Experiential Learning as it Applies to Developing Army Officers

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Abstract
Experiential learning and education are critical to developing world class officers and instilling a discipline of lifelong learning as a member of a profession. Our research sought to define the experiential learning model, the four adaptive learning modes, and the forms of knowing. We further saw the need to identify the role of the instructor as a catalyst for the creation of experiences and practice within adaptive learning modes. Lastly, we compared the use of experiential learning in both the military, civilian education and medical professions. The result is the analysis of the experiential learning opportunities available for military science instruction at West Point.

Experiential Learning to Create Military Professionals

Where do you start to tell the story? As the tracers flew over my head, only one thought went through my mind, "I was supposed to get a good night’s sleep tonight. Why are you shooting at us now?"

In May, two months prior, as I lay in the dirt beside my up-armored M1151 High Mobility Medium Wheeled Vehicle (HMMWV) in exhaustion as we waited to fix a broken vehicle in sight of our combat outpost but unable to reach its safety? Having pushed myself to the limits, never resting, over the previous 18-24 hours my body now rested, whether my mind gave it permission or not. My body would eventually demand rest. So there I lay, asleep beside my vehicle, as the patrol leader, mentally and emotionally exhausted, no specific guidance given to my platoon, we all knew that with our broken vehicles we just had to get back to Koshmand to rest, refit, and fix our vehicles. At this point most of our patrol was likely dozing if not completely asleep. We were exposed, vulnerable to attack, fortunately no attack came.

Perhaps when I was both the company executive officer of Blackfoot Company and standing in as a Platoon Leader of one of the platoons during the 2008 train-up to the deployment. During a platoon Situational Training Exercise (STX) that was going horribly as my Squad leader struggled to lead a fire team sized element and I took charge of the squad, and my Radio-Telephone Operator (RTO) was reporting malarkey on the company net without my knowledge or care as my focus was on the squad fight rather than controlling the platoon and reporting to my boss.

September of 2001, when I was a Ranger School student, I was fine during daylight hours but once the sun went down, my solar powered ranger batteries gave out. The squad leader being graded asked me to be his team leader for the patrol. I had been the team leader or squad leader for the previous 3 missions and I knew that I was out of energy. I said that I would do it through actions on, but that after that I needed to be a rifleman and rest. As I predicted I was worthless after actions on but the Squad Leader did not change me out and he failed his patrol.

The series of events leading up the night first mentioned in the Afghan country side, in a small field that separated two small towns when I was disturbed not as much that we were being shot at but that it meant that I could not get a full nights rest. We were conducting
reconnaissance of the polling locations for the 2009 Afghan Presidential elections. The month or so preceding that night were filled with missions ranging from days in blocking positions in various towns to one night raids on left over targets that the tier one and two units left to the battle space owners. We were looking for PFC Bergdahl who had found himself captured by the Taliban. My platoon three days prior to Bergdahl’s capture had gone out to relieve a sister platoon who had watched their platoon leader, 1LT Brian Bradshaw, disappear before their eyes as he stepped on an Improvised Explosive Device (IED). Cooks manned the security positions around the combat outpost as we prepared ourselves to finish out the mission, expecting to return the day that Bergdahl was captured.

I had learned through experience and reflection several things about myself and my strengths and weaknesses not only over my deployment but over my military career. The lesson I learned that night though was a new one, while I knew that I needed to manage my own rest cycles and that it was not my job to micromanage the squad fight, and that an reliable RTO is talking to the company commander, I was still not in a position to master the fight.

