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## Today's Training and Education (Development) Revolution: The Future is Now!

Donald E. Vandergriff

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**by**

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**The Institute of Land Warfare**  
ASSOCIATION OF THE UNITED STATES ARMY

## AN INSTITUTE OF LAND WARFARE PAPER

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### LAND WARFARE PAPER NO. 76, April 2010

#### **Today's Training and Education (Development) Revolution: The Future is Now!**

**by Donald E. Vandergriff**

Donald E. Vandergriff served 24 years of active duty as an enlisted Marine and Army officer. He has authored 50 articles and four books. *Spirit, Blood and Treasure: The American Cost of Battle in the 21st Century* (Presidio Press, May 2001) is a collection of essays that address across-the-board reform of the Department of Defense for the 21st century. *Path to Victory: America's Army and the Revolution in Human Affairs* (Presidio Press, May 2002) is an extensive study of the Army's personnel system and culture, with recommendations for preparing the Army for the 21st century. More recently he has published *Raising the Bar: Creating and Nurturing Adaptability to Deal with the Changing Face of War* (Center for Defense Information, December 2006) and *Manning the Legions of the United States and Finding Tomorrow's Centurions* (Praeger, October 2008).

*Raising the Bar* is currently being used in numerous courses, particularly by the Department of Military Instruction at the United States Military Academy at West Point, New York; an excerpt of chapter 6, "Training (and Educating) Tomorrow's Soldier" in *Manning the Legions* was sent out in July 2008 by Army Chief of Staff General George W. Casey, Jr., to all two-star generals as a recommendation for best practices on how to develop Soldiers.

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This paper represents the opinions of the author and should not be taken to represent the views of the Department of the Army, the Department of Defense, the United States government, the Institute of Land Warfare, or the Association of the United States Army or its members.

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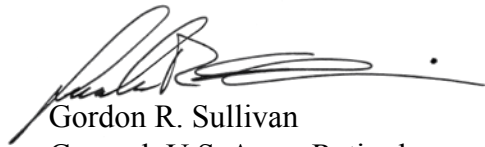


## Foreword

Today's highly complex operations have driven home for the Army the importance of quality decisionmaking at junior levels. Even with modern command, control, communications, computer, intelligence, surveillance and reconnaissance (C4ISR) capabilities, the noncommissioned officer or junior officer on the ground sometimes has the best situational awareness and thus is likely to make the best decision—but only if he or she is equipped, intellectually and culturally, to properly assess the situation and creatively arrive at the best solution.

Rote learning is no longer sufficient to produce the kind of problem-solving Soldiers the Army needs for today's complicated challenges. Adaptability, critical thinking and creativity have become critical skills for modern Soldiers, and the Army is changing the way it trains and educates to ensure that those skills are instilled in its warriors.

This paper describes the Army's new approach, Outcomes-Based Training & Education (OBT&E). This educational philosophy is implemented in both the teaching of basic skills and the development of leaders, using the Combat Applications Training Course (CATC) and the Adaptive Leader Methodology (ALM). These new training and education tools will produce the kind of flexible, adaptable Soldiers and leaders the modern battlefield demands.



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## **Today's Training and Education (Development) Revolution: The Future is Now!**

*We've gone to outcomes-based training. . . . What we've learned in this fight is that Soldiers really need to be able to figure things out.*

General Martin E. Dempsey  
Commanding General,  
U.S. Army Training and Doctrine Command  
October 2009<sup>1</sup>

### **Introduction**

The challenge the Army faces today is not one of over-thinking situations; rather, it is the failure to think clearly in situations that require sound judgment at junior levels, and leadership's hesitation to believe that juniors can or will think clearly. Soldiers and junior leaders who are trained or conditioned to "look" at the situation—i.e., to assess, exercise judgment and make decisions—are more decisive, deliberate and correct in their actions. This is particularly important in the complex environment of full-spectrum operations. The most important capability needed for the Army Future Force may well be thinking Soldiers and junior leaders who seek after the "why" of a situation, task or directive, to understand and make better use of the purpose behind it. And the future is now.

In light of this, thinking young men and women who have been taught the purpose behind military operations understand that anarchy leads to failure, while unity of purpose is more likely to lead to success. An organization of thinking individuals, working in unity of purpose with a strong understanding of intent, is more readily able to adapt to the unexpected realities of today's mission sets. Therefore, the Army is adopting a new approach to training and education called Outcomes-Based Training & Education (OBT&E) and evolving two teaching methods—the Combat Applications Training Course (CATC) and the Adaptive Leaders Methodology (ALM)—under the OBT&E umbrella.<sup>2</sup>

OBT&E—which evolved out of the efforts of the 198th Infantry Brigade at Fort Benning, Georgia, 2006–08, in the approach they took to developing new infantry Soldiers—is now being embraced as doctrine by the Army. Simply put, OBT&E looks for results; much like mission orders or mission tactics executed with little or



no oversight from higher headquarters, it puts a greater burden of professionalism (including accountability for prior knowledge and training) on the shoulders of the student, with guidance from the instructor. OBT&E is best described as “developmental training,” i.e., development of the individual within the training of military tasks.<sup>3</sup>

Behavioral changes are not lasting if we fail to strike at their antecedents. Until relatively recently, these causes were not well understood, so there was little the Army could do to influence methods of developing Soldiers in meaningful ways. This began to change based on research done since about 1970. Today, the Army has to account for the fact that the actions we take at the earliest points in a career and thereafter, in a sequential and progressive fashion, manifest themselves much later.

