Technical Report 1413

A Targeted Assessment of the Strengths and Opportunities of the Maneuver Captains Career Course

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Working with the Maneuver Center of Excellence, Command and Tactics Directorate (CATD) at Fort Benning, GA, researchers conducted a targeted assessment of the (1) teaching methodology, (2) instructor certification course, and (3) critical thinking skills assessments of the Maneuver Captains Career Course (MCCC). Findings suggest that the MCCC's approach is well-aligned with the Army Learning Concept for Training and Education (ALC-TE; U.S. Army Training and Doctrine Command, 2017) and effectively applies the Army's Experiential Learning Model (ELM). In particular, the instructor development processes were a major strength of the MCCC and prepare instructors to achieve the MCCC's learning objectives. Opportunities for improvements include applying elements of the cognitive apprenticeship model to further refine instructor certification and to more deliberatively teach critical thinking skills. Better-trained instructors can then help the MCCC reach its goal of developing leaders who can thrive in the current and future operating environments.

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A TARGETED ASSESSMENT OF THE STRENGTHS AND OPPORTUNITIES OF THE MANEUVER CAPTAINS CAREER COURSE

EXECUTIVE SUMMARY

Research Requirement:

Leadership of the Command and Tactics Directorate (CATD) at Fort Benning, GA requested that the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) conduct a targeted assessment of the (1) teaching methodology, (2) instructor certification course, and (3) critical thinking skills assessments of the Maneuver Captains Career Course (MCCC). The results of this targeted assessment were to guide future work aimed at supporting the MCCC's instructor development and instructional practices to develop the MCCC students' critical thinking. Better-trained instructors are then better equipped to develop future commanders who can operate in the current and future operating environments.

Procedure:

Working with CATD, researchers conducted a targeted assessment of the MCCC's (1) teaching methodology, (2) instructor certification course, and (3) critical thinking skills assessments. To explore those focus areas, the ARI team reviewed key doctrine and course documents, observed specific lessons, and interviewed MCCC instructors and leadership. Rather than a comprehensive assessment of the course, the effort focused on identifying opportunities for enhancement to guide subsequent development work related to the three focus areas identified. To analyze these qualitative data, team members reviewed each observer's notes, classified them into themes, and compared the themes across all observers. The most common themes were then identified and discussed to clarify any discrepancies. Once the themes were finalized, they were further classified into areas of strength and opportunities.

Findings:

Findings suggest that MCCC's instructional approach is well-aligned with the Army Learning Concept for Training and Education (ALC-TE; U.S. Army Training and Doctrine Command, 2017) and effectively applies the Army's experiential learning model (ELM). In particular, the instructor development processes including the MCCC's instructor certification course and the team train-ups prepare instructors to achieve the MCCC's learning objectives. Opportunities for improvements include applying elements of the cognitive apprenticeship model to further refine instructor certification and to more deliberatively teach critical thinking skills. Opportunities for improvements include adjustments in teaching practices to more deliberately teach critical thinking skills.

Utilization and Dissemination of Findings:

This paper outlines the strengths and opportunities ARI identified in the targeted assessment of the MCCC's teaching methodology, certification process, and critical thinking assessments. Although the recommendations were tailored to the MCCC, the descriptions of best practices and recommendations in this paper can help guide similar institutions that are looking to improve their instructor development and teaching practices.

A TARGETED ASSESSMENT OF THE STRENGTHS AND OPPORTUNITIES OF THE MANEUVER CAPTAINS CAREER COURSE

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A Targeted Assessment of the Strengths and Opportunities of the Maneuver Captains Career Course

Introduction

Current and future operating environments are likely to be complex, characterized by conflict across domains that requires the Army to successfully address a range of potential adversaries in both competition and armed conflict (U.S. Department of the Army, 2018). Within such Joint All-Domain Operations (JADO), there is a need for effective combined arms maneuver that requires leaders and Soldiers to integrate into "trusted teams of professionals who are able to thrive in ambiguity and chaos" (U.S. Department of the Army, 2018). Similarly, the Army Modernization Strategy includes a focus on Soldier lethality, which along with enhancing various materiel solutions, stresses that the Army must also modernize the Soldier in a manner that increases "their ability to quickly understand and react to emerging situations – increasing their lethality, precision, and survivability" (U.S. Department of the Army, 2019a, p. 6). Consistent with this broader context, the mission of the Command and Tactics Directorate (CATD) at the Maneuver Center of Excellence (MCoE) is to "develop agile and adaptive leaders," and specifically within the Maneuver Captains Career Course (MCCC), to produce leaders who can be effective company commanders and staff officers who can "win in a complex world" (CATD, 2022)¹.