We had set up 360 security in a large field with about 300 meters of standoff on all sides. Of our six vehicles only four of them were still working, so we had two vehicles that worked that were not towing another vehicle. In the prior six months in country I had never taken off my boots, body armor or gotten my sleeping bag out of my rucksack to sleep while outside of a Forward Operating Base (FOB) or Combat Outpost (COP). That night I said to myself that I was going to get a good night’s rest. My Forward Observer (FO) was a man I trusted and a Non-Commissioned Officer (NCO), but that night he was reporting to our battalion commander unbeknownst to me that we were pinned down. We were receiving effective enemy fire but we were not fixed, while our ability to maneuver with two vehicles towing two broke down vehicles and only two vehicles that could actually maneuver our movement and maneuver as a warfighting function was degraded. I scrambled immediately to get into my boots, body armor and helmet and secure my gear to my M1151 HMMWV as rounds went overhead, and into the grill of my truck. My company commander was out of FM radio range was sending the equivalent of text messages which were not computing to me in the heat of battle, as I managed the direct fires of the platoon which included a 60mm mortar which was being utilized in handheld mode by some of my 11 Bravos (Infantrymen). My commander was asking about why we were not maneuvering on, and attacking the enemy, the battalion commander had readied a Quick Reaction Force (QRF) to launch to our location. When I finally had gotten my platoon accounted for and ready to displace from our location, was the first time I spoke with either my rater or senior rater. The battalion commander told me that he believed it was the Afghan National Police (ANP) who were shooting at us and that he wanted me to enter the town and attempt to linkup with them. I relayed to him that based on my vehicles and the nature of the villages, with their narrow and unstable streets as well as the volume of machine gun and RPG fire coming from the wood line around the town that I was not able to attempt a link up with the ANP. As RPGs flew overhead, the Battalion Commander agreed and we departed the area to move north to an Afghan Army outpost at Kirkot Castle. After the event, I found that while I had properly integrated several of my lessons learned I had not properly managed my ability to command and control my platoon, nor was I able to manage the discussion between my element and my Company or Battalion Commander. Could this experience in combat have been avoided by training or schooling prior to that deployment? If so what training at what point would be proper, and having had some similar learning experiences why did they not translate to that situation?
Defining Experiential Learning and Experiential Education

Via our behavioral adaptations over time it is clear that the human being is a learning organism. We have the ability to learn in many ways, however, addressing them unilaterally results in a far less productive adaptation than allowing for theory to interact with experience. In Kolb’s book, *Experiential Learning: Experience as the Source of Learning and Development*, Kolb defines several key persons who had a hand in the basis for the theory including Piaget who’s theory states that intelligence is shaped by experience (Kolb, 1984). Beard and Wilson define experience below:

“For the sake of simplicity in discussing learning from experience, experience is sometimes referred to as if it were singular and unlimited by time or place. Much experience, however, is multifaceted, multi-layered and inextricably connected with other experiences that it is impossible to locate temporally or spatially. It almost defies analysis as the act of analysis inevitably alters the experience and the learning that flows from it (Beard & Wilson, 2006, p. 17).”

So, what is Experiential Learning? It is most simply described as changes in the individual based on direct experience, reflection and results in new abstractions and applications (Itin, 1999). Kolb further defines Experiential Learning as a four-stage cycle involving four adaptive learning modes: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1984). Not to be confused with Experiential Education, wherein education infers a transitive process between a student (learner) and teacher, and can be described via the modem of direct experience, teacher-learner interactions and socio-political-economic elements in the learning environment (Itin, 1999, p.92). Itin continues to define Experiential Education in the following manner:

“Experiential education is a holistic philosophy, where carefully chosen experiences supported by reflection, critical analysis and synthesis, are structured to require the learner to take initiative, make decisions, and be accountable for the results, through actively posing questions, investigating, experimenting, being curious, solving problems, assuming responsibility, being creative, constructing meaning and integrating previously developed knowledge (Itin, 1999, p. 93).”

After defining some of the lead thinkers who had established the foundation for his experiential learning model Kolb goes on to define the structure of knowledge before describing his theory. He separates the structure of knowledge into two different forms; apprehension and comprehension.