To counter an array of national threats and opponents, using practices that range full spectrum, a synthesis of Army courses into “learning organizations” is needed. To meet this educational end, current educational and training ways and means must be assessed, evaluated and changed. Weak spots and points of failure in leader and Soldier education and training must be identified—all in the interest of retooling the system in ways that facilitate the development of officers who are intuitive and adaptive.

Acknowledging the need for change, the Army has begun an evolution in the way it develops—accesses, trains, educates, promotes and selects—leaders and Soldiers. Its recently published training doctrine, Field Manual (FM) 7-0, *Training for Full-Spectrum Operations*, states:

Traditional training and education may not meet all the needs of an expeditionary Army; as appropriate, training and education must adapt to the needs of a new operational environment. The training and education requirements are different for a full spectrum-capable force. Development of new approaches may be necessary to ensure Soldiers and Army Civilians are confident in their ability to conduct full spectrum operations anywhere along the spectrum of conflict with minimal additional training. For example, Outcome-Based Training and Education is supposed to develop individuals and organizations that can think and operate in complex environments. Used in initial entry training, its goal is to develop individual confidence, initiative, and accountability in addition to mastery of skills, instead of just minimum baseline level of performance. The focus is on the total outcome of a task or event rather than on the execution of a particular task to a standard under a given set of conditions. Given operational expectations, it is supposed to develop tangible skills—such as marksmanship—and intangible attributes—such as creativity and judgment.<sup>4</sup>

In the past, the “competency theory” of learning dominated course curriculums, and there remain signs of it today in leader development. Competency theory is a product of the old Industrial Age outlook that once, by necessity, governed the way military forces prepared for war. During the time when we relied on a massed

citizen army made up of draftees, this “assembly line” mentality made sense, but the disadvantage was that this emphasized output more than the individual quality of the product. Today, some leader-centric programs within the institutional Army in general still reflect the old assembly-line approach. Order and control are central to programs of instruction (POIs) that use the competency theory as its foundation.<sup>5</sup>

Leader development for the full spectrum of 21st century military operations must be based on quality, not quantity, at every grade level. The rule should be, “Soldiers deserve and require trained leaders.” Schools must constantly put students in difficult, unexpected situations, and then require them to decide and act under time pressure. Schooling must take students out of their “comfort zones.” Stress—mental and moral as well as physical—must be constant. War games, tactical decision games, map exercises and free-play field exercises must constitute the bulk of the curriculum. Drill and ceremonies and adhering to “task, condition and standards” (TCS)—task proficiency—in the name of process are not important. There are many tasks for which TCS is still relevant. But under CATC and ALM, the emphasis is on growing the decisionmaker by explaining the reason for the task and teaching in the context of a problem-solving exercise. Higher command levels overseeing officers’ and noncommissioned officers’ (NCOs’) schools must look for flexible courses guided by outcomes rather than inputs while allowing instructors to evolve their lesson plans using innovative teaching techniques and tools for an ever-changing environment. Those leaders who successfully pass through the schools must continue to be developed by their commanders; learning cannot stop at the schoolhouse door.

The question that arises repeatedly is, “How does one teach in an OBT&E environment?” There are two techniques that answer this question: CATC is better for lower-level/individual Soldier-centric tasks, and ALM is focused more on leader tasks; both approaches focus on growing decisionmaking. OBT&E is the guiding philosophy from which CATC and ALM were developed as ways to teach and reach outcomes.

In both CATC and ALM, Army standards remain the baseline for training; however, they are no longer the primary or exclusive goal of training. Within this idea is the realization that a generalized standard designed for the success of the Army at large may be less than is required for the success of the individual or small unit in unique situations. In this manner, the task to be trained is looked upon as an opportunity to develop Soldiers, primarily by creating a foundation of understanding that allows them not only to perform the task to standard but also to take ownership of the task and to exercise problem-solving skills.

### **Combat Applications Training Course**

The Army’s Asymmetric Warfare Group (AWG),<sup>6</sup> as well as other courses and units, are teaching using the CATC philosophy. It deals with a method to instruct and

develop mastery of any given subject. Its premise is that Soldiers can apply principles to understand the how and why of training. At the center of CATC is the use of problem-solving to teach a task. In this venue, CATC uses rifle marksmanship as the training vehicle to demonstrate how to teach under OBT&E. AWG selected basic rifle marksmanship (BRM) as a vehicle to demonstrate OBT&E because BRM is used across the Army to teach people to shoot their rifles. CATC has been taught to several basic training battalions throughout the Army as well as at the drill sergeants' school at Fort Jackson, South Carolina, and to infantry training brigades at Fort Jackson, Fort Benning, Georgia, Fort Sill, Oklahoma, and Fort Leonard Wood, Missouri.

During CATC, teaching a military skill results in mastery of that skill for the vast majority of students, when presented as a relevant problem-solving exercise. In this manner, the teacher guides the student to discovery of a desired solution or outcome through established principles or demonstrated facts, and with student-generated evaluation throughout the learning cycle. Mastery of the skill results in:

- confidence, accountability and initiative; and
- an introduction to the skill of discursive reasoning and the norm of problem-solving.

