do I want? I want the schoolhouse to train the best folks. Well hold on a second now you can't have both.

– Field Grade Officer

Part of the issue is that taking time away from operational assignments leads to a level of “discomfort, suspicion, worry that you don’t know who the Soldier is anymore, you don’t know how bullets move on the battle space,” (Field Grade Officer). Another outcome of the anti-intellectual bias in Army culture is that those who are assigned to teach may not be the most qualified, which affects the quality of PME.

Chain of command. The final element of Army culture related to the topic of strategic thinking is chain of command and rank. Chain of command is essential to the Army and is a deeply held value, as required by any military organization. However, the Army has recognized that chain of command and rank are not the ultimate answer in all circumstances, which is why the idea of Mission Command has been promoted in recent years. Mission Command is defined as “the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander’s intent to empower agile and adaptive leaders in the conduct of unified land operations” (ADP 6-0). Mission Command is essential to strategic thinking because it allows for Army leaders to be candid with their chain of command.

“You can’t have a good relationship without trust. I think one of the things that’s hard to, again I don’t know if this is a cultural thing ...but there’s got to be a way to disagree, have healthy conversations, and not have it be at the expense of the relationship. One of the things I’m very cautious about is, because I hear people say, ‘It’s all about the relationships, you’ve got to form the relationships... but you’ve got to be able to disagree on important issues. When we don’t disagree, we don’t have a healthy enough, trusting enough relationship where you can trust that I may disagree with you, but whatever decision gets made I’m going to support 100%. Even if someone decides to select a position that I was advocating for, I don’t see that as a win. I think we struggle sometimes with this friction or gravitas that has to exist between the relationship and healthy disagreement and figuring about what’s right for the nation.”

– General Officer

Some participants expressed concern that junior officers are intimidated by rank and chain of command, while others stated they never felt uncomfortable being candid with their bosses. Others thought candor is not an issue within the chain of command so much as it is more of an issue peer to peer. These differences in opinion and experience may come down to an issue of the interpersonal skills of the individual providing candid feedback and/or the unique leadership climate experienced in different commands. Individual differences will always exist, however, leadership climate can be controlled by the leader. Therefore, a leader climate in which questioning and candor are valued will also create a climate in which strategic thinking can thrive. If questioning and candor are not valued, mistakes are more likely to occur and the results could be costly.

Discussion

Related Army Efforts

The Army has already begun to address concerns with developing strategic thinking capability. The U.S. Army War College was designated as the proponent for strategy education and held an initial Strategy Education Conference in September 2014, establishing the Strategy Education Community of Interest (SE CoI), and a follow-on meeting in May 2015. The purpose of the SE CoI is to address the following question, “How do we continue to empower distributed education of strategy across the U.S. Army education enterprise while assuring coherency in the fundamentals of strategy?” (SE CoI, 2014). In concert with the question listed above, the focus of the initial SE CoI was to produce and address the following:

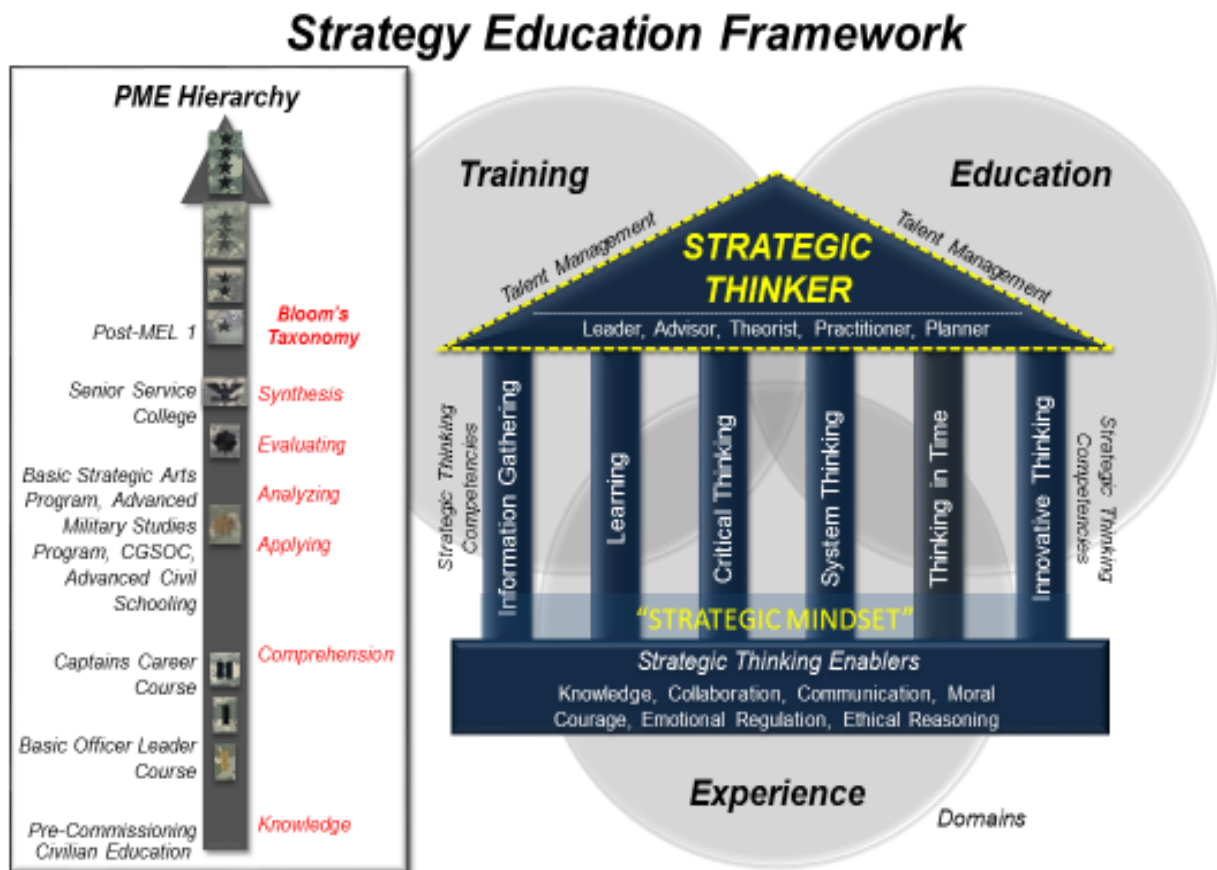
- Agree on a definition of “Strategy”
- Agree on a foundational strategy education framework

The SE CoI subsequently reached general consensus as a group (with some participants not in agreement) on three draft definitions of strategy:

- Strategy: The alignment of ends, ways and means—informed by risk—to attain goals.
- National Strategy: The alignment of ends, ways, and means to attain national policy objectives.
- Military Strategy: The art and science of aligning military ends, ways and means to support national policy objectives.

The SE CoI also established a proposed strategy education framework with an associated matrix highlighting ARI’s strategic thinking competencies and enablers that underpin the U.S. Army educational enterprise which was refined at the May 2015 meeting (see Figure 1). In addition, the SE CoI, has been formally established as a sub-group of the Army Learning Coordination Council (ALCC) and started discourse on strategy education best practices. Some best practices are already in use in other programs such as the University of Foreign Military and Culture Studies (UFMCS) which utilizes best methods (e.g., skill-building practice) to develop many of the skills that support strategic thinking. The next steps include a self-assessment of members’ curricula to determine where strategic thinking competencies and enablers are being developed and to gain a common operational picture of the strategy education landscape.

Figure 1. Strategy Education Framework



References: Krathwohl, D. (2002). A Revision of Bloom's Taxonomy: An Overview. Retrieved from http://www.air02.edu/loris/instating_autonome/documents/Krathwohl.pdf U.S. Army. (2013). Army Leadership Development Strategy. Retrieved from <http://usacac.army.mil/cac2/CALInpository/ALD25June%202013Record.pdf> Sackett, A., Kamauchi, A., Weybrauch, W., Goldman, E. (in preparation). Enhancing the strategic capacity of Army Leaders: An investigation of strategic-level tasks, skills, and development. ARI Special Report. Fort Belvoir. U.S. Army Research Institute for the Behavioral and Social Sciences

(SE CoI, 2015)

In addition, the Army has been emphasizing broadening experiences for leader development which contribute to strategic thinking ability. Further, the Army stood up a new program called the Advanced Strategic Planning and Policy Program (ASP3) in 2013. The mission of ASP3 is to develop field grade officers as strategic planners and as future General Officers through a combination of practical experience, PME, and a doctoral degree from a university in a strategy-related field of study.

