

Outcomes Based Training and Education: in the Department of Military Instruction, United States Military Academy

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Introduction

This paper examines the training approached called Outcomes Based Training and Education (OBT&E) and how it is being used in the United States Military Academy (USMA) and the results of OBT&E in the Academy. Since the start of the Global war on terrorism, our leaders are facing an ever adapting and knowledgeable enemy force. Our current leaders must train our future leaders to think and adapt to the changes that they will face.

“We have to develop leaders who understand that context matters. The complexity of today’s challenges and the uncertainties of tomorrow require a much broader approach to leader development and a clear understanding of the operating environment.”

*--General Martin E. Dempsey
Commander, Army Training and Doctrine Command
October 2009¹*

At the beginning of the academic year 2009, the Department of Military Instructions (DMI) at the United States Military Academy took on and evolved a new approach to training and education called Outcomes-based Training and Education (OBT&E). With this new training approach, the training shifted from training students how to apply solutions and enforce standards to teaching students how to frame the problem and solve them. This new approach presented future leaders the opportunity to learn thorough discovery, and thus internalize the lessons they learn, not just from the instructors but from themselves through learning from doing, and through learning from others. This paper will analyze the OBT&E training methodology used by DMI by examining the assessment training conducted during spring 2012. This paper will also analyze the view of current active duty officers and it will also explore their recommendations according to their own experiences as an Army officer.

What is OBT&E?

¹ Remarks by General Martin E. Dempsey, Commanding General, U.S. Army Training and Doctrine Command (TRADOC), at the Association of the United States Army's Chapter Presidents' Dinner, Washington, DC, October 4, 2009.

An outcome, when related to training/education is slightly different than training or learning objective, even though an outcome is part of the definition of the training objective. Just as a commander's intent states the broader purpose for the operation, an outcome provides a broader purpose for the training or instructional topic.

Outcomes include intangible behaviors that are difficult to measure (objectively) but are easily observable in practice by more experienced observers such as trainers and instructors. Whereas learning and training objectives depend upon, indeed require, action oriented words to frame assessment for objective measurement, outcomes provide a broader, and from a military perspective, more useful measure of effectiveness. In USMA, OBT&E focuses on teaching the cadets to understand the "Why" behind any problem. Its primary purpose is to teach "How" to think. This is taught in an environment that encourages learning through mistakes, that it is ok to falter from time to time.

"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. . . . For example, Outcome-Based Training and Education is supposed to develop individuals and organizations that can think and operate in complex environments. . . . 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"²

OBT&E is based on the recognition that competent and confident students are developed when instructors allow students reasonable autonomy to exercise individual initiative. This creates a climate that holds the instructor accountable and requires them to think and act flexibly based on constant awareness and adjustment to their agenda. Given this requirement, OBT&E seeks to enable mission effectiveness through the application of five core principles (Figure #1). These principles are important to both the instructor and student. Instructors must demonstrate that effective mission accomplishment occurs through the development of subordinates, which goes beyond simply meeting a standard of performance for an isolated task. An instructional plan devised simply to meet a standard for a particular set of conditions may not be sufficiently robust to ensure performance to standard under plausible variations in instructional conditions let alone in the Contemporary Operating Environment. The principles of OBTE provide priorities and themes that persist over changes in instructional methods and techniques employed in response to variations in the conditions of instruction. Realization of the principles helps instructors choose and

² U.S. Army Field Manual 7-0, *Training for Full Spectrum Operations* (Fort Leavenworth, KS: Combined Arms Center, December 12, 2008), para. 3-7

adapt methods and techniques of instruction that develop intangible attributes such as confidence, initiative, and accountability in learners.