AWG instructors believe this is applicable to all manner of military training; its efficacy has been readily demonstrated in history and in such current military initiatives as land navigation, squad tactics, room-clearing and convoy operations. The term “mastery” defines reasonable ownership of a skill in terms of knowledge, expertise and application. CATC abides by the following OBT&E principles:

- **Training to grow problem-solving** teaches Soldiers to “teach themselves” the skills necessary to the success of their mission.
- **Training to increase intangibles** develops the intangible attributes of confidence, accountability, and initiative.
- **Training to increase understanding and awareness** teaches through contextual understanding of the task and its mission application.
- **Training to increase deliberate thought** conditions Soldiers to always exercise a deliberate thought process while under stress.
- **Training to improve combat performance** conditions Soldiers to overcome the psychological and physiological effects of combat.<sup>7</sup>

The CATC program uses rifle marksmanship as a foundation to improve the professionalism, confidence and character of the Soldier. One example involves a task called “SPORTS” (slap, pull, observe, release, tap and shoot) for clearing a jammed weapon.<sup>8</sup> The traditional approach to basic Soldier skill training presents only TCS. In this case, the problem for the Soldier is to correctly perform, in five seconds, a

mechanical function in a sterile environment. This not only offers no opportunity to employ the problem-solving skills required in combat, it also places the responsibility for the outcome on the instructor, not on the student.

In contrast, the OBT&E approach presents the problem in a combat scenario. When the weapon jams, the Soldier not only uses the SPORTS process to clear the jam (if that makes sense under the circumstances) but also considers and executes other essential tasks, such as taking cover and notifying comrades of the problem—in roughly the same amount of time.

From leaders at all levels, the response to CATC's approach has been positive. For example:

While at the Drill Sergeant School (where I received CATC training), we made a great attempt immediately to implement the training from CATC. Introducing the training methodology was easy, in that it is merely a shift in leadership style and does not take much outside approval to make it happen. We also wanted to integrate the basic rifle marksmanship training itself; we thought it would be a great addition to the curriculum at the Drill Sergeant School.

CATC was an awesome experience for me. Aside from learning more about BRM in one week that I had learned in 10 years in the Army, it really opened my eyes as a trainer and a leader. Maturity in training and leading is the biggest success multiplier out there. If you treat the Soldiers maturely and as professional adults, you can expect those same results in return. Personal responsibility and personal accountability must be at the forefront of all training. If it is, and the understanding by all is that safety is nonnegotiable, it is nearly limitless how far you can go in training, to make the training as realistic and relevant as possible.<sup>9</sup>

It is a natural process for individuals in leadership roles to solve problems without regard to the potential impact on those below them. But problem-solving in a vacuum is a short-term solution that may do harm to the long-term development of an organization. If an individual in a position of influence or authority identifies a problem of concern within an organization, a solution is generally presented in a top-down manner. In effect, this takes the responsibility out of the hands of the individual performing the task, making him or her dependent first on the instructor and later on the chain of command for trivial tasks.

It can be argued that there is nothing systematically wrong with this approach. It is to the point, it appears efficient and it is quantifiable. The Army, and society, will solve organizational problems using the mechanical approach or to find a process wherein the solution is thrust upon the group with a means of enforcement. The focus of this type of problem-solving is the problem itself, and it often relies on principles of manipulation associated with models like Maslow's hierarchy of need.<sup>10</sup> One Soldier

reflects on the contrast between the Army's Industrial Age approach and CATC's OBT&E method:

The course exceeded my expectations. I expected to get the basic rifle marksmanship class that I gave while a drill sergeant. I was wrong. I was introduced to a new method of providing information to today's young leaders, as well as honing my BRM skills. The BRM portion was presented in a well thought out manner, time was well spent, the instructors were the subject matter experts, and the range was well set up. The instructors made sure that information was understood by all, especially taking time to assist with the development of our program here in Germany.

I see the CATC philosophy as training Soldiers to be adaptive leaders—making today's Soldier a thinking tool and not a mindless robot, and ensuring that the training we provide for today's Soldiers is what is necessary on the battlefield.<sup>11</sup>

CATC developers have discovered another approach to problem-solving, but it is counter to current cultural ideas and is not readily inherent in the Army or U.S. society. It is extremely powerful in building a sense of accountability, responsibility and confidence in the Soldier in addition to solving the problem, and it is especially suited to volunteers. The focus of this type of problem-solving is at least equally divided between growing the intangible attributes of juniors and the problem itself, and it relies on the principle that individualized, purposeful action is superior to mandated action.

In this approach, CATC instructors have discovered that when an organizational problem is encountered, a solution is still defined (to a degree), but it is not directly presented. The leadership works with the Soldier to help him see and analyze the problem from an operational perspective. The leadership demonstrates to the Soldier that the resources required to solve the problem are within the Soldier's means. In this manner, the Soldier plays an active (creative) role in discovery of the solution. Two things are accomplished with this approach: The solution is found through the positive experience of discovery, with the Soldier taking ownership of the solution and experiencing the process of problem-solving from an operational perspective. Revisiting the simple example of a rifle stoppage:

“An obstacle in your mission to engage the enemy is a stoppage in your rifle. How can you overcome this obstacle? First, determine what causes a stoppage and then how to correct it.” Leadership talks the matter out using its defined or partially defined solution as a guide—i.e., the logical process of *SPORTS plus* thoughtful problem-solving versus a mechanical function that must be performed correctly in five seconds. The intent is for the Soldier to discover the cause and solution by his own deliberation. This builds in the Soldier a sense of accountability for his actions,

responsibility for taking action and confidence in deciding on the correct action. The goal in this approach is for the Soldier to understand the problem and the solution. The standard of correctly performing the task in five seconds will be a natural byproduct and, to a degree, secondary to the growth of the Soldier.