"[K]nowing by apprehension is here-and-now. It exists only in a continuously unfolding present movement of apparently limitless depth wherein events are related via synchronicity - that is, a patterned interrelationship in the moment. Comprehension, on the other hand, is by its very nature a record of the past that seeks to define the future; the concept of linear time is perhaps its most fundamental foundation, underlying all concept of causality. As Hume pointed out, the mind cannot learn causal connections between events by experience alone (apprehension) (Kolb, 1984, 102).”

Kolb uses the experiment that Piaget did after encouragement from Einstein to investigate the psychological side of whether speed or time are acquired earlier. The experiment asked children to describe a moving object as it passed behind a series of bars.
"The apprehension of speed seems to be based on the muscular effort expended in attending to a moving object. The comprehension of time, however, occurs later developmentally and is much more complex (Kolb, 1984, 102)."

After defining apprehension versus comprehension and how they relate, Kolb goes on to define criticism and appreciation. He seems to relate criticism to comprehension and appreciation to apprehension:

"Appreciation of apprehended reality is the source of values. Most mature value judgments are combinations of value and fact. Yet it is the affective core values that fuel them, giving values the power to select and direct behavior... Finally, appreciation is a process of affirmation. Unlike criticism, which is based on skepticism and doubt, apprehension is based on belief, trust, and conviction. To appreciate apprehended reality is to embrace it. From this affirmative embrace flows a deeper fullness and richness of experience. This act of affirmation forms the foundation from which critical comprehension can develop (Kolb, 1984, 104)."

Neither comprehension by itself or apprehension by itself are sufficient. Both modes and their interrelated aspects, are closest to truth and acquiring knowledge. Knowledge and truth result not from the preeminence of one of these knowing modes over the other but, from the intense coequal confrontation of both modes (Kolb, 1984). Continuing Kolb's idea that learning in this sense is an active, self-directed process that can be applied not only in the group setting [relating to an educational exercise] but in everyday life (Kolb, 1984, 36). Learning is a process whereby knowledge is created through the transformation of experience (Kolb, 1984, 38). Based on Kolb and Itin, the conclusion about learning is that it is a balance between theory and application, that occurs over time (often a lifetime), and that the student must have a vested and active role in to maximize their growth.

This theory implies that throughout one’s life there ought to be a constant reflection of events, tying those to previous experiences and that this will absolutely impact future events. Looking at the relationship between theory and practice, it is similar to the Army’s Decide, Detect, Deliver, Assess (3DA) practice for targeting in that there is an assessment of the action that took place in order to refine our actions for the future.

Professionals Grow via Experiences

Professionals grow via the integration of the theory they get in their field of study and the experiences of putting those theories into practice in the infinitely complex three dimensional world that is very hard to replicate in the classroom. We will discuss military officers, professional educators, and medical professionals (paramedics specifically) as three examples of career fields that utilize experiential learning as part of the institutional development.

Junior Officers in the military spend two of their first ten years of the service in formalized schooling covering topics of individual technical matter, current doctrine, and all the way to battle staff and planning efforts. Still, much of their learning takes place on the job within their units and via the experiences they encounter both in training and in various operational environments (Ulmer, 1999). Even prior to their commissioning, young men and women endure a multitude of different experiences in pre-commissioning sources such as at the United States Military Academy (USMA), in the Reserve Officer Training Corps (ROTC) while attending civilian
universities or at Officer Candidate School (OCS) where enlisted Soldiers are trained and transition to understanding the dichotomy between commissioned officers and enlisted Soldiers.

Following their commissioning, newly minted officers attend a branch specific Basic Officer Leader Course (BOLC) where they are taught the technical skills associated with the military specialty. However, they do not see the theory or application of their specified technical training in true action until they reach their first unit of assignment, and have the opportunity to do their job with the actual resources and Soldiers that they are taught to. This is the first proof to Ulmer’s point that despite immense efforts to educate and train our leaders that the real bulk of their learning doesn’t occur until they are on the job. “This concept of learning is considerably broader than that commonly associated with the school classroom. It occurs in all human settings, from schools to the workforce (Kolb, 1984, p. 32).”