Working with CATD, the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) conducted a targeted assessment of MCCC to guide future work aimed at supporting MCCC's ability to meet its mission of producing leaders who will thrive in complexity. Specifically, CATD asked ARI to focus on assessing the following areas: (1) teaching methodology, (2) the instructor certification course, and (3) critical thinking skills (CTS) assessments. Results of the assessment indicate that MCCC's approach is well-aligned with the Army Learning Concept for Training and Education (ALC-TE; U.S. Army Training and Doctrine Command, 2017) and effectively applies the Army's Experiential Learning Model (ELM; see The Army University, n.d., Adult Teaching and Learning User's Guide). The ALC-TE specifies various learning outcomes including, but not limited to, knowledge, skills, and abilities – e.g., adaptability, innovation, and ability to build and lead cohesive teams. It also specifically points to creative and critical thinking skills to enhance problem-framing and problem-solving skills in the service of design and planning activities. More generally, the ALC-TE is consistent with best practices in education, in which learning systems are designed to be learner-, knowledge-, and assessment-centered within the context of the communities they serve (National Research Council, 2000). Further, the results point to opportunities for the MCCC to enhance instruction and more deliberately address its intended course outcomes with slight adjustments to some teaching practices. Table 1 highlights MCCC strengths by focus area and Table 2 shows opportunities for improvement by focus area. The subsequent sections describe key findings and recommendations in more detail.

Results indicated that the MCCC is already well-aligned to its intended outcomes. However, future work can enhance MCCC's ability to produce officers who can succeed in

¹ CATD leadership provided the MCCC Course Map and Outcomes to the team. Included were the MCCC Student Learning Outcomes referenced throughout this report.

increasingly complex environments by further supporting their small group leaders (SGLs). This can be done through slight modifications to the instructor certification course and arming SGLs with methods and tools to support them in the classroom. These methods and tools can be designed to support the development of CTS in students along with other key outcomes specified by the MCCC. Instructors who are better trained are then better equipped to develop the future commanders who can operate in the current complex operational environment.

Table 1.

MCCC Strengths by Focus Area

Focus Areas	Strengths
Instructor Certification Efficiencies or Support	 The approach aligns with cognitive apprenticeship with its emphasis on modeling and coaching from the Certification Chief. The Certification models "what right looks like" and guides the SGL students' understanding. The certification course has a small instructor-student ratio. During the targeted assessment, the Certification Chief certified three student SGLs. The certification briefs allow instructors to experience their future educational environment. During the briefs, the SGLs role play as MCCC students.
Teaching Methods	 The SGLs collaborate often to improve their instruction. During team train-ups, the SGLs prepare for upcoming modules and share best teaching practices. The SGLs also collaborate in the module working groups where they review and update course content. The SGLs use the ELM and learner-centered approaches. The SGLs employ class discussion, encourage student interaction through whiteboarding, emphasize that it is okay not to know everything, and have coaching discussions with students.
Critical Thinking Skills (CTS)	 The MCCC has a lesson focused on critical thinking skills. The SGLs point out the importance of critical thinking skills during the course.

 Table 2.

 Opportunities and Recommendations for Improvements by Focus Area

Focus Areas	Opportunities	Recommendations for improvements
Instructor Certification Efficiencies or Support	1. Guided experience	1. Provide the SGL students more opportunities to reflect and practice what they are learning to allow them to grapple with the problem of how to teach each lesson, discover their own style, and understand their own strengths/weaknesses. Over time, gradually reduce the support given to the SGL students through modeling (i.e. further align with cognitive apprenticeship). Provide feedback and assessment tools.
	2. Instructional methods	2. Explicitly convey the "why" behind the method for teaching specific lessons and "tips and tricks" for effectively teaching each lesson. Encourage SGL students to build on their own experiences and expertise in their instruction at the MCCC.
	3. Instructor support tools	3. Provide user-friendly and efficient collaboration and knowledge-capture/management tools.
Teaching Methods	1. (U) Learning from peers	1. (U) Capitalize on opportunities for learning from peers.
	2. (CUI) Enhance SGL methods through slight modification of current approaches	2. (CUI) Arm instructors with tools and methods to more effectively apply teaching methods based on inquiry/problem-solving (i.e., engage students by facilitating problem solving).
	3. (U) Job aids and instructional support tools	3. (U) Provide instructors with digital and paper-based teaching support tools (e.g., templates and assessment tools, knowledge capture tools).
	4. (CUI) Other leader attributes and competencies	4. (CUI) Identify and assess other leader attributes and competencies more deliberately.
Critical Thinking Skills (CTS)	Deliberately develop CTS through instructional approaches	Leverage elements of inquiry-based and peer-to-peer learning methods to more deliberately develop CTS.