Asking questions in a positive manner involves the Soldier in the process of discovery. Using the word “we” means the leader is joining with the Soldier in finding mission success for the Soldier: “This is your mission (or task), but I am committed to helping you find success.”<sup>12</sup>

Contrast the two methods of dealing with organizational problems—the competency theory and OBT&E—and discover that the first method is not concerned with developing the problem-solving ability of the Soldier. It also focuses the efforts of leadership on solving an increasing number of problems for the Soldier. A byproduct of this method is a growing sense of frustration in the leadership over a perceived lack of initiative and responsibility in Soldiers. The second method, concerned with encouraging the problem-solving ability of the individual, sees problems as opportunities. It focuses efforts of leadership on providing the environment and resources for the individual to succeed. The first method defines what the Soldier *must* do for success while the second method empowers the Soldier to discover what he *can* do.

“It is better to be called a mentor than an instructor.”<sup>13</sup> In the BRM example, an instructor states the problem (a jammed weapon) and then states the solution (execution of SPORTS within the mandated five seconds). For the Soldier, the problem has shifted from the need to clear a rifle stoppage in combat to the need to perform a task correctly in five seconds. This places a requirement on the student not related to the task of warfighting and contrary to the initiative expected of American Soldiers. A mentor helps the individual understand the problem as it relates to the task of warfighting and then guides him to discover the solution (mastery of the skill). A mentor does not have to know the solution; he has only to ask the question and be willing to help find the solution.

Field Manual 3-22, *Rifle Marksmanship*, contains the word “must” more than 400 times, with more than 100 references to “Soldier(s) must.” The Army has solved the problem for the individual and retains ownership of the solution. In doing so, it also removes operational accountability, responsibility and confidence from the individual. Leaders and advisors may find it rewarding to solve problems—we all like to do it—but if the Army is not teaching Soldiers how to solve their own problems and fostering an environment wherein they are resourced for success, then the Army is the problem.<sup>14</sup>

### **Adaptive Leader Methodology**

Parallel to the CATC program of instruction is the Adaptive Leader Methodology (ALM)—the second innovation used to apply the principles of OBT&E; ALM evolved

from an effort at Georgetown University between 1999 and 2005 to develop ROTC cadets to be better decisionmakers and leaders of character. While CATC and ALM use different vehicles—ALM uses situational exercises in a tactical environment—to develop professionalism, decisionmaking skills and, ultimately, strength of character, the methodology used by the instructor is similar.

According to Major Chris Kennedy, CATC and ALM are “two sides of the same coin.”<sup>15</sup> ARCIC Command Sergeant Major Patrick Laidlaw describes ALM as:

. . . training as it has always been done but now more focused for the team to share and not just the leader. ALM reinforces the events that all Soldiers and future leaders learn in a long period of time as what they can now do in short periods and get instant feedback and input; gets the [after-action review] back into the decisionmaking and critique process. This should be a course that gets into every aspect of decisionmaking from reception station to mission rehearsals for future combat operations at the lowest level. ALM is a great asset for early leader development at all of our training bases.<sup>16</sup>

Dr. Gary Klein tells us that the most frequent type of decisionmaking for leaders in a time-critical environment is recognitional, which requires a large amount of experience.<sup>17</sup> Research also tells us that competence in decisionmaking is solidified by making a large number of decisions in a stressed environment.<sup>18</sup>

Dr. Robert Bjork, Dean of the School of Psychology at the University of California Los Angeles (UCLA), tells the Army that there is room for improvement in its training methods. In his presentation “How We Learn Versus How We Think We Learn: Implications for the Organization of Army Training,” Bjork emphasizes:

As instructors, we can often be misled in this determination because what is readily available to us is the performance of our students during instruction, which can be a poor indicator of how much durable learning is actually occurring. If, for example, all we consider is the rapidity and apparent ease of learning during training and instruction, we can easily be led into preferring poorer conditions of learning to better conditions of learning. Additionally, as learners, it seems that we do not develop—through the everyday trials of living and learning—an accurate mental model, so to speak, of those operations that result in learning and those that do not. And, furthermore, we are fooled by certain indices—such as how fluently we process information during the re-reading of to-be-learned material—into illusions of learning and/or competence that then leads us to prefer poorer conditions of learning to better conditions of learning.<sup>19</sup>

Leaders must understand that deciding when and how to close with an enemy may be the least important decision they make on an asymmetric battlefield. Instead, actions that build and nurture positive relationships (with a community, local leaders and children) may be among the defining factors for success, along with the primary

tools for containing an insurgency, building a nation or stopping genocide. True tactical prowess often entails co-opting the local population's will while shattering the cohesion of asymmetric adversaries. The Army, and for that matter the other services, with exceptions, have focused on the competency model, which produces leaders who are good at "what to think," but, as Bjork stresses,

When instruction occurs under conditions that are constant and predictable, learning appears to get what we might call contextualized. It looks very good in that context, but doesn't support retention later when tested in other contexts and the learning acquired in the original context does not transfer well to different contexts. In contrast, varying conditions of practice, even just the place where you study, for example, can enhance recall on a later test. . . .

If when trying to learn several things, you intertwine the learning of those things in such a way as to cause interference among them during learning, long-term performance on them will be enhanced. This is the one desired difficulty that I am going to illustrate with experimental results. . . . Massing (such as cramming for exams) supports short-term performance; whereas spacing (distributing presentations, study attempts, training trials, etc.) supports long-term retention.<sup>20</sup>

Bjork's work, as it relates to evolving the current task-centric and process-centric approach to Army education, can be summed up in the following:

***Conditions of instruction that make performance improve rapidly often fail to support long-term retention and transfer,***

***whereas***

***conditions of instruction that appear to create difficulties for the learner, slowing the rate of apparent learning, often optimize long-term retention and transfer.***<sup>21</sup>

Army courses moving to OBT&E can use ALM as the program of instruction (POI). It exposes students to classical education in conjunction with existing leadership programs on campuses where they are taught to find the answers, whereas a competency-based curriculum, as described earlier, gives students the answers. Instead, if students are exposed to an environment in which they want to find the answers for themselves, then the lessons are emotionally marked in time, which builds intuition—a necessary trait of adaptive leaders. This approach in ALM immerses the students in education and training, with innovative teachers combining the terms "education" and "training" into "development."