Recommendations

Organizational culture has serious implications for strategic thinking development. Although strategic thinking is an *individual* cognitive process, the organizational context must be supportive to benefit fully from its individual's strategic thinking (Liedtka, 1998b). Drawing from Liedtka (1998b), Cross (2013) describes "traditional" versus "enlightened" strategy processes. Traditional strategy processes choke initiative, focus on analytics and extrapolations, and result in incremental change whereas enlightened strategy processes inspire initiative, focus on creativity and innovation, and result in substantive change. To shift the Army culture to a more supportive context for strategic thinking development, here are a number of recommendations.

Develop a shared lexicon. As described in the strategic thinking competencies and enablers section, Army leaders had a difficult time articulating the cognitive activities required to accomplish strategic thinking tasks. Not having the words to talk about cognition may be an indication that the Army organizational culture does not value strategic thinking.

“Organizations exist only as far as their members create them through discourse... it is the principle means by which members create a coherent social reality that frames their sense of who they are.”
– Mumby and Clair, 1997

Army leaders can easily talk about leadership. Over time, the Army has developed a lexicon for discussing leadership issues and fostered a culture that places high value on leadership. To foster an Army culture in which strategic thinking is valued, Army leaders need to be able to share their stories of strategic thinking successes in action. Sharing stories not only provides examples to increase conceptual understanding, but it also allows leaders to take pride in their strategic thinking successes and recognize the value of strategic thinking. Therefore, it is recommended that the Army develop a common definition for strategic thinking based on the academic literature and appropriate to the Army context. Developing a common definition would produce a shared lexicon to enable productive conversations about strategic thinking. Otherwise, there is a lack of clarity around what is strategic thinking, which inhibits comprehensive Army-wide understanding.

Developing a common definition would also increase the effectiveness of the programs that develop strategic thinking and planning by making it clear what is meant by “strategic;” who does it, when, and where. In addition, a common perspective or set of perspectives would result in more consistency in the practice of instructing, assessing, and developing strategic thinking. If strategic thinking is not defined, it is also difficult to assess and provide feedback to students. Further, the additional consistency would ensure strategic thinking development is standardized across levels and cohorts.

In addition to developing a common definition, it is also recommended that the Army differentiate strategic thinking from strategic planning, strategic leadership, and strategic advising. Again, confusion would be reduced and educational programming would be improved. The accepted definitions could then be used as the basis for determining course titles and content, as well as course materials used (e.g., books, articles, videos, frameworks).

Further, the Army may benefit from developing not only a common definition of strategic thinking, but also a common set of strategic thinking competencies and enablers that can be used for educational programming. Faculty described a wide range of strategic thinking KSAs and did not distinguish between strategic thinking competencies and strategic thinking enablers that help translate strategic thinking to others, but are not necessary for the cognitive process of strategic thinking. Numerous faculty place an emphasis on assessing strategic thinking enablers, such as communication skills, rather than focusing on the strategic thinking competencies. The Army strategic thinking KSAs should focus on what is required to think strategically, as opposed to general thinking or leadership skills. These KSAs should be used as the basis for developing learning objectives to improve strategic thinking development. The SE CoI effort will help address this concern as they work to assess how well and to what extent the strategic thinking competencies are being taught across institutions.

Strategic thinking development. One overall theme that came out of the analysis of the Army’s development of strategic thinking is that across the board, the focus tends to be on developing conceptual understanding, and there is not enough focus on skill building, feedback, or personal growth (reflection). To maximize leader development and provide opportunities for deeper learning, there needs to be a better balance between Conger’s (1992) four approaches in all areas of development, i.e., more opportunities to practice strategic thinking skills, receive feedback on strategic thinking, and for reflection to provide opportunities for personal growth. Specifically, in PME, most courses that relate to strategic thinking development involve heavy daily reading loads which leave no time for reflection on the readings, stunting personal growth.