Assessment Methods

To explore the focus areas outlined above, the ARI team reviewed key doctrine and course documents, observed specific lessons, and interviewed MCCC instructors and leadership. Below is a description of the methods applied, followed by additional details on key findings. Rather than a comprehensive assessment of the course, the effort focused on identifying

opportunities for enhancement to guide subsequent development work related to the three focus areas identified.

Table 3 outlines the data sources and observations for the assessment. The ARI team conducted targeted observations of the MCCC instructor certification course and MCCC lessons as well as interviewed SGLs. In addition, the team reviewed key doctrine used in specific MCCC lessons as well as those that shape the execution of the course overall. Further, the team met with MCCC leadership to discuss and ensure alignment following observation of specific lessons and interviews.

Table 3.

Touchpoints that Informed the Assessment, Course Observations, and Documents Reviewed

Requested Touchpoints and Interviews

- Instructor certification
- SGL Team Train-up
- SGL Module Working Groups
- Critical Thinking Assessments
- Observation of lessons in Company (CO) and Battalion (BN) phases
- Observations of MCCC students' briefs
- Focus group on MCCC students' challenges and opportunities
- Focus group on SGLs' challenges and opportunities

Course Observations

MCCC Lessons and Briefs

- Course of Action (COA) Development
- COA Decision Brief
- Intelligence Surveillance Reconnaissance (ISR) Rehearsal
- Scheme of Maneuver
- CO Operations Order (OPORD) Brief
- BN OPORD Brief

SGL Certification

- Intelligence Preparation of the Battlefield (IPB) 3&4 Certification Pitch and Brief
- Surface Danger Zone (SDZs)/ Risk Estimated Distances (REDs) Certification Pitch and Brief SGL Activities
 - SGL Module Working Group
 - SGL Team Train-up

Documents Reviewed

- Army Learning Concept for Training and Education (ALC-TE; U.S. Army Training and Doctrine Command, 2017)
- Foundational materials on the ELM produced by The Army University for the CFD-IC
 - o Adult Teaching and Learning User's Guide, n.d.
 - o Common Faculty Development Instructor Course Student Book, n.d.
- Peer-based learning literature
- MCCC trip reports
- Documents from MCCC (rubrics, briefs, policy material)
- Doctrine associated with SGL Certification Classes (e.g. ATP 2-01.3 and ATP 3-21.10)

Data from this assessment consisted of notes from various observations and interviews. To analyze these qualitative data, team members examined each observer's notes for emergent themes that related to the requested touch points. Once each team member had identified emergent themes, those themes were compared across all observers. The most common themes were identified and discussed to clarify any discrepancies. Given a wide range of expertise in the team (i.e., retired officers, a retired enlisted special operator, cognitive and industrial/organizational psychologists, and an educational psychologist), this approach allowed us to account for multiple perspectives while identifying the most prevalent themes. Once the themes were finalized, they were further classified into areas of strength and opportunities (*see* Table 1 and Table 2).

Findings

Teaching Methods

As a foundation for the MCCC, the ALC-TE provides a general framework for how the Army can meet the objectives of competing and winning in a complex world (U.S. Army Training and Doctrine Command, 2017). By developing themes related to individual learning, collective learning, infrastructure, human capital, and learning science, the ALC-TE stresses an outcomes-based, learner-centered approach to develop agile Soldiers and teams in a manner that is supported by assessment. The ALC-TE specifies various learning outcomes including, but not limited to, knowledge, skills, and abilities such as adaptability, innovation, and the ability to build and lead cohesive teams. It also specifically points to creative and critical thinking skills to enhance problem-framing and problem-solving skills in the service of design and planning activities. Consistent with the needs of the Army community, MCCC's objective is to create company commanders and staff officers who can win in a complex world. To do so, MCCC specifies seven well-articulated student learning outcomes that it strives to meet (CATD, 2022, Table 4).

Table 4.