According to Major Chad Foster, course director for Military Science 300 in the Department of Military Instruction at the United States Military Academy (USMA) at West Point, New York,



[T]he implementation of key elements of ALM has been the best thing to happen to our Military Science program during my time here as an instructor. After seeing this new methodology of teaching applied to our courses in tactical problem-solving and small unit tactics this semester, I am even more convinced of its value. In just a few weeks, I felt that I was able to get my cadets to a level beyond that which I was able to achieve over several months during previous semesters.<sup>22</sup>

ALM is a leader development approach incorporating recent advances in the field of experiential learning. It is an answer to the call for a new leader education model to reshape a fundamental Army learning process for a dynamic operating environment. ALM provides an answer to the 2006 TRADOC Area of Interest 2 requirement to “Change the Professional Military Education (PME) model to adapt to the contemporary operational environment (COE) and the Army Forces Generation (ARFORGEN) model, and leverage Army Distributed Learning (ADL), which supports Army TRADOC Campaign Plan.”<sup>23</sup>

The Basic Officer Leader Course (BOLC) II program at Fort Sill and Fort Benning used ALM from July 2006 until the BOLC II program ended in October 2009.<sup>24</sup> Since February 2008, the demand for information on ALM has intensified, as have as requests for its instructor certification workshop “Deciding Under Pressure and Fast.” Since January 2008, ALM and the workshop have been presented to the Joint Conference on Military Ethics in San Diego, California, and at Fort Huachuca, Arizona; Fort Benning; Fort Gordon, Georgia; Fort Monroe, Virginia; Fort Knox, Kentucky; and the USMA. According to Major Foster,

The ALM workshop was instrumental in getting our new instructors to “buy in” to the new teaching methodology [ALM] that we are utilizing in our new MS300 course. It built on a lot of things that I had been saying to them previously, but it went farther in communicating the spirit and intent of ALM than anything else that we did as part of our new instructor integration and training.<sup>25</sup>

ALM became institutionalized on 24 April 2008 when Lieutenant General Benjamin C. Freakley, Commander, U.S. Army Accessions Command, signed a policy letter, “Basic Officer Leader Course (BOLC) Policy and Guidance,” mandating ALM certification for BOLC instructors. The Asymmetric Warfare Group has also used ALM in its OBT&E activities; it hosted its first Adaptability Conference 3–4 June 2008, with day 1 focusing on ALM workshop while day 2 focused on OBT&E. AWG continues to host these workshops, most recently at Fort Benning and at Fort Sill in December 2008.<sup>26</sup>

Many other institutions within the Army, including leader-centric courses such as the Noncommissioned Officer Academy (NCOA) at Fort Benning, are starting to

use ALM in their POI and lesson plans. As Command Sergeant Major Zoltan James, commandant of the Fort Benning NCOA, describes,

ALM has outlined and changed the way we teach at Fort Benning's NCO Academy by giving us the ability to develop NCOs to think for themselves instead of current training outlines that provided them with a Task, Condition and Standard. We have changed our training culture adding the utilization of tactical decision games with no additional resources or increased Program of Instruction time. This new training tool allows our Noncommissioned Officer Education System (NCOES) students to share their combat experiences with their peers and provides a training vehicle to develop and practice adaptability. Most important, they gain knowledge and understanding of how to deal effectively with a continually changing environment.<sup>27</sup>

Using ALM to accomplish OBT&E supports the Army Chief of Staff's and Secretary of the Army's vision of adapting Army culture to encourage, develop and teach adaptive leadership. The issue before TRADOC is instituting a methodology that moves beyond this vision to a method to instruct leaders on "how to think" versus "what to think." As CSM James continues,

Creating adaptability in our leaders attending NCOA is a huge challenge for the current methods available of training by the standard training support packets (TSP) provided for NCOES classroom instructions by the institutional Army.<sup>28</sup>

The institutional Army must understand the ALM principles, which include:

- Providing contextual interference during learning (e.g., *interleaving* rather than *blocking* practice); most tasks are learned through doing and are subordinate to leader development scenarios, taught as needed and as part of varying the conditions of learning.
  - "Experiencing the thing before they try to give it a name."<sup>29</sup>
  - Conducting scenarios three levels higher to understand their (units') role in the bigger picture through use of tactical decision games (TDGs).
  - Executing free-play, force-on-force exercises, with missions used as vehicles to develop leadership adaptability.
- Distributing or spacing study or practice sessions (providing the opportunity and access to find answers).
- Reducing feedback to the learner, forcing the student to find the answer rather than providing it.
- Using observations and evaluations by conducting scenarios (rather than presentations) as learning events.