“I saw it in every unit I ever led, we never pause for the appropriate amount of time and say, ‘What does this mean? What do we think about that?’ Let’s talk about the ugly things, let’s talk about the hard things, let’s talk about the things that no one’s talking about that we need to.”
– General Officer

Army leaders described advanced civilian education as being particularly developmental for strategic thinking because of the high level of academic rigor, exposure to perspectives outside the military, increased amounts of feedback, and more time for reflection. Regarding academic rigor, an example is the tendency in PME to focus on “analysis,” to the detriment of “creation,” keeping learning at lower levels of Bloom’s taxonomy. Essentially, civilian education seems to have a better balance of the four leader development approaches, providing a richer educational experience that promotes greater learning and retention. Therefore, the Army can adopt similar practices to increase the developmental benefits in PME and across all Army education by adopting principles from civilian institutions.

In addition, assignments are hugely developmental, and thus provide excellent opportunities to develop strategic thinking, even when assignments are not at the strategic level. The main deficiencies in strategic thinking developmental opportunities in assignments stem from Army cultural barriers. It is a difficult and slow process to change the culture of a large organization like the Army, but one way to promote personal growth opportunities would be to foster a leader climate that allows for strategic thinking skill building opportunities. Specifically, inculcating reflective practices into the daily routine would greatly enhance strategic thinking development in any assignment. Considering the implications of day-to-day activities and thinking about the big picture help prepare Soldiers for the strategic thinking they will be required to do as they are promoted to higher levels. A leader climate that allows for other strategic thinking skills to be practiced such as questioning and innovative thinking (without career risk) would also increase developmental opportunities in assignments. Furthermore, Army leaders can put the onus on themselves to develop strategic thinking KSAs through self-development.

Although the present research did not interview OCTs from the Combat Training Centers (CTC), the CTCs are another area that is ripe for strategic thinking development because of the increased opportunities for skill building, feedback, and personal growth. Future research should delve into this area.

Talent management. Throughout the interviews, one pervasive theme was talent management. Talent management came up in regards to many issues, such as strategic thinking development, assessment, and organizational culture issues. The Army defines talent

“Some of our leaders are inherently strategic in their mindset, but that’s by luck and not by plan.”
– General Officer

management as, “systematic planning for the right number and type of people to meet the Army’s needs at all levels and at all times so that the majority of them are employed optimally. It integrates accessions, retention, development, and employment strategies. Talent management begins with entry-level employees and aligns their talents against the demand for them during

“The Army is big enough that we ought to be able to develop more than one track for what a good officer should be and what their background should be.”
– Civilian

their entire careers, to include positions at the very top of the Army” (U.S. Army Office of Economics and Manpower Analysis, 2015). The Army must ensure those who can think strategically are being identified and placed in jobs requiring strategic thinking to maximize this critical capability. When

participants were discussing barriers to strategic thinking many thought the Army could better utilize talent management practices to promote and facilitate strategic thinking development.

“The Army’s culture is what the boards do.”
– General Officer

Selection Boards. Many of the comments around talent management centered on selection boards. Specifically, the results of selection boards send a message to the force that says, “This is what the Army wants.” Therefore, if the Army wants to encourage strategic thinking, leaders must align incentives to promote strategic thinking through selection boards.

“We’ve got a board system that basically [is] the same as we’ve had since World War II. But the world isn’t the same. We’re way behind what’s being done in other leadership organizations. And we constantly tell ourselves, ‘We’re picking the best and the brightest.’ Are you? Then why aren’t we winning?”
– General Officer

Broadening. One way to encourage strategic thinking development is to ensure selection boards value broadening assignments. The explication of tasks in this research demonstrated that a remarkable depth and breadth of KSAs are required to effectively address strategic issues. An understanding of the huge diversity of tasks calls for more broadening of leaders and not just in areas where there is a close and clear connection to war and conflict. Army leaders need to be able to see outside the security lens. They need more than simple exposure to different disciplines, they need to be held accountable for creating a vision that shows how systems are or could be connected.

“We can say, ‘you want people with a broad set of experiences,’ but we don’t promote people who do. We’re saying one thing and doing another.”
– Field Grade Officer

“What I’ve seen as one of our biggest lapses in strategic thinking and planning has been that we only operate on the military battleground, because that is the only one we really understand well enough. But our enemies operate on multiple battlegrounds. They operate on the battleground of perception and information much more effectively than we do.”