Then, as goes the Army, junior company grade officers are promoted to senior company grade officers and subsequently sent to attend more formalized schooling associated to the next level of leadership responsibilities they are intended to fulfill. After spending up to six months at a captain’s career course, Army Captains move back to operational units and fill roles as staff officers and company commanders where, again, the highest magnitude of experiences occur to complete the intellectual and professional growth of the officer before again being promoted and sent off for the next iteration of education. This process is recognized and ultimately intentional.

The next two examples that we will look at have periods of time where the student will go out and practice their trade in the field. This is different in some ways to that of our first example of military officers. In some ways it makes sense that a high school teacher or paramedic has to have more extensive hands on training prior to full time employment as they will be often times alone in their work. For the paramedic, he will be on a two person team and it will require that he can execute his tasks unaided. Similarly, the high school teacher will be in front of students and demonstrate expertise. In the Army, a newly graduated lieutenant will have a commander, a senior enlisted advisor and are crew of noncommissioned subordinate leader that the lieutenant can lean on as they master their responsibilities. The other major difference is that in the education and paramedic fields, the schooling and field experience is over once they are on the job, whereas in the military, at regular intervals there is professional military education requirements as the responsibilities grow throughout the progression of a career.

Over the years throughout the international community, student teaching has been recognized as a critical and formative portion of certifying civilian educators before entering the profession full time (Biermann, Karbach, Spinath, & Brunken 2015). Biermann’s article outlines the German Teaching Model for secondary school teachers, and examines what contributions the student teaching has in the self-perceived effectiveness of the teachers who were the subject of the research.

“[S]tudents enrolled in teacher education gain some teaching experience in the first, academic phase of teacher education by completing many weeks of several mandatory internships. These field experiences provide the opportunity to integrate scientific educational and didactical knowledge and practical experience, thereby serving as an important link between academic studies and teaching profession (Biermann et al., 2015, p. 78).”

The general requirement for high school teachers in Germany is that they attend an academic or theoretical phase in addition to a practical or hands on phase (Biermann et al.,
In Biermann words, the second phase "... consists of practical training focusing on the acquisition and practice of teaching skills and routines (Biermann et al., 2015, p. 78)." The length of the two phases differ depending on what type of secondary school the teacher is going to end up in, but what we should focus on is that in some cases the phase 1 and phase 2 are blended and not viewed sequentially. In one model, the student spends several years in a university (phase 1) and then conducts student teaching (phase 2) when all of their university classes are complete. The other variation is that the student teaching is integrated throughout the classes over the course of their university and phase 1 requirements (Biermann et al., 2015).

My perceptions of the two and Biermann conclusions were that the model’s effectiveness depended not on what version a student experienced but on several other factors.

"In sum, theory-based reflection of the experiences acquired in the classroom guided by university or school mentors as well as constructive feedback from mentors and peers are considered important organizational aspects of teaching internships that can support the development of teaching skills in prospective teachers (Biermann et al., 2015, p. 79)."

It was not whether the future high school teacher did his internship or student teaching after his university studies or in periods throughout his university teaching but that he had experienced teachers as mentors and that he had access to peer student teachers to get feedback and to collaborate in a noncompetitive environment (Biermann et al., 2015). The research of Biermann and several other of his sources all confirm the value of connecting what is theory in the classroom with how it plays out in the world. This is in line with the experiential learning model as defined by both Kolb and Ittin and has value in both the training of professional educators as well as the training of military officers (Biermann et al., 2015).

