Strategies for Designing 21st Century Military Education

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ABSTRACT

As the world changes, a gap has grown between the way students learn and the way many schools continue to teach. Today's students learn in a non-linear way. According to recent studies, students learn more about doing their jobs in informal learning environments and use social media platforms to connect with experts in the field. However, only a few military schools have found ways to blend the formal, informal, and emerging technologies to enable these new 21st century learners.

This study looks at the profiles of emerging learners and offers recommendations into how professional military education (PME) can support these learning styles and the students who aspire to gain this knowledge. Based on a review of over 20 educational reports and interviews with students at each level of PME, this paper outlines the characteristics of these 21st century students and looks at how PME must adjust from performance-based to outcome-based learning in an effort to place greater emphasis on choosing and using learning strategies rather than about taking on knowledge and skills that are quickly outdated. This paper includes a detailed case study of how an advanced blended learning solution could be applied to a military classroom.

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MILITARY EDUCATION MUST KEEP PACE WITH CHANGE

Secretary of the Army John McHugh has called for a renewed focus on training and educating the next generation leader. "Creative Leaders would be the only means to defeat insurgency" and that developing leaders was as important as developing new weapon systems. (Larter, 2010) Yet the Army continues to spend an remarkably small percentage of it budget on education and training and only a tiny fraction of that that money is spend on learning environments outside the traditional and formal settings if the institutional Army.

In March 2010, TRADOC Commanding General Martin Dempsey introduced the Army Learning Concept for 2015 in a blog posted on smallwarsjournal.com:

"The operational environment is exceptionally complex with an expanding array of threats. Increased competitiveness is the norm. Recognizing that fact means that in order to prevail in future conflict we must first win in the competitive learning environment.

To that end, we are developing an Army Learning Concept to describe a 2015 learning environment that will be more effective in meeting the needs of our Soldiers and leaders. Derived from major themes of the Army Capstone Concept and the Army Leader Development Strategy, it will provide the basis for building and adapting our learning models and future information needs while ensuring we still deliver the high-quality content our Soldiers need and deserve.

The Army Learning Concept for 2015 will guide all Soldiers and leaders through a continuum of learning for the duration of their careers. We are going to cut the chaff and augment the most effective aspects of our current learning system while ensuring relevant and rigorous training and education is available and accessible, and not just on the institutional side of the Army. This is a shared responsibility between the operating and generating force as we lead the Army into a future characterized by its persistent learning environment." (Small Wars Journal, 2010)

The theme of adaptation and change has been persistent in discussions of professional military education, as has the recognition that today's military learning environment has not kept pace with change. In this paper, the authors put forward a learning model that can meet the rate of change and the needs of 21st century learners.

Rate of Learning and Rate of Change

Keeping up with change is not a new challenge in education. The notion that learning must equal or exceed the rate of change in the environment was foundational to the work in action learning led by Professor Reg Revans. (Raelin, 2008)

Proponents of action learning say that for true learning to occur, you must combine programmed, or formal, instruction with deep reflection and questioning and take of advantage of informal less structured learning opportunities that exist outside the classroom. By relying only on formal, programmed instruction--textbooks, lectures, and case studies--you risk teaching material that is outdated, not relevant, or simply out of context. However, when the formal instruction is supported by critical reflection, and socialized among peers, learners can adapt and apply what's learned to address operational problems in a timely and responsive way.

In the workplace, the action learning involves learners working on, collaborating and reflecting on real situations in a real setting. This work-based learning has at its core "the informal learning that transpires in learning teams." (Raelin, 2008)

Today there are many barriers to learning at the rate of change in the professional military environment. These occur in both the formal and informal settings. Some of these, like an over-reliance on PowerPoint in the classroom, are starting to gain attention. Inadequate time for deep reflection is another barrier. With education and learning still seen as something apart from the workplace, there is little to no time set aside once the student returns to the workplace to reflect on how to apply the material presented in formal

instruction to the wicked, complex problems encountered in the operating environment today. Likewise, when in the classroom the focus often appears to be on the lower end of the cognitive scale (knowledge and comprehension) with a sage instructor who at one time had all the experience and knowledge and was now sharing it with young novices.