MCCC Student Learning Outcomes (CATD, 2022)

MCCC Student Learning Outcomes

Primary Outcomes

- 1. Masters of Troop Leading Procedures to plan, train, and fight IBCT/ABCT/SBCT companies using Combined Arms Maneuver.
- 2. Effective in planning, employing and synchronizing direct fire, indirect fires, Army Aviation, Close Air Support and other enablers in the current operating environment.
- 3. Proficient in MDMP for battalion and brigade operations to seize, retain, and exploit the initiative.

Secondary Outcomes

- 4. Proficient in Company-level training management, CSDP, unit-level maintenance; and displaying confidence and effective communication skills.
- 5. Apply critical thinking to understand and realize mission command, establish shared understanding, issue clear commander's intent, use mission orders, and accept prudent risk.
- 6. Morally and ethically grounded with Army Values and the Warrior Ethos. They continue to develop the tools to be agile/adaptive, lifelong learners, and are stewards of the Army Profession.
- 7. Prepared to contribute immediately with an understanding of the variables that make their future BCT unique with the skills necessary to lead, operate, and employ their assigned platform.

These seven outcomes describe how the MCCC creates a knowledge-centered learning environment by specifying what it wants its graduates to be able to apply (transfer) beyond the MCCC. These objectives echo themes in the ALC-TE such as critical thinking and problem solving in service of planning. To meet these intended learning outcomes, the MCCC generally follows the ELM in its approach to instruction (see The Army University, n.d., Adult Teaching and Learning User's Guide). The ELM is the Army's approach to planning and executing instruction. The ELM is a five-step process that can be flexibly applied to instruction to actively engage adult learners. Generally, the ELM starts with a Concrete Experience (CE) to trigger past knowledge. Then it is followed by the Publish and Process (P&P) stage in which learners reflect on the CE by sharing and comparing observations. The next stage is Generalize New Information (GNI) in which new information is presented through methods appropriate to the learning goals such as lecture or a practical exercise. In this stage, instructors fill in the gaps and expand on student knowledge identified during the P&P stage. The next stage is *Develop (DEV)* in which learners reflect on the value of the material and how it might be used in the future. The final stage, Apply, allows learners to demonstrate their grasp of the material to inform additional instruction if needed. The ELM is the foundation for the general methods that the MCCC uses as it strives to create an active learning environment. Following this general approach, MCCC modules typically start with a historical vignette and then a CE to connect learners to the topic. Then through a series of discussions, lectures, and/or tactical decision exercises (TDEs), students are able to reflect on new knowledge, followed by a culminating event that centers on student production of an Operations Order (OPORD) to allow learners to demonstrate what they learned.

Instructor Certification and Development

SGL Certification

New instructors go through a six-week certification process to become small group leaders (SGLs). This SGL certification process consists of a two-week Common Faculty Development – Instructor Course (CFD-IC) and a four-week certification course specific to the MCCC. CFD-IC introduces the SGL students to the ELM and covers other relevant content to help prepare them to become Army instructors. Building on the CFD-IC, the four-week MCCC certification course reviews the foundational course content, application of the ELM to the MCCC context, and trains the SGL students on the expected teaching approach within the MCCC. To review the MCCC instructor development practices, the research team observed two classes from the instructor certification course, a SGL team train-up in which an instructional module is collaboratively reviewed, and held focus groups with current SGLs. The purpose of the observations and focus groups were to gain insights on the MCCC formal and informal instructor development processes to identify efficiencies along with areas that need support.

The four-week MCCC specific course has two main parts. First, the Certification Chief teaches and models five doctrinal lessons to the SGL students. MCCC refers to these as class pitches. After the class pitches, the SGL students teach or "brief" the class to a panel of certified SGLs who role-play as students. During these briefs, the SGL panel models difficult student behaviors and asks hard questions to challenge the SGL students' doctrinal knowledge and teaching ability. After the briefs, the Certification Chief and certified SGLs conduct an after action review (AAR) to provide the SGL students feedback on their teaching practices and doctrinal knowledge. Based on the discussions with certified SGLs, they felt that the briefs were challenging but also one of the most helpful aspects of the certification course. They felt that the briefs challenged them in ways actual students would not and that the experience helped them grow as instructors. The briefs are also an opportunity for the SGL students to practice teaching in an environment where they can receive peer feedback and coaching.