OBT&E Principles	
Principle	Description
1. Train to grow problem solving.	Teach Soldiers to “learn for themselves” the skills necessary to the success of their mission, within an established framework of knowledge.
2. Train to develop intangible attributes.	Develop confidence, initiative, and accountability. <ol style="list-style-type: none"> a. Assist the Soldier/civilian to understand the situation and desired result. b. Assist the Soldier/civilian in identifying obstacles to the desire result c. Allow the Soldier/civilian to work towards a solution within defined principles. d. Draw out of the Soldier a critique of performance during the process. e. Demonstrate the linking of tasks in a military situation.
3. Train to increase understanding and awareness.	Teach through contextual understanding of the task and its mission application.
4. Train to increase deliberate thought.	Condition Soldiers/civilians, always, to exercise a deliberate thought process (evaluation, judgment, decision) while under stress.
5. Train to improve combat performance.	Condition Soldiers to overcome the psychological and physiological effects, and the physical requirements of combat.

Figure 1: OBT&E Principles³

There are a few guidelines in using the OBT&E training approach. In OBT&E doing less, at times can be better. This allows the student to learn from his experiences, rather than being spoon feed the solution. Change the way training is conducted by focusing more on the “why” in the task on hand and not just on the how. Require thinking, judgment, and decision making be part of all training—build it in. Hold the students accountable; assume the individual will behave responsibly. Allow students to make mistakes but do not allow them to fail. Lastly, develop a thorough assessment program to help steer and adjust training

Why OBT&E in DMI and what are the desired outcomes in the DMI?

“OBT&E does not focus only on tasks, conditions and standards; it must also include the attributes that are required in individuals, teams, and organizations to carry out any task. Successful OBT&E events include: 1) a clear criterion of success or

³ Information provided by COL Casey Haskins

standard of performance (the intended end) that guides both instructors and learners; and 2) a variability in the time and number of opportunities (critical means) that learners might take to achieve the standard. Without defined boundaries in time, effort and measurable standards or tactics, techniques and procedures which serve as the baseline or core competencies required, the outcome effectiveness is at risk.”⁴

“OBT&E looks for results; it puts the burden of professionalism more on the shoulders of the student and lets the instructor decide how to get results, much like mission orders or mission tactics where the how to is left to those executing the mission with little or no oversight from higher up. OBT&E is best described as ‘developmental training’—development of the individual within the training of a military task. Students are held accountable for what they should already know and bring to the next course”

- CSM Morgan Darwin, USA (Ret.)⁵

OBT&E also focuses on developing students over time by exposing them to experiences designed to develop students with respect to attributes such as confidence, accountability, and initiative as well as associated capabilities such as awareness, discipline, judgment and deliberate thought.

The desired outcomes⁶ for each graduating cadet will:

- Demonstrate the courage, character, physical and mental toughness, and values required to succeed as an Army officer
- Be proficient as an individual Soldier
- Be proficient as a member of a team in select tasks
- Solve tactical problems at company level and below, using principles that underlie doctrine and war fighting
- Demonstrate effective leadership as a junior officer
- Have gained a perspective of the officer corps and its role in the Army Lives a life that complies with the honor code and Army values
- Displays the warrior ethos
- Physically fit and mentally tough, with habits and knowledge to lead a life of fitness
- Demonstrates consistent sound judgment
- Overcomes peer pressure to make difficult right choices
- Demonstrates self-confidence
- Considered by peers and seniors as a team player
- Demonstrates self discipline and personal accountability
- Performs successfully under stress
- Spiritually and emotionally balanced
- Demonstrates commitment to personal and professional growth

⁴ Discussion with COL Casey Haskins, Spring 2011, topic was on OBT&E

⁵ CSM Morgan Darwin, USA (Ret.), provided this definition of OBT&E.

⁶ Department of Military Instruction Overview

How is OBT&E used in teaching?

In Military Science 300, instructors are required not to tell their students how to solve a problem (ownership through discovery), but allow the students to try it themselves. The instructor should allow each individual do as much as it himself as he's capable of. An instructor should spend 70% of their time on mastering basics, 30% of time on applying them, incorporating problem solving. They should begin with no stress, and then add increased difficulty as the students gains in capability.