Instructors' feedback and that of students involved with ALM reflect the positive impact this cultural change will have on the Army's future leaders. According to Captain Thomas Pike, course director for Military Intelligence BOLC III,

Adaptive Leader Methodology has had a paradigm-shifting impact on the Military Intelligence Basic Officer Leader Course (MIBOLC). ALM has not only improved the way in which material is presented to the students, it has also changed the way in which instructors understand their material, dynamically changing MIBOLC's training environment. ALM is what is needed to train junior intelligence officers for the 21st century.<sup>30</sup>

Of significant note is that this change has required no additional resources or a lengthening of the total period of instruction. ALM takes advantage of current combat veterans' insights and experiences, their continued initiative and their desire to grow future leaders. ALM does this because it continues to build on the Army core principles and values. The warrior ethos underpins everything in ALM, while ALM adapts Army leaders to the current and future operating environment.

ALM is a cultural change rather than a specific set list of exercises; as Captain Pike continues, "It is a completely different mindset for the instructor."<sup>31</sup> ALM develops adaptability by employing the rapid decisionmaking (RDM) process, using the experiential learning model in scenario-based learning. According to Captain Casey Giese, BOLC II company commander, "ALM is a system that promotes self-actualized learning via weakly structured situational problems."<sup>32</sup> Additionally, ALM parallels the latest findings of the academic world in leader and cognitive development. The ALM POI employs techniques that are "desirable difficulties" as pointed out by Dr. Bjork in his keynote presentation at the TRADOC-hosted Science of Learning Workshop in August 2006. Captain Alec Barker states, "ALM espouses institutionalized inductive reasoning in order to prepare leaders for the complex wars of the future."<sup>33</sup>

According to former BOLC II company commander Major Paul Wilcox, in a course using ALM,

Students are quickly thrown into problem-solving exercises that would be viewed in the past as too complicated for them without first learning the basics [from a classroom lecture]. They then review the results of their actions in an after-action review (AAR) in which the instructors facilitate the students in finding their answers. The instructors avoid telling the students how to do it—there are no book solutions—but guide the students toward workable solutions they already discovered in experimenting during the course of the scenario.<sup>34</sup>

Before introducing theory or doctrine, instructors use tactical decision games (TDGs) or symposium-based case studies as tools to facilitate learning.<sup>35</sup> Then, whenever possible, they follow up with force-on-force, free-play exercises. A USMA cadet contrasts the old with the new:

I wanted to express to you how thankful I am for the change in the program. Last year as you know was death by PowerPoint, where the quizzes were a bunch of form numbers. Myself and many of my classmates deemed that of little use considering how most of those forms can be found on Google and that most of us have forgotten what we memorized and dumped for that course. I was very happy to find out that the yearlings did not have to suffer through what I did, and instead, are developing their tactical thinking and applying them to scenarios we may see in the future. Many of my classmate and myself agree that this course makes one realize why they came to West Point, to lead Soldiers and be real good at it. I just read the homework assignment for MS 300 and it was full of good information that I can use for the future. This class prepares me a lot better for [Operation Iraqi Freedom] and [Operation Enduring Freedom] than last year's class. Thank you for that, and I hope this development continues.<sup>36</sup>

Students are allowed to run as much of the course as possible. For example, for rifle qualification required to meet Army regulations, students not only learn how to shoot, they also learn by running the range as well. **These approaches do not absolve the cadre of the responsibilities of teaching and ensuring the safety of the students.**

According to BOLC II instructor Sergeant First Class Robert Elzy,

The approach called for in the ALM POI is more difficult because the instructors must stand back and let the students learn through doing, but also know when to step in to keep students on course without wasting too much time as some student leaders will flounder in trying to lead and solve the problem.<sup>37</sup>

Major Foster adds,

ALM works, but it takes the right kind of instructor. Gone are the days when you could just plug any officer or NCO into a teaching position. Teaching in a course that applies ALM requires a high level of passion and competence. It is tough for those who want to implement this methodology, but nothing worth having is ever easy. After seeing it first hand, I will apply the principles of ALM in everything that I as a leader, trainer and mentor during the rest of my Army career. I will also seek out subordinate leaders who understand this philosophy and can put it into practice.<sup>38</sup>

ALM holds to the idea that every moment and event offers an opportunity to develop adaptability. Every action taken by a student in the classroom or in field training is important to the process of inculcating a preference for new solutions. If students err while acting in good faith, they do not suffer anything more than corrective coaching. Constructive critiques of solutions are the norm, but more important are the results of actions, and the reasons for those actions. The role of coaching and

360-degree assessment is to develop students so their future actions will make a positive contribution to their unit's success, no matter what the mission. This idea is based on the premise that one learns more from a well-meaning mistake reviewed critically and constructively than from applying an established and memorized process.

ALM teachers are concerned with why the students do what they do—an action-learning approach. The emphasis of the course is on ensuring that the students gain and maintain a willingness to act. During numerous AARs and mentoring sessions—occurring during and after numerous scenarios with different conditions—the teacher will analyze why the students acted as they did and the effect the action had on the overall operation. As Captain Andrew Watson, an instructor at Infantry BOLC III, put it,

I was skeptical at first of ALM's utility for a number of reasons. We had to really bite our lips during the painful execution of very poor React to Contact Drills during the live-fire exercises [LFXs]. However, we noticed during the AAR we were no longer confronted with the statement, "But that's the way the sergeant told me to do it." I was now able to ask leading questions during the AAR, i.e., "Why did you assault back toward your support-by-fire position?" I found myself rather than in a position of convincing the lieutenants of a way to do it, and even confrontational at times in the AAR, the lieutenants now fully accepted and took ownership that they were not ready. I was now coaching, teaching, and mentoring on team, squad, and platoon leadership. The lieutenants then went back and conducted several hours of rehearsals and then executed a second iteration of the LFX. They performed the best set of squad LFXs we've ever conducted.<sup>39</sup>

The ALM curriculum and leader evaluation system use two criteria to judge students' decisions and ultimately their strength of character: the timeliness of their decisions and their justification for actions taken. The first criterion will impress on students the need to act in a timely manner, while the second requires students to reflect on their actions and gain insights into their own thought processes. Since students must justify their decisions in their own minds before implementing them, imprudent decisions and reckless actions will be less likely. During the course, student decisions in terms of a "school solution" will be relatively unimportant. The emphasis will be on the effect of the students' actions, not on the method they may have chosen. This encourages a learning environment in which there will be few formulas or processes to achieve optimum solutions—an environment that will solicit creative solutions.