Another major barrier to effective military education is the difference between education and training. It is often said that we train for certainty but must educate for uncertainty. To create the adaptive agile leaders required in today's operational environment, highly developed problem solving skills based on an ability to critically reason and think through new situations must be developed through effective education rather than training approaches.

Training is focused on the task in isolation and often isolates the Soldier from the bigger problem. It attempts to govern all that Soldiers do by applying uniform tasks, conditions and standards and increasing stress regardless of the developmental pace of the learner. The training environment possesses some elements of the combat environment but effectively conditions soldiers to act or react in a set way given specific condition. The problem is these conditions are rarely the same or as simple.

Education on the other hand enlists a much broader range of cognitive skills development and should focus on work related problem solving. It emphasis an "if/ then" methodology that prepares learners for the multi dimensional, complex world. An educational environment asks questions and allows/encourages the learner to experiment, test and answer; discuss alternatives and how to recognize changing conditions and to think critically and to develop the norms required for problem solving.

Another difference in training and education is the role of the instructor that shifts from being the wise experienced "sage on the stage" to a facilitator of learning, challenging ideas, approaches and assumptions and connecting the learner to multiple sources of knowledge and expertise. This new breed of learning facilitator is more coach than teacher, asks more questions than offers definitive answers, and adapts coaching to the unique needs of the individual learner. This is a much more challenging role for our military instructors and not all will be capable of the change.

We know how adults learn best. (Knowles, Holton III, & Swanson, 2005) They learn best when they:

1. Take responsibility for determining what they learn.
2. Focus on that which is personally beneficial to them.
3. Discover for themselves.
4. Have an environment that provides experience, reflection and feedback rather than experience alone.

Given these known parameters, another obstacle is that our learning environments seldom enable these conditions.

Learning Can Meet or Exceed Rate of Change

The authors maintain that it is possible to create an environment where learning meets, and even exceeds, the rate of change. In this environment, we combine work-based learning with blended learning to create an advanced blended learning model that expands learning to the workplace, links learners to the operational world and the operational world to tools like Web 2.0 that support just-in-time learning. (McGurn & Prevou, 2009)

With this learning model, 21st century learners are enabled inside the classroom as well as in their organization. The emphasis shifts from learning content in formal modules to building learning capacity that extends outside the classroom, using tools and technologies that support how these students want to learn. Schoolhouses and organizations share equally in building this learning capacity, where learning *how* to learn is emphasized over learning new skills.

LITERATURE REVIEW AND THEORY

There is growing evidence that the paradigm shift from an instructor-centered to a student-centered learning environment has begun.

Among the major trends identified by the 2010 Horizon Report is the expectation of "just-in-time" learning, where individuals can work, learn and study wherever and whenever they want to. Another major trend is the increasingly collaborative nature of students' work. Open content is used to maintain the currency of the course material as students and instructors form learning communities and collaborate across campuses and disciplines. (Johnson, Levine, Smith, & Stone, 2010)

Communities of practice help place knowledge into context and thus support learning. In his book *Work-Based Learning*, Joseph Raelin notes that "The

expertness of the community of practice as a learning community should not be overlooked. As an element of work-based learning, it often supersedes the formal scientific documentation that can be found in training manuals or designs that are 'down-skilled' to operating levels. Learning becomes *enacted;* that is, constructed on the spot as new information comes online." (Raelin, 2008)

There is also evidence that learning outcomes improve when elements of an advanced blended learning model are applied. (Office of Planning, Evaluation, and Policy Development, 2009)

- Students learn better in blended (online and classroom) environments.
- Learning outcomes improve when students are prodded to reflect on their learning.
- Learning outcomes improve when learners have control over Web functionality.
- Effectiveness of online learning increases with use of community building among participants, use of online facilitator, blending work and training.