The MCCC certification course aligns with the tenets of a cognitive apprenticeship (see Wittig et al., 2022 for a more detailed review). Collins et al., (1989) describe a cognitive apprenticeship as "learning through guided experience." It is an inherently social learning process where an expert or more experienced person utilizes modeling, coaching, and scaffolding to guide student learning (Collins et al., 1989; Collins et al., 1991; Dennen & Burner, 2008). This approach is a major strength of the MCCC instructor development process because it effectively uses the knowledge of more experienced SGLs to aid the SGL students' development. The Certification Chief serves as a model and coach to guide the SGL students' learning throughout the certification process. The Certification Chief models what "right looks like" during their class pitches, which helps the SGL students understand the expected teaching practices at the MCCC. During the briefs, the SGL students are then able to practice those teaching techniques in an environment where they receive peer feedback and coaching. As the SGL panel models student behavior, the SGL students receive feedback on their doctrinal knowledge, teaching techniques, and ability to address the panels' questions or behaviors. This gives the SGL students the opportunity to practice working through classroom challenges before they teach the MCCC students.

Team Train-Ups

Before each module, the Team Chief conducts a train-up with their SGL team. During the train-ups, the Team Chief reviews the next module and shares lesson materials. The train-ups are an important time for the SGLs to synchronize on the key outputs and content for the module. It is also an opportunity for the SGLs to collaborate and learn from each other. During the train-ups, the SGLs also discuss best practices and teaching tips for the module. Therefore, team train-ups are a major strength of the MCCC instructor development practices because they help promote consistency in instruction within the SGL teams and provide a space for SGLs to share and expand on their teaching expertise. It is important for the SGLs to have a shared understanding of the expected outcomes for each module and to be able to learn from their more experienced peers. This is especially important for the newer SGLs as they plan to teach material that is outside their area of expertise or was not covered in the certification course.

Critical Thinking Skills (CTS)

CATD requested that the research team assess how the organization assessed CTS of the MCCC students to ensure that the outcome of developing these skills is achieved. CTS is clearly valued as a key skill for success in the course. The ability to apply critical thinking is included in the MCCC learning outcomes (*see* Table 4 Outcome 5) and there is a CTS lesson plan in the program of instruction (POI). However, there are no formal assessments or methods used to deliberatively develop CTS as part of the course. The MCCC SGLs address CTS through their application of the ELM, but explicit development of it is primarily addressed in the CTS lesson. Specifically, the MCCC application of the ELM is designed to develop higher-order competencies such as CTS so its development is inextricably tied to how well the ELM is applied in various lessons across the course. The intent of the CTS lesson is for MCCC students to understand the importance of critical thinking for planning and decision making in the Army. This is done through class discussions and activities that encourage students to think about the definition of CTS and the importance of CTS primarily in avoiding biases and logical fallacies during various phases of analysis and OPORD development.

Recommendations

Focus Area: Instructor Certification

For the SGL certification, the research team suggested further capitalizing on a cognitive apprenticeship approach, where the SGL students learn through guided experience (*see* Wittig et al., 2022 for a more detailed description of our suggested changes). As currently structured, the approach to learning largely relies on modeling. Modeling and observation are important initial learning experiences within a cognitive apprenticeship (Collins et al., 1989; Collins et al., 1999), but this support should be faded as the SGL students gain more experience and knowledge of the teaching approach. By not fading the support of modeling, it limits the opportunities for SGL students to productively struggle and practice preparing for lessons they have not seen modeled first. That is, by focusing on modeling alone, SGL students may learn how to teach a specific lesson in a specific way rather than the approach or process required to teach different lessons at the MCCC. It is particularly important for SGLs to practice this preparation process while

learning more general approaches because SGLs must eventually teach content that is not covered in the certification course and is beyond their area of expertise (e.g., an Infantry officer has to teach Armor missions) and experiences (e.g., teaching the military decision making process (MDMP) without having led the process before). In these cases, understanding the process of how to effectively teach a new lesson is much more critical than knowing how to teach a specific lesson in a specific format. Therefore, the certification process could further align with a cognitive apprenticeship approach by fading the support of modeling and providing more experiences for the SGL students to practice teaching.

As outlined in Wittig et al., 2022, fading can be done by progressively adding responsibility to the SGL students so they can go from an observer to active participant in the certification course. In the early certification classes this process could start with discussion based activities, where the SGL students are encouraged to reflect on the purpose of the teaching approaches instead of purely observing the Certification Chief model them. Following the early modeled classes, the SGL students could then teach sections of a class without seeing it modeled first. While initial sessions might involve only partial lessons and practice sessions, over time SGL student responsibility could increase toward that of certified instructors. For the final class, the SGL students could practice the complete preparation process during which the Certification Chief conducts a team train-up, reviewing the key outputs of the class. Then the SGL students would brief the class to the panel of SGLs without having seen the Certification Chief model the class. Overall, this change in approach would enable student SGLs to be more active participants who have to understand and apply the instructional method to a new topic in a manner similar to what they will have to do in future instruction.