Peter O'Meara, Brett Williams, and Helen Hickson’s article on Paramedic instructor perspectives on the quality of clinical and field placements for paramedics gives us a view into another field where experiential learning is utilized. Their study focused on paramedic instructors in New Zealand and Australia and the quality or effectiveness of their on the job experiences with paramedic students. (O'Meara, Williams, and Hickson, 2015, p. 1081). For the purposes of our paper, the authors outline that the western world has established various standards which all have in common that a paramedic must have both classroom instruction as well as clinical, or field experience, as part of the certification requirements. Specifically the United States, "require clinical placements in a wide range of hospital departments where students can gain access to different types of patients, whilst proposed changes specify that students and graduates gain exposure, and the assessment and management to specific patients and conditions that would be listed in the standards (O'Meara, et al., 2015, p. 1081)." Similarly, the Canadian Medical Association mandates programs “provide students with a clinical rotation and a field preceptorship that enables them to perform the competencies required for entry to the profession (O'Meara, et al., 2015, p. 1081)."

Some of the findings that are concurrent with Kolb’s description of Experiential Learning and the authors of the study on German secondary teacher education programs are that the length of time of the clinical needs to be of sufficient length and the preparation of the paramedic instructor/mentor (O'Meara, et al., 2015, p.1082). The interesting aspect of the findings in this qualitative research is the differing perspectives of paramedic instructors who had entered the workforce through different pathways. The three “pathways to paramedicine: university education, vocational training through a paramedic service; and vocational training followed by
completion of a university degree.”(O’Meara, et al., 2015, p. 1081). The paramedic instructors whose background was one of university educated, saw the purpose of the clinical as being the chance for the students to put their theoretical knowledge to practice, whilst the vocationally trained paramedic instructors saw it as the time for the students to watch and learn what really happens on the ground (O’Meara, et al., 2015, p. 1082). There is a parallel thought in regard to the purpose of an officers’ time as a lieutenant in the Army. Some believe that a young officer should just be watching their NCO counterpart run the platoon and see how it is done and the other school of thought is that this time is spent under the mentorship of their commander, collaborating with their lieutenant peers as they succeed or fail in the execution of various missions in multiple environments. “The quality of the mentoring by cooperating teachers and university instructors during... internships was the best predictor for self-rated teaching skills (Biermann, et al., 2015, p. 79).” I would argue that if the instructors at the university paramedic programs had work experience in the field within which they were teaching, that the paramedic instructors and students themselves would have a more convergent view of themselves and the purpose of the clinical. The commissioning source and specific teachers within an officer’s track en-route to commissioning would most likely correlate to how they viewed those first year and a half on the job and the purpose of those experiences.

Experiential Learning in DMI

"Moreover, we know that not only organizational conditions of the educational process but also individual characteristics of the teachers affect their teaching skills (Biermann et al., 2015, p. 77)."

For the Department of Military Instruction (DMI) and the greater United States Military Academy purport to be the world class institution it is only right that in our Military Science courses teachers are of world class expertise and experience be the instructors that teach in the classroom. As common sense would say, and Barr, Eustice, and Noe through their research has agreed, “Students [can] reliably discriminate differences in teacher competency (Barr et. al., 1955, p. 264).”

The application of this to military science instruction at USMA is that a student knows whether there instructor has had any personal experience, tacit knowledge, in the subject matter they are teaching. Tacit Knowledge is the knowledge gained by one’s experience (Horvath, and Sternberg, 1999). It is difficult to articulate or quantify but, can be observed in one’s actions or behaviors given context. In order for us to facilitate the transition from rote memorization in military science it is imperative that our instructors have the tacit knowledge to help create experiences within the context of military education. In order for our officer’s to continue to remain relevant to our students, it is vital that they continue to learn new competencies in conjunction with the application of their tacit knowledge throughout the duration of their career (Ulmer, 1999).

Tacit knowledge is a requirement to instruct, however we have quite a few in our current instructor pool who do not have tacit knowledge in the fields highlighted in our Military Science Curriculum. We can give some degree of experiential knowledge through exposure to summer training and through the use of simulations.