Businesses who applied action learning saw improved outcomes in the workplace. This was particularly true when the learning teams used critical reflection to resolve unfamiliar problems in an unfamiliar setting. (Dilworth, 2010)

ENABLING THE PARADIGM SHIFT

The Web and social networks allow us to connect with people who have already figured out the problems novices are wrestling with in their learning settings. This connection to experienced peers and experts helps the novice make sense of the context and build new mental models that account for the changing nature of the real world.

Communities of practice are heralded as the killer application of knowledge management and were the pioneer applications for connecting passionate workers around solving real problems. The Army has been using these communities (Professional Forums) since early 2000 yet few courses have leveraged their power to connect practitioners and bring their expertise into the classroom environment.

Currently the Army suite of Web 2.0 tools is just reaching a level of maturity comparable to the Web 2.0 environment available to soldiers outside the Army firewall. Again, very few course curriculums take advantage of these tools.

Decision games and judgment exercises are becoming much easier with the YouTube like capabilities afforded on most every computer. Army programs like Virtual Battle Space 2 (VBS2) provide instructor and student a capability to take any classroom case study and build it into a repeatable and tailored learning event. By developing a series of simply questions, any instructor can scaffold learning that helps learners analyze, synthesize and apply problem solving to complex situations.

Given recent advances in neuroplasticity (rewiring the brain in response to experience), we now better understand how we can improve learning outcomes and can demonstrate what success looks like (rather than failure). Old dogs can learn new tricks.

PROFESSIONAL MILITARY EDUCATION IN THE 21ST CENTURY

The Army Learning Concept for 2015, currently in draft form, has begun laying out many of these guidelines for the changes that will be necessary for professional military education in the 21st century. They include an action plan calling for some immediate next steps, for example: eliminating instructor-led PowerPoint presentations from the classroom and using blended learning instead; turning classrooms into collaborative problem-solving labs led by facilitators, not instructors.

These guidelines are consistent with the advanced blended learning model. The focus on transforming professional military education presents an ideal opportunity to create a 21st century learning environment and pilot ABL tools, techniques and technologies that move us beyond theoretical training and education to an operational context.

What follows is a blueprint for structuring that pilot, adapted from the eight phases of workplace learning. (Woodall, Hovis, & Miller, 2006) We then describe what the resulting 21st century learning environment could look like in the vignette at the end of the section.

Phase 1: Preparation. This occurs before the learning event, and begins with senior leadership support as learning needs are assessed. Designing and building the advanced blended learning environment is a critical part of Phase 1.

Preparing learners to participate in the advanced blended learning environment is another important component of Phase 1. This can be accomplished through an orientation structured around a set of

meetings and seminars. The goal of the orientation is to establish an understanding of the art of the possible and a recognition of the value advanced blended learning philosophy.

As part of the orientation, the leadership establishes a sense of urgency, builds a guiding team, then develops and communicates the vision of a new learning environment. These initial steps are critical in that most initiatives fail due to the lack of urgency, vision and clear responsibility for who is doing what to effect the change. Once there is understanding and buy- in, the learning teams can be formed.

Ideally, there should be no more than six individuals in the learning team, and team members should be peers. (Dilworth, 2010) Once formed, it's important that the team be deliberately launched using team development techniques that have been shown to increase team performance. Team questionnaires or surveys can be used to determine ideal team composition. Part of that launch will involve establishing the team protocols and battle rhythm. (Mike Prevou, Veitch, & Sullivan, 2009)

Students will need basic digital literacy, and IT team support (how to access systems, how to reach the help desk). During this preparation phase, the facilitator—who could be an instructor or a team supervisor—can describe the learning path and introduce the job and learning aids that will be used, emphasizing throughout that the learning will continue into the workplace.

Initiating an advanced blended learning environment will require the presence of a dedicated team. A program manager, whose job it is to set up and launch the ABL environment, should recruit the participants, the learning team and community facilitators, subject matter experts, and peer practitioners.