Cadets are exposed to different techniques to reach the desired outcomes. The students are given Tactical Decision Exercises (TDE) throughout the 40 hour course. When a TDE is given by an instructor, there is a time limit for a student to develop a solution. The cadets are also given small pieces of information, which requires the cadet to establish a solution based on limited information. After formulating a course of action, the cadets are required to brief their solution in front of the class. After the brief, the other students are allowed to ask questions about the cadet's solution. In return, the briefer needs to defend his solution and explain why he chose that certain course of option. This technique requires the student to demonstrate the ability to make tactical decisions under pressure with limited information and limited time.

Another method used in MS300, is that a student is required to brief his operation order. This requirement will come in the form of briefings to the instructor and their fellow cadets. The students will receive a company operation order from his instructor. After receiving the company operation order, the cadet will need to dissect the company operation order and use the information which is pertinent to his unit. After analyzing all information, the cadet will develop a course of action. The cadets will produce visual tools such as ECOA sketches, Concept Sketches and Terrain Models to assist in communicating their plans and orders. This method requires the student to demonstrate an understanding of the fundamental principles that underlie Army doctrine and small tactics and the ability to apply them to mission planning. A great tactical plan or decision is worthless if one's subordinates do not understand what the leader wants them to do. Therefore, clear and confident communication of orders is essential. This requires the student to demonstrate the ability to effectively communicate a tactical course of action both verbally and visually to the underclassmen.

In teaching MS300, the tools are presented to all cadets to formulate their solution. In science and math, there is usually a single, easily quantifiable solution to a problem. One arrives at these "solutions" through the rigid application of a numerical or scientific process. In tactical situations, especially on the incredibly complex battlefields of the Global War on Terror, there is no lock-step method that can assure a leader of arriving at the single, correct answer. In combat, there are many different "solutions" that will accomplish the mission. This does not mean that there are no "wrong" answers. Plans that are not feasible, violate the commander's intent, present a likelihood of fratricide, or are poorly communicated are obviously wrong. In fact, it is important to realize that there tactical plans fall into only two categories: (1) those that might work and (2) those that won't work. It the leader's challenge to ensure that he

develops plans that fall into the first category! With that being said, each cadets are given all the necessary tools to frame and solve any problems.

As stated in this paper, cadets should expect to make mistakes during this course (and throughout their development as leaders). The most important thing, however, is to learn from those mistakes. In order to do so, MS300 will focus on the tactical thinking of the cadets as they make decisions. What information did they consider? What assumptions did they make? Why did a particular piece of information cause them to act in a specific way? Since there is no single, “right” answer in combat, the best way to equip the cadets with the ability to develop plans that fall into the “might work” category is to teach them how to think about tactical problems.

Cadets are often afraid to make leadership decisions out of a misguided sensitivity to being ‘unpopular’ or out of a fear of losing points on their ‘grade.’ What they must realize, however, is that they are supposed to be leaders . . . and leaders make decisions. In MS300, they will either become accustomed to making decisions, or they will fail the course. Although it is true that some decisions that the cadets make will be ‘wrong,’ this is perfectly acceptable. Mistakes during practice will minimize mistakes when they are exercising their leadership under fire in the years to come. Those that have the courage and determination to act decisively and to learn from their mistakes will excel. Those who are timid and are more focused on maximizing points rather than on improving as a tactical decision-maker will suffer.

Lastly, MS300 understands that instructor feedback is extremely important in the development of the cadets. In MS300, instructor feedbacks are done in the following:

- Introduction during Lesson 1- Outcomes, expectations (syllabus)
- Cadets brief their COA in class and the other cadets provide feedback (sustains & improves)
- Instructor solutions are provided for every TDE
- Instructor quizzes are done which provides that instructor feedback that displays were the class is currently at.
- After every assessment, the instructor provides feedback
- OPORD Briefs. Feedback are done by subordinates and peers
- Midterm/End of the course Feedback are provided to the instructor

Assessment

The purpose of the assessment is to provide honest feedback on how well the training is achieving each desired outcome and measure of effectiveness. This informs the instructor where adjustments need to be made to the program.