“The common core of these technologies [tasks, structured exercises, simulations, cases, games, observation tools, role plays, skill-practice routines, and so on] is a simulated situation designed to create personal experiences for learners that serve to initiate their own process of inquiry and understanding. (Kolb, 1984, p. 11)”
Additionally, we currently provide a new instructor training that forces instructors to pass written exams and to deliver several periods of instruction which are observed by senior instructors in the department who in turn give constructive feedback, however, we need to have them plan and brief Operations Orders (OPORDs) at least for MS200/MS300 instructors given these are the outputs we expect from cadets in each of these courses. "The first step is to see the consequences of one’s own actions in a meaningful way. The second is an evaluation of those results (Bakken, B., & Gilljam, M. 2003, p. 199)." For many Army officers who are at the post command broadening block of their career, it may have been several years since they have conducted the level of planning and detail, or in some branches within the Army they may not have completed the troop leading procedures whether at the platoon or company level. With this in mind, at least conducting an iteration of producing an operations order during their new instructor training gives them some perspective and expectations on how to teach the material and how to grade their students on the topic. Bakken & Gilljam, write about Combat Dynamic Intuition and how to train military professionals. “The concept of Combat Dynamic Intuition (CDI) is this closely related to the concept of tacit reasoning and implicit memory, which has been studied by cognitive psychology researchers (Bakken & Gilljam, 2003, p. 200)."

Leading a platoon of light infantry Soldiers in battle is an extremely complex task, imagine having 35 Soldiers, in the dark, with a radio on a different net in each ear. In one ear, you are hearing transmissions on the company net, in the other ear you are hearing reports from the members of your platoon. You are wearing equipment that weighs around 100 pounds, the sweat is fogging up the eye protection and the sound of machine guns is all around. The plan is not going as it was briefed and you are trying to decide what to do next. This is not an uncommon experience for an infantry platoon leader. “…experts in complex tasks under uncertainty are able to detect possible problems at an early stage, e.g.,, they are sensitive to subtle environmental changes (Bakken & Gilljam, 2003, p. 200)” As the US Military Academy trains cadets to be ready to take on the responsibilities of leading Soldiers, having the ability to conduct analysis of the mission variables, develop a course of action, and deliver that course of action in the form of an order to their subordinates requires trainers, or instructors who have themselves experienced and have personal knowledge of the topics they are attempting to impart. Barr & Noe in their article, The Measurement and Prediction of Teacher Efficiency found characteristics of successful teachers "found skill in human relations to be important…. teacher attitude toward children… positive character… well-controlled character stability… existing knowledge and skills in practical situations rather than a function of teacher knowledge and information... had genuine interest in students, and organized their work well. Teachers with experience surpassed trainees. (1955, 262)." Many of these aspects are things that cannot be overcome in a block of new instructor training, even if its length is several months, which DMI currently does this over several weeks. “Most real-life situations require that the decision maker has acquired the skills of his profession through real-life experience (Bakken & Gilljam, 2003, p. 197).” Bakken and Gilljam’s point is applicable to those who are teaching military science in that you cannot develop students in things that you have not developed within yourself through your own life experiences. Having served on and been on the periphery of the hiring boards it is not as easy to get the right people with the right experiences and skill sets in the classroom as it may seem. The department in some cases has a requirement to fill a position in a branch and there may be no applicants of that branch. The department also has many roles, that do not involve teaching in the classroom but in planning and executing summer training and other high visibility and large scale events and these require specialized officers with expert knowledge in logistics.
What our literature review has revealed is that we should seek to hire a majority of instructors with experience in leading Soldiers and conducting the TLPs at the platoon and company level, and improve our new instructor training to give some experience to those officers who have had little to no experience with the topics they will be teaching. The discriminating factor as Barr notes is the motive behind teaching, "...as long as teachers teach for social status rather than to help children, they will be poor teachers (Barr & Noe, 1955, p. 263)." The department should ensure that those teachers who lack experience in the subject matter, firstly have an interest in the subject matter and are not trying to teach for some social status (to say "I taught at West Point), they also must have, as