Finally, curriculum design and development should support the extension of learning into the workplace.
In Table 1 we offer principles for instructional design in an advanced blended learning environment. To apply these principles we would follow a simple set of design guidelines that will be discussed in the presentation at length. These principles and guidelines were used in helping the US Air Force Air Staff Collage redesign its non-degree granting Distance Learning ASC Course.

Modularity	No individual instructional segment larger than 15 minutes to allow for quick update
Length	Average instructional segment -2-7 minutes
Interactivity	
People to People	Opportunity for connecting with peers, instructors, experts.
People to System	Simple and easy to use interface. 3 clicks to anywhere
System to System	Use tools that you will use in the workplace, push-pull-prod
Access	Web only, CD, classroom, workplace, integrated (all)
Current & relevant	Opportunities for students to research, access and consult with peers and experts about current operating environment and challenges
Experiential	Create opportunities to practice. Vignettes, case based learning, judgment exercises and decision games, simulations
Learn doctrine	Don't summarize doctrinal reading material. Make students apply. Use presentation applications to introduce and outline the learning, use discussion and conversation to build understanding
Higher Cognition	Emphasis on critical thinking and cognition between apply and evaluation. (may want to set a % standard for each level)

Table 1. Key principles for instructional design in an Advanced Blended Learning environment

Phase 2: Programmed Instruction. In this phase formal content is presented to the learners. The learning team is introduced to the learning objectives and the desired outcomes. Rather than task, conditions and standards driving the lessons the facilitator uses a learning objective and a set of driving questions that should be answered by the students. The questions can be measured by a rubric rather than a single set of conditions that may not account for various learning styles or pre-existing levels of competency.

While this phase may occur in a formal classroom or online setting, traditional discussion is augmented with 21st century technology to support interactive teaching in virtual communities and teams using digital stories and decision games that provide iterative experiential learning. Further, the role of instructor becomes "reconceptualized" into coach, group project leader, learning team facilitator, or designer of the learning experiences. (Raelin, 2008) This will require its own set of instruction and tools and new competencies for instructors. Their role becomes more important as a guide to help learners navigate a complex world, one that they supposedly have already mastered.

Reflection and discussion becomes part of the classroom time, and learners are introduced to tools like learning logs, blogs and threaded discussion tools to reflect and ask the right questions: What should be happening? What is supposed to happen? What is stopping us from doing it? What can we do? The structure of the instruction must be based on an adult learning format and address a variety of learning styles.

Phase 3: Action Learning in the Workplace. Once the programmed instruction is complete, the work-based learning begins as the learning team applies new knowledge in the workplace by tackling operational problems. Again, senior leadership is important because, despite being in the "informal" workplace setting, this is structured learning. Either the workplace leadership or the learning team facilitator can select the problems for the team to resolve. As the team works through the problem, they reflect on the formal learning content and how it could be applied in the operational context. This requires time and practice, both of which are in short supply in workplace. For that reason, it's important that the learning team establish a time and a place to do their critical reflection. (Dilworth, 2010) Throughout this phase, the facilitator/coach provides feedback and the learning team members reinforce one another.

Phase 4: Assessing Outcomes and Measuring Effectiveness. Measuring learning in the traditional ways does not tell us what learning will stick or how effectively learning can be applied to the real world. Learning-team effectiveness in this real world depends on three criteria:

1. Producing a team outcome (product or service) acceptable to whomever the leader-team is serving.
2. A growth in learning-team capacity (which in turn improves capacity of the organization).
3. A group experience meaningful and satisfying to members (which results in improved confidence).

This type of learning is often qualitative and hard to observe. In a complex and changing world it is the only useful measure of effectiveness as we apply what we have learned to varying situations. You simply do not measure critical thinking skills the same way we measure a learners ability to recite the principles of war. Yet given out inflexible task, condition, standards approached we try. What is needed is a rubric of competency levels that gives us a spectrum of performance and an example of the behaviors we expect at each level. Table 2 provides an example of such a behaviorally-anchored scale.