In 2009, DMI started to incorporate the OBT&E training approach within their classrooms and all the training events. As mentioned above, OBT&E does not focus only on tasks, conditions and standards; it must also include the attributes that are required in individuals, teams, and organizations to carry out any task. During spring 2010, a survey has given to a handful of students in each class. The purpose of this survey has to see if this new training approach has affecting the intangibles of a cadet that leaders were looking for in becoming a successful Army officer. The results (Figure #2) stated that the attributes of the students, who were exposed more to the OBT&E training methodology, were greatly influenced in a positive way.

Spring 2010															
	2010 N = 22					2011 N = 25					2012 N = 24				
Peer Evaluations	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Cadet X upholds the Army Values.	0%	18%	18%	32%	32%	0%	0%	20%	48%	32%	13%	21%	8%	46%	13%
2. Cadet X lives by the spirit of our Honor Code.	5%	9%	18%	41%	27%	0%	8%	16%	48%	28%	4%	4%	25%	50%	17%
3. Cadet X makes what he/she believes are the right choices even if they are unpopular with fellow cadets.	5%	9%	27%	41%	18%	4%	8%	40%	36%	12%	8%	29%	21%	33%	8%
4. Cadet X is someone I would want to have on my team.	14%	18%	5%	27%	36%	0%	12%	24%	24%	40%	17%	17%	25%	29%	13%
5. When faced with stressful situations, Cadet X remains calm and works well with his/her people to get the job done.	14%	23%	18%	36%	9%	0%	4%	36%	40%	20%	4%	13%	29%	42%	13%
6. Cadet X seems to balance well all the demands in his/her life.	5%	23%	14%	45%	14%	0%	4%	24%	60%	12%	4%	25%	13%	50%	8%
7. Cadet X personally accepts responsibility for the performance of his/her unit.	14%	9%	18%	36%	23%	0%	20%	12%	48%	20%	8%	8%	42%	38%	4%
8. Cadet X lives by the same standards in his / her personal life as he / she does in his / her professional life.	5%	18%	36%	14%	27%	0%	12%	24%	44%	20%	17%	13%	29%	29%	13%

Figure #2- Spring Survey

In the training environment, an assessment has given to a handful of cadets in each class. There were a total of 30 cadets randomly selected for this assessment. Each group (plebes, yuks, cows and firsties) will be assessed in marksmanship, land navigation, communication and soldiers first responder. Instructors will use an assessment card which will determine the group's grade. They will be assessed from 0-7

SFR Assessment Card							
FAILURE	ACCEPTABLE		GOOD		SUPERIOR		
Does not meet acceptable standard of performance	In acceptable time, effectively assesses, treats, and evacuates casualties; Preventable death or further injury avoided through deliberate action; Takes action to deal with enemy threat but may have some difficulty in simultaneously managing the requirements of patient care and local security; May have limited difficulty in maintaining accountability of friendly personnel; Usually keeps higher HQ informed of status but sometimes requires prompting to provide critical information. If wounded, renders self-aid and, as possible, avoids becoming a liability to the team.		In a timely manner, effectively assesses, treats, and evacuates casualties; Preventable death or further injury is avoided through deliberate action; Secures and cares for patients; communicates patients' status to higher HQ as appropriate; Establishes and maintains control of the situation, ensuring that security is maintained throughout; Maintains effective accountability of friendly personnel at all times; If wounded, conducts effective self-aid and stays in the fight as possible.		Takes minimum time to effectively assess, treat, and evacuate casualties; Preventable death or further injury is avoided through deliberate action; Secures and cares for patients, minimizing their exposure to enemy fire and communicating their status to higher HQ as appropriate; Establishes and maintains effective control of the situation, balancing the tactical requirements with the requirement to care for casualties; Maintains effective accountability of friendly personnel at all times; If wounded, conducts effective self-aid and stays in the fight as possible.		
0	1	2	3	4	5	6	7

•Are the Goals of Tactical Combat Casualty Care understood?
 (i.e. Treat the casualty, prevent additional casualties, complete the mission)

•Are the Stages of Care understood?
 (i.e. Care under Fire, Tactical Field Care, Tactical Evacuation care)