Focus Area: Teaching Methods

There are several opportunities to provide instructors with useful tools and technology that could support effective application of the ELM and facilitate knowledge, assessment, and learner-centered environments. The research team recommends leveraging technologies such as smartboards to enhance the learning environment by supporting both live instruction and distance-learning models – a need that emerged during the COVID-19 environment. Smartboards would also enable more collaboration and improve content management and storage. Instead of taking pictures of the current whiteboards and storing those images as future models, content created on smartboards would be digitized and stored for reference or distribution. This would continue to support the practice of using whiteboards for lesson preparation and execution, but would hopefully decrease the amount of preparation time needed to prepare based on previous models.

Focus Area: Teaching Methods and Critical Thinking Skills Assessment

The MCCC's application of the ELM has the potential to promote problem solving, CTS, and other leader attributes in MCCC students, but this instructional technique can be enhanced by leveraging elements of inquiry-based and peer-to-peer learning methods to more deliberately facilitate CTS. Inquiry-based methods rest on collaborative problem-solving activities (e.g., Duffy & Raymer, 2010) and peer-to-peer learning methods stress the use of patterns of open-ended questioning that promote deeper reflection and understanding (e.g., King, 2002; 2008).

Leader attributes and competencies – as well as skills that support them, such as critical thinking, sound judgement, and mental agility – can be deliberately developed by encouraging problem-solving activities accompanied by reflection through both instructor and peer patterns of questioning. However, instructors must be appropriately armed and trained to use these methods. It is important for the SGLs to learn about these types of techniques in certification.

For instance, one such method is King's (2002; 2008) guided reciprocal peer questioning. This instructional strategy promotes high-level cognitive processing through structured peer-topeer questioning. As King (2002; 2008) describes, students rarely initiate the type of dialogue needed for high-level cognitive processing without prompts. Therefore, in this instructional strategy peers create their own questions about the assigned material or lecture using a set of question prompts (see Table 5). Using these questions, the students reciprocally ask and respond to their peers' questions to elicit explanations and inferences about course material or guide the problem-solving process. Through the guided questions, students' thinking and learning gradually moves to more complex levels (King, 2008). SGLs could integrate this strategy into the P&P or Apply stages of the ELM to encourage more peer-to-peer and higher-level discussions. This approach can also help SGLs more deliberately develop some of MCCC's learning outcomes. For example, outcome 5 (see Table 4) lists that MCCC students will be able to apply critical thinking, build teams, and establish shared understanding. Through guided reciprocal peer questioning, students gain experience with and learn how to: 1) build a collective understanding of the material, 2) initiate group level complex learning, and 3) assess and monitor peers' understanding. Therefore, this instructional strategy would purposefully structure the students' discussions for them to develop these skills.

Table 5.

Sample Question Starters for Reciprocal Peer Questioning (adapted from King, 2008, p. 80)

Comprehension Review Questions	What does mean?
-	What caused?
	Describe in your own words.
	Summarize in our own words.
Thought-Provoking Questions	Explain why
	Explain how
	How would you use to?
	What is the significance of?
	What is the difference between and?
	What do you think would happen if?
	What conclusions can you draw about?
	Which do you think is best and why?
	How is related tothat we studied earlier?

Conclusions

The ARI team conducted a targeted assessment of three focus areas at the MCCC for the purpose of identifying current efficiencies and opportunities for improvements in (1) Teaching Methodology, (2) the instructor certification course, and (3) critical thinking skills assessments. In general, our findings suggest that MCCC's approach is well-aligned with the ALC-TE and effectively applies the Army ELM. In particular, the instructor development processes including the instructor certification course and the team train-ups prepare instructors to effectively teach at the MCCC. Opportunities for improvements include a more deliberate application of elements of the cognitive apprenticeship model to further refine instructor certification and to teach CTS through modified instructional approaches. Future work can further enhance MCCC's ability to produce officers who can succeed in increasingly complex environments by further supporting their SGLs. Instructors who are better trained are then better equipped to develop future commanders who can perform in the current and future operating environments.

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