In this example, leaders are evaluated on how well they consider timing during an operation. A novice many not consider timing at all, while an expert has a good sense of how much time it takes to accomplish various battlefield tasks and can predict based on their knowledge of specific factors and their experience. (Prevou, 2005)

Ignore Timing	Aware of Timing Constraints	Model Time Against Assets, Terrain, & Objective	Accurate Predictions	Bold Actions
Novice	**Advanced Beginner**	**Competent**	**Proficient**	**Expert**
• Makes plans without considering how long it takes to accomplish the tasks involved • Ignores factors such as rate of movement • Does not sequence or coordinate assets effectively	• Acknowledges timing constraints • Articulates timing estimates (e.g., is able to estimate time required for movement), but does not incorporate that knowledge into plans.	• Keeps time in mind as a critical factor while developing the COA • Incorporates knowledge of assets, terrain and timing into COA • Calculates timing based upon factors such as available assets, terrain, obstacles, etc.	• Accurately visualizes how long it is going to take to accomplish specific tasks and what the battlefield will look like when all assets are in place • Mentally simulates what is going to be accomplished and in what sequence	• Applies predictions about the enemy to command force within appropriate timing and sequence • Creates a well-synchronized effort whereby units' actions are interdependent, and appropriately timed and sequenced

Table 2. An example rubric for measuring behavior

Additionally our work with interagency and learning teams has demonstrated that high performance can be measured by:

1. Amount of shared situational understanding.
2. Amount of shared purpose and vision about the mission (ability to see an end-state, a compelling direction).
3. Amount of shared trust between team members.
4. Amount of perceived competence of other team members.
5. Amount of confidence each member has in the team's ability to get the job done…and more.
6. The amount of latitude it is given by leaders to get the job done (enabling structure that facilitates rather than impedes).
7. Level of expertise available or accessible to the team (the bigger the shared rolodex the better).
8. The ability to use their social network to include and co-opt others into supporting the team.
9. Time it takes to accomplish a mission/task.
10. Quality of work the team produces (satisfaction of the customer).

Each of these performance objectives can be displayed in a rubric similar to Table 2. This method helps us establish an explicit bridge between learning and performance, and takes us beyond development plans and formative testing.

Phase 5: Reinforcing Learning: In this final phase, the work-based learning is reinforced, enhanced, and becomes continuous. A feedback loop incorporates new learner-generated content as knowledge and learning is applied; this drives updates in the job and learning aids introduced in Phase 1.

The learners use Web 2.0 tools to access programmed instructional material and reach back to facilitators and experts. The learning teams can also use communities for reflective dialogue and resolving the operational problems. Finally, continuous coaching from managers, peers, mentors and experts reinforces the action learning.

A STORY OF ONE ORGANIZATION'S PATH TO TRANSFORM LEARNING

The Commander of a TRADOC Center of Excellence and Combat Arms proponent (or CEO of a company) has come to the conclusion that his officers and senior NCOs are not getting the highest quality education possible required to prepare them for the complex and wicked problems facing the units in Iraq and Afghanistan. After visiting the classes he notes that most instruction is driven by PowerPoint slides and rather than reading the doctrine and critically questioning how that doctrine is employed, he sees instructors practicing the same form of military instruction he experienced over 20 years ago. The

instructors tell the students what they are going to tell them, they lecture them on a subject using PowerPoint slides then they summarize and tell them what they just told them. In follow-up discussions with students and commanders in the field he notes the frustration of both in that the classroom is not keeping pace with the changing battle field environment and while these leaders feel they know a lot of things, they are having trouble executing missions and applying the learning to new situations.

The Commander realizes that a change in instructional methods is needed and that officers and NCOs need to learn as they will fight and that learning must be continuous, not just in four- to six-month bursts when we can pull students back to the schoolhouses. He also notes that the skills for learning have changed. Today's officers and NCOs are well versed in the internet and comfortable with collaborative tools. Most will ask a peer for advice before they look in a manual and most find their sources of knowledge on the web.