– General Officer

Similarly, selection boards should place greater value on a diversity of assignments to help broaden leaders. Currently, the Army does not excel at distinguishing more than one career path to higher ranks. This causes the issue of uniformity within General Officers that was discussed in the Cultural Barriers section. Specifically, the research shows that teaching is an excellent venue for developing strategic thinking ability, so placing more emphasis on the value of teaching as a

consideration for promotion would also be beneficial. The added benefit of placing more emphasis on teaching is that teaching positions would become more competitive, thus creating a larger pool of prospective instructors and allowing for better selection of qualified instructors with special expertise in specific areas. Further, more qualified instructors would raise the academic rigor of PME.

Finally, advanced civilian education helps develop diversity within the ranks and develops strategic thinking ability, so ensuring selection boards place value on advanced civil schooling would also benefit strategic thinking development in the Army.

Differentiation. One key tenet of talent management is to utilize individual’s unique talents. However, the Army’s career path to success tends to be fairly uniform, as discussed in

“I think you’ll find formally that people will talk about broadening and experiences. The trouble is that what’s broadening for one is not for another. Everybody doesn’t have to be the same. I don’t know that you have to have a complete model. But when you say you want to have a broadening experience, it could be a raft of different things. The problem is making time in our very prescribed, lock-step system that would allow you time to do that kind of stuff.”

– General Officer

the Army Culture section above. To develop an organization with strong strategic thinking capability, there should be multiple paths to success so that at the top levels of the organization there is a diversity of thought and experience broad enough to face any strategic issue. Further, to fully utilize talent management practices, the Army could improve on aligning individual’s unique talents to specific assignments and broadening experiences that are a good fit for those unique talents.

Assessment. When discussing strategic thinking assessment, numerous participants identified the need for tools. Not only could a strategic thinking assessment tool help with selection boards making promotion decisions, but it could also be used as a developmental tool throughout one’s career. Other suggestions for selection boards related to assessment were to conduct interviews and/or include a writing sample to identify, assess, and select for strategic thinking ability rather than being restricted to paper files.

“If the Army is going to value strategic thinking, then it ought to become a factor in whether people get promoted or not.”

– Field Grade Officer

Essentially, the Army needs to align incentives across the board to promote strategic thinking or the Army culture will not change to support strategic thinking development.

Future Research

There are numerous areas for future research. To start, assessing Army POI to determine if, where, and to what extent the strategic thinking competencies and enablers are being taught will provide insight into how strategic thinking development can be improved. The SE CoI's planned effort to conduct self-assessment of members' curricula will be an excellent starting point (SE CoI, 2015). Tools that support strategic thinking development (e.g., skill-building practical exercises focusing on important KSAs such as reflection that allow for practice) could also be developed and implemented. Developing an assessment tool for strategic thinking would also benefit the Army in multiple ways, as described above. Finally, assessing the characteristics of broadening experiences that develop strategic thinking competencies and enablers would help the Army tailor those experiences more appropriately and efficiently.

Conclusion

Army leaders are given immensely complex and dynamic missions that have serious implications in terms of resources, risks, and international relations. There are clear indications from the interviews that Army leaders were not prepared for the challenges they faced in recent conflicts. The recognition that tactical and operational environments are now converging with strategic environments points to the need for a concerted effort to identify, develop, and assess strategic thinkers.

The research indicates that the Army culture is not fully supportive of strategic thinking development. A strong focus on tactical excellence (at the cost of long-term future-oriented thinking and reflection), uniformity (rather than diversity of capability and perspective), and chain of command (to the detriment of questioning and candor) inhibit, rather than promote, development of this vital capability. Creating climates in which important aspects of strategic thinking (e.g., reflection, learning, questioning) are valued and promoted is crucial to shifting Army culture to support strategic thinking development.

The research findings can benefit a variety of stakeholders, including Army leaders interested in creating climates that promote strategic thinking, curriculum designers and faculty charged with teaching strategic thinking KSAs in the classroom, and policy makers involved with Army talent management. The findings can also help the individual Soldier interested in developing strategic thinking competency through self-development. The findings may also aid in crafting doctrine supporting the development of agile and adaptive Soldiers. Finally, the research findings can aid in identifying and developing future research needs in the area of strategic thinking.

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