It seems that technical expertise in the military is very measurable but, not very interrelated to a successful military career (Ulmer, 1999). Conversely, the ability to lead, while not easily quantified, is the largest contributing factor. That ability is gained over time and through experiences. Therefore, the best way to develop leaders is to provide them experiences to do so. As Bakken and Gilljam point out in reference to military leaders who possess Combat Dynamic Intuition 200)"They generate alternative scenarios and develop strategies for handling such scenarios in order to be 'proactive' instead of 'putting out fires'(2003, p. 200)." Are we giving them enough experience of the right kind to develop effective leaders in their four years at USMA? An even better question is, are we using the right metrics to find/hire the right instructors for the department?

Improving course designs and increasing opportunities to experience the profession

"How easy and tempting it is in designing a course to think of the learners mind as being as blank as the paper on which we sketch our outline." “Thus, ones job as an educator is not only to implant new ideas but also to dispose of or modify old ones.” (Kolb, 1984, p. 28)

The Role of Games and Simulations in the MS Classroom

According to Macedonia (2002), one of the means that we can leverage to create experiences to enable experiential education is via games and simulations. His entire article simply chronicled that with the birth of the World Wide Web and growth of technology, the military has tried to utilize this forum to assist with creating efficient training that does not require as many resources as real life. Across the Army since the 2013 sequestration, cost reduction, reduced budgets, seeing quotas on which vehicles can drive certain miles, limited rounds of ammunition, little funds to purchase fuel and equipment for training and the closing down of extraneous or redundant infrastructure. We find the whole Army looking for ways to save time and money and still be able to develop experiences where both Soldiers and Leaders can become more proficient in their profession through the use of simulations (Roman & Brown, 2008, p. 3). The simulations that we have had most experience with, focus on leader training that allow leaders at all echelons to take two dimensional plans and to execute them in a simulated environment. These exercises tend to give the trainee a look at how the plan is executed and allows the leaders to exercise their mission command systems without expending the time and resources it would require to do this on a range or at a Combat Training Center (CTC). This also has to do with being able to simplify and focus on a specific portion of the plan in order to better connect actions and decisions by the trainee and try to what happened in the simulation (Bakken & Gilljam, 2003, 199). In referencing micro worlds (simulations), Bakken and Gilljam said, "Hence, they give greater opportunities to learn by reflecting on the relations between decisions and outcomes (Bakken & Gilljam, 2003, p. 197)."
Roman and Brown, in their article from the 2008 Interservice/Industry Training, Simulation, and Education Conference (I/ITSEC), site several studies that confirm that our perceptions of the values of simulations to train military leaders and military teams are backed up by academic research. They looked at Canadian Armor Warrant Officers, a study of US Marine Corps (USMC) trainees, and US Army Engineers to highlight the effectiveness of using simulations to improve performance (Roman & Brown, 2008, p. 6-7). The Canadian Warrant and USMC studies showed an improvement from 80% success rate without simulating the exercises to 100% success for those that did simulations before the training event (Roman & Brown, 2008, p. 6-7). The study on the Army engineers has to do with situations where the equipment needed to train with is not where the Soldiers are. In this specific case it had to do with IED defeating vehicles that were being sent straight to theatre forcing those units training up to need to use simulators to practice on before arriving in Iraq (Roman & Brown, 2008, p. 7,8). Roman and Brown noted that in this case, a laptop or computer was insufficient and that “identical controls and performance characteristics to the mine clearing arm on the Buffalo that enables the operators to develop their psycho-motor skills as operators of the equipment (2008, p. 7).” "...effective learning takes place only under certain conditions, requiring accurate and immediate feedback about the relation between the situational conditions and the appropriate response (Bakken & Gilljam, 2003, p. 198)."

These systems have been implemented into both the operational as well as the institutional (trying