Yet the classrooms the Commander visited were very isolated and the only link to the current operational environment seemed to be through the instructor. This instructor-centric environment was counter to what was needed, even demanded by students as they require a more learner-centric model where they become the central character in the classroom and instruction is tailored not only for what they are going to do, but how they learn best. This is a big shift, the Commander knows, and some instructors won't make the transition; but it's a necessary change. He remembers back to the words the former Chief of Staff of the Army General Eric Shinseki told him and a group of then younger LTCs "If you don't like change, you're going to hate being irrelevant."

The Commander wasted little time and called in some old friends who have a background in innovative educational strategies. They had helped a number of other organizations, both corporate and military, transform programs and improve learning outcomes. He asked them to help coach his team through the needed change. After a few calls, office visits and teleconferences to get a clear understanding of the situation the Commander and the Coach set up a three-day seminar that was intended to help the command see the problem, create and communicate a vision, build a guiding team, and enable that team to take immediate action to make quick wins and build momentum that would make the required change last.

Day 1 of the seminar started early with the first three hours for all the executive level leaders across the post. The Commander led off and discussed the problem and why change was needed. He communicated the sense of urgency to the group and after some discussion and professional debate achieved general buy-in.

The Coach talked about the art of the possible and discussed what others were doing or attempting to do to make their educational environment more effective. The Coach then facilitated a discussion on a vision for the future of learning in the organization and the executives provided their input and discussed constraints, restrictions and resourcing issues. The Coach managed to help the group avoid getting in the weeds with tactical 'how to' discussions and instead stay focused on the bigger picture of what was possible.

One of the main constrains offered by a Director was that instructors had limited ways to communicate and collaborate beyond teleconferencing and email and that the inefficiency of those limitations isolated innovation to small pockets of excellence. The Coach suggested they consider revitalizing an online community of practice for instructors. InstructorNet had been set up years prior but left unsupported and resources had languished. After some brief discussion the group thought this would be an excellent application to connect resident and distance learning faculty and then eventually all TRADOC faculty to share curriculum and best practices. The Commander agreed to provide the resources (an online facilitator and IT support) to give it a try.

At the end of the gathering the Commander identified his guiding team to lead the organization through the educational redesign and got a firm commitment from each member that they could and would support the effort.

In the afternoon a larger group, expanded to include department heads and instructional team leaders, gathered. The Commander opened the session by describing the reason change was needed and the conversations he had just had with his senior executives. He asked for only clarification at this point, identified the leaders who would guide the effort, and then set a time frame for the next meeting with this group to hear their input and recommendations. He made the case for change very clear and compelling, he identified his team and he communicated a vision. Now it was up to this team to work out the how and when. The Commander then left the room in the hands of the Coach and the instructional team.

The Coach had no authority here; he was just a facilitator with the mission to guide the team and challenge them to look beyond their own limited experiences to create a new learning environment. For the next three hours this team talked of the principles for an effective learning environment, different instructional techniques and identified new collaborative tools, strategies and approaches and made a list on the whiteboard (Table 3). The meeting adjourned with a clear understanding of what must be done but not yet how. They were to return to their organizations talk with their people and bring a larger group to the auditorium tomorrow afternoon.

The morning of Day 2 was decentralized and each department head and instructional lead met with their team and planned for the afternoon session. In that afternoon session of Day 2 the Coach facilitated a best practices session. "What was working out there and what was not," he asked, and then brought instructors from across the center up to give a two- to three-minute overview of something they had tried. The coach helped fill in gaps in both tools and approaches through some deliberate questioning and by noon the group had a list of potential tools and approaches listed on the white board. The last order of business was to now decide which course/lesson would serve as a test bed to implement some of the new tools and approaches. One innovative and creative instructor volunteered his lesson and the group broke for lunch.

On Day 3 the session opened with the Coach facilitating while the designated instructor laid out his course overview and 'snake chart' to the group. They examined how many PowerPoint slides were used. All got a big laugh when they realized that 300+ slides for a four-hour module was a bit excessive. The group looked at ways it could reduce the number of PowerPoint slides, increase opportunities to read and discuss the application of doctrine, and connect with other leaders outside the classroom to find new TTPs and approaches. They also discussed how to integrate a myriad of Web 2.0 strategies and approaches to create meaningful learning experiences. They mapped the new approaches and strategies to the current class 'snake-chart' and identified six to eight places and activities where experiential learning, reflection, and connecting to the operational world would be most effective.