•Are the technical aspects for using medical equipment correctly applied?
 (i.e. Tourniquet for hemorrhage, NPA if unconscious, correctly prepare for EVAC)

•Are the skills properly adjusted and executed in context, with increased stress?
 (i.e. Correctly apply tourniquet to stop massive hemorrhage within 3 minutes to save casualty)

•Do the cadets demonstrate the desired intangibles?
 (i.e. Teamwork, communication, etc)

Figure #3- Assessment Card example⁷

After the Spring Assessment, the overall Corps performance: Yuk (4.00) > Plebe (3.85) > Cow (3.11) > Firstie (2.88) -scale from 0 to 7. The Yuks consistently performed well across all events. They demonstrated a sound skill based aptitude and they rated highly with regard to the desired intangibles. The Plebes rated in the top 2 of each event with the exception of Land Nav, where they came in last. Plebes excelled in the desired intangibles, to include motivation, accountability, initiative, and teamwork. They also had a solid performance with regard to skill sets. The Cows lacked in motivation, initiative, and teamwork. Cows consistently finished in the bottom half of the classes with the exception of Land Nav, where they had the best individual performances of a class. Firsties rated last in 2 of 4 events where they demonstrated poor fundamentals (Marksmanship & SFR). They habitually failed to demonstrate the desired intangibles and they presented a “bitter attitude” at Land Nav. Their sole bright spot was in Communications.

After receiving these results and knowing that the yuks and plebes were the only classes to receive the OBT&E training approach, you can conclude that the OBT&E approach is reaching the desired outcomes.

This past year, I also applied the OBT&E training approach to a local youth football team that I coach in fall 2011. The teams consist of 7th and 8th grader students. I

⁷ Assessment card received from MAJ Scott, Department of Military Instruction

started by following the principles of OBT&E. At first, I coached the team the proper way to tackle a player with the ball by having two players show an example of a tackle. After the example was given, we discussed the techniques that were done correctly and incorrectly. With the incorrect techniques, we discussed the proper technique that needs to be applied. After the discussions, the players were partnered with each other to execute the tackling drill. After I felt that the team was grasping the concept of tackling another player, I put them in situations that would train to grow problem solving. I would put a blocker who would execute different types of blocking techniques. The defender would have to read the blocker and execute the tackle. As a coach, I used the game of football to develop the intangible attributes. The intangible attributes I was seeking from my players were those intangible attributes that would make him a better student and overall a better person in his community. Those attributes were discipline, initiative, hard work, never giving up and etc. As the team became competent and started to know the game of football, I started to train the players to increase their deliberate thought. I would usually increase the stress level by showing the defense different offensive schemes. I would execute different plays that would come from that offensive scheme. This type of training would develop the player's situational awareness. This would also train them to be critical thinkers. At times, I would make the players fatigue before I run this type of drill.

As the players became exposed more to the OBT&E training approach, I noticed that my player's knowledge of football grew tremendously. As weeks pass, I continued to raise the standards and expected more from my team. The team did not back down from a challenge and rose to my expectations. At the end of the season, I did not yell as much as I did as a coach. I could tell that this new training approach was working, was when a handful of the player's parent approached me stating that their son's grade has improved throughout the season. They also stated that their son taking more initiative in doing his house chores.

Summary

OBT&E training methodology has been in the Department of Military Instruction over 2 years and now we're seeing the results from the cadets. OBT&E focuses on the attributes that are required in individuals, teams, and organizations to carry out any task. And after seeing the results from the survey given in spring 2011, you can see that this training is affecting the intangibles of these cadets who were exposed to this training approach, in a positive way. We can also conclude from the assessment that cadets, who are exposed to this training, learn and retain the skills at a better rate than cadets who did not receive OBT&E approach at all. OBT&E can also be used towards other teaching opportunities such as youth football.

“OBT&E is the evolving approach to developing leaders who have the strength of character to make rapid decisions based on their understanding of the commander's intent beyond the traditional two levels up.”

- General Dempsey