The learning evaluation system in ALM is based on the philosophy that feedback should be given in a way that encourages a willingness to act and then reflect on actions in a manner that maximizes learning. Unconstructive critiques destroy the student leader's willingness to act and can lead to withholding of adverse information or false reporting. The course will avoid formulaic solutions and provide room for

innovative solutions in its POI. This begins at the entry level to achieve transformation over a generation of leaders, teaching new dogs new tricks. As CSM James remarked, “With ALM we have a better trained and developed NCO Corps that become critical thinkers and can adapt to a changing operating environment to support senior leaders’ mission requirements.”<sup>40</sup>

### **Conclusion: Evolution Must Continue**

*Most Army schools open with the standard bromide: “We are not going to teach you what to think . . . we are going to teach you how to think.” They rarely do. Critical thinking is both art and science. There are techniques to critical thinking, such as careful application of logic, or alternative application of deduction and induction. These techniques can be taught and learned.*

Brigadier General David A. Fastabend and  
Robert H. Simpson, “Adapt or Die”<sup>41</sup>

Critically important to the institutionalization of adaptability, which will assist with recruiting and retaining good Soldiers in the Army, is superior (innovative) military education and training. Not only will the Army need to produce leaders who possess adaptability, but the institutions tasked to develop leaders will need to become adaptive as well—to evolve as the operating environment changes.

The Army’s cultivation of adaptability requires a vast effort—both from the top down and the bottom up. It is so central to the future of the Army that it applies to squad leaders as well as to the joint force commander. Moving the Army toward a learning organization structure will bring its collective creativity to bear in solving problems at the tactical, operational and strategic levels of war. The culture will become one that rewards leaders and Soldiers who act, and penalizes those who do not.

The Army’s future leaders will also have the responsibility to self-police their own ranks, particularly early on if they become teachers within a CATC, ALM or an operational unit. This makes evaluating—“racking and stacking”—graduates easier. It will also help determine early on who will have the character and traits to become an adaptive leader. The criteria should include observations of the student leaders in several scenarios. Before selecting or promoting subordinates, a commander and teacher should always ask, “Would I want this person to serve in my unit?” Throughout a course, an instructor or teacher will instill in students the importance of accurate reporting and taking action when the situation demands it. The Army’s culture of the future will not tolerate inaction.

The instructor’s role in employing OBT&E principles cannot be overstated. The instructor is central to the learning process, be it training or education. One could argue that OBT&E is dependent on specific instructor skills, whereas the skills of course managers and training developers are enablers to OBT&E. It’s the instructor who

interfaces with the student and is accountable for facilitating the student's attainment of the desired outcome while maintaining a safe learning environment that does not stifle initiative. Under OBT&E, safety is opportunity for the individual to preserve life, limb, equipment and resources in training, mission and combat. Safety allows training and mission to go further, resulting in more realistic training (learning in more complex scenarios) and greater success in mission or combat. Safety is more than risk management—it can be instilled in the individual as an awareness of situation.<sup>42</sup>

Adaptability will become a product of the future Army; it will depend on what appears to be a relatively simple change in teaching technique to deal with the increasing complexities of war. The grasping, understanding and mastering of adaptability will come through rigorous education and tough training early on—quality, not quantity—to produce adaptive leaders. Leaders' ability to be adaptable will guide decisions on how to accomplish their missions, while also helping them to recognize and compensate for differences in the temperament and ability of other Army officers, NCOs and civilians through unit training and professional development. Adaptability will provide a stable support structure to infuse and sustain Army leaders' initiative in future operating environments. Most important, as Major Foster concludes,

ALM creates leaders and Soldiers who can truly “think on their feet” because they are forced to do so in every aspect of the course. I don't think there is any other method or theory that could be better for developing leaders, especially those in the military.<sup>43</sup>

## Endnotes

- <sup>1</sup> General Martin E. Dempsey, “TRADOC Focuses on Leader Development,” *Army News*, (16 April 2009), available online at <http://www.army.mil/-news/2009/04/16/19773-tradoc-focuses-on-leader-development>, accessed 8 May 2009.
- <sup>2</sup> From discussions with Command Sergeant Major William “Morgan” Darwin (USA Ret.) December 2007 through March 2009.
- <sup>3</sup> CSM Darwin provided this definition of OBT&E.
- <sup>4</sup> Army Field Manual 7-0, *Training for Full-Spectrum Operations* (Leavenworth, Kans.: Combined Arms Center, 12 December 2008), p. 3-7.
- <sup>5</sup> Donald E. Vandergriff, “Review of Army Training,” unpublished paper, September 2006, pp. 4–5.