They discussed how and where they could integrate other tools that were now common place in units and learn the types of knowledge management and information technology skills being required of them in operational units.

Strategies & Approaches:

- Library/Knowledge Repository (flat with metadata)
- Classroom vs DL
- Learning Community asynchronous activity or conversation
- Learning Community synchronous activities - web conferencing
- Community of Practice - Asynchronous Conversation outside the learning group
- User generated profile- to find expertise
- Faculty Generated Content
- Student generated content
- Army wide generated Best Practices and Lessons Learned
- Instructor presence
- SME presence
- Ibot/ intelligent tutors
- Digital Story/Interview
- Judgment Exercise
- Decision Game
- Find an Expert
- Exercise/Simulations
- Virtual worlds
- Branching story
- Wiki
- Blog
- RSS Feeds
- Work flow tools

Table 3. Strategies and Approaches

Some of the more innovative instructors described how they would use Virtual Battle Space 2 (VBS2) and other gaming simulations to create short, first person scenarios, all based on after action reviews and interviews with leaders experiencing a variety of full spectrum operations. Students (and faculty) created their interpretation of doctrine as it is played out. This type of user-generated content, especially when integrated in larger communities of practice, helps learners make sense of our doctrine and understand how it will manifest itself during an operation. It goes beyond the PowerPoint briefing and brings the doctrine to life, improving our ability to remember and apply it.

Others talked of Communities of Practice (or Professional Forums as they are called by the Battle Command Knowledge System) that connect passionate learners in a professional conversation around relevant and current content to solve real problems. These communities cut across stovepipes and link practitioners in specific jobs. They become the virtual O'Club, where we used to gather and share lessons learned. They extend the reach of our leaders by breaking down geographical and time boundaries. These forums when properly facilitated and supported provide an invaluable connection that is unlikely to occur in any other way. When linked with Warfighter Forums, knowledge repositories like Reimer Library and CALL and other specialty Forums like COIN and Domestic Operations place an enormous amount of expertise, lived experience and tactics, techniques and procedures at a members fingertips.

Blogs, wikis, social networks all have a place in learning as well as the workplace. When applied properly they provide learners an opportunity to reflect, integrate thoughts and experiences, combine ideas and make sense of complex situations and work out solutions collaboratively.

After four hours they had a basic understanding of how and when to integrate these new strategies and approaches. The guiding team's leadership then put together a quick timeline of when the group would meet again.

On the afternoon of Day 3 the Commander returned for a brief update where the guiding team identified a half day each month for the next four months where they would conduct best practice reviews and update him on which courses had been modified and how. They showed him how they would use InstructorNet to help faculty connect and collaborate, and how they would use the team building approach offered by the Coach help instructional teams to launch learning teams with common purpose, understanding and confidence with the new strategies and approaches. The Commander was pleased with the schedule and asked to have three to four instructors from the Center attend the next TRADOC Commanders Course to present their best instructional practices and discuss how they have used InstructorNet to collaborate and share strategies. The Commander wanted to share what his team had learned with other commanders and transfer the strategies and approaches across the Army.

The Commander felt that the organization was now on the right path. The follow-up sessions were critical, he knew, to making change stick and that every instructor would not be able to make the transformation. He was prepared for that by actively recruiting a new cadre with the right temperament and personality and the operational experience to facilitate learning in the new century. He wanted to make his Center the model for learning Full Spectrum Operations and was determined to use every tool at his disposal.

CONCLUSION

Change is eminent, and the rate of change will be a constant challenge. The military must have an approach to meet the rate of change. Advanced Blended Learning, with its emphasis on the 21st century learner, enables learning to keep pace with change and provides more opportunity for lifelong learning as the military prepares the force to learn as they will fight (operate).

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