- <sup>6</sup> The Asymmetric Warfare Group (AWG), located at Fort Meade, Maryland, was originally founded in 2005 as the Improvised Explosive Device (IED) Task Force; it became the AWG in 2006. It takes the latest lessons learned in theaters of operations (war) and helps commanders and staffs translate these lessons into tactics, techniques and procedures (TTPs).
- <sup>7</sup> Asymmetric Warfare Group, “Outcome Based Training and Education: Fostering Adaptability in Full-Spectrum Operations,” briefing, December 2008, slide 7.
- <sup>8</sup> Based on author’s numerous discussions with CSM Morgan Darwin (USA Ret.), November–December 2007.
- <sup>9</sup> AWG interview with Sergeant First Class Steve Case 19 March 2007.
- <sup>10</sup> A.H. Maslow, “A Theory of Human Motivation,” *Psychological Review* 50(4) (1943), pp. 370–96, <http://psychclassics.yorku.ca/Maslow/motivation.htm>.
- <sup>11</sup> AWG interview with instructor Sergeant First Class Steve Case, 19 March 2007.
- <sup>12</sup> Author’s discussion with CSM Darwin, 18 November 2008.
- <sup>13</sup> *Ibid.*
- <sup>14</sup> *Ibid.*
- <sup>15</sup> From e-mail exchange with Major Chris Kennedy, 7 November 2008.
- <sup>16</sup> From e-mail exchange with CSM Patrick Laidlaw, 30 October 2008.
- <sup>17</sup> Dr. Gary Klein, *Sources of Power: How People Make Decisions* (Cambridge, Mass.: MIT Press, 1999).
- <sup>18</sup> Donald E. Vandergriff, *Raising the Bar: Creating and Nurturing Adaptability to Deal with the Changing Face of War* (Washington, D.C.: Center for Defense Information, 2006). ALM, referenced in chapter 3 as Adaptive Course Model (ACM), was changed by Army Capabilities Integration Center Forward to ALM.
- <sup>19</sup> Dr. Robert Bjork, “How We Learn Versus How We Think We Learn: Implications for the Organization of Army Training” (unpublished briefing presented at Science of Learning Workshop, UCLA, Los Angeles, Calif., 1 August 2006), p. 2.
- <sup>20</sup> Bjork, “How We Learn,” p. 5.
- <sup>21</sup> *Ibid.*, p. 6.
- <sup>22</sup> From e-mail exchange with Major Chad Foster, 25 October 2008.
- <sup>23</sup> U.S. Army Training and Doctrine Command, “TRADOC Area of Interest 2: Leader Development and Professional Military Education” (Fort Monroe, Va.: U.S. Army Training and Doctrine Command, February 2006), p. 1.
- <sup>24</sup> The Basic Officer Leadership Course (BOLC) II, begun in June 2006 as a sort of basic training for lieutenants before they were shipped to their officer basic courses, was cancelled in October 2009. The shortages of captains and majors that have kept units from manning their officer billets at 100 percent forced the Army to look at how it was moving lieutenants through the pipeline.



- 25 From e-mail exchange with MAJ Chad Foster, 21 October 2008.
- 26 U.S. Army Accessions Command memorandum, subj: “Basic Officer Leaders Course (BOLC) Policy and Guidance,” Fort Monroe, Va., 24 April 2008), p. 4.
- 27 From e-mail exchange with CSM Zoltan James, 31 October 2008.
- 28 *Ibid.*
- 29 At the heart of the reforms led by Gerhard Scharnhorst shortly after the destruction of the Prussian army at Jena in 1806 were ways to develop officers who could make rapid decisions in the chaos of the battlefield. Prussia’s military education of its officer cadets was based on an education approach developed by a Swiss educator, Johann Heinrich Pestalozzi. In the late 1700s, Pestalozzi developed his theory that students would learn faster on their own if allowed to “experience the thing before they tried to give it a name.” More specifically, the Prussians used Pestalozzi’s methods to educate leaders on how to identify the core of a problem and then deal with the centerpiece of the problem without “wasting time working their way to finding a solution.” North Carolina State University, Department of Agricultural and Extension Education, College of Agriculture and Life Sciences, <http://www.cals.ncsu.edu/agexed/aee501/pestalozzi.html>.
- 30 From e-mail exchange with Captain Thomas Pike, 2 June 2008.
- 31 *Ibid.*
- 32 From e-mail exchange with Captain Casey Giese, 14 May 2008.
- 33 From e-mail exchange with Captain Alec Barker, 23 April 2008.
- 34 From discussion with Major Paul Wilcox, 16 September 2007.
- 35 Donald E. Vandergriff, “Swift to Swiss: Tactical Decision Games and Their Place in Military Education,” *Performance Improvement Journal* (Rockville, Md.: ISPI, February 2006).
- 36 From e-mail exchange with Major Chad Foster, 25 November 2008. Major Foster provided this anonymous cadet’s remarks from a survey taken about the MS 300 course.
- 37 From e-mail exchange with Sergeant First Class Robert Elzy, 12 March 2008.
- 38 From e-mail exchange with Major Chad Foster, 25 October 2008.
- 39 From e-mail exchange with Captain Andrew Watson, Infantry BOLC III instructor, Fort Benning, Ga., 25 October 2008.
- 40 From e-mail exchange with CSM Zoltan James, 31 October 2008.
- 41 Brigadier General David A. Fastabend and Mr. Robert H. Simpson, “Adapt or Die: The Imperative for a Culture of Innovation in the United States Army,” *ARMY*, February 2004, p. 20.
- 42 Asymmetric Warfare Group, “Outcome Based Training and Education: Fostering Adaptability in Full-Spectrum Operations,” briefing, December 2008, slide 68.
- 43 From e-mail exchange with Major Chad Foster, 25 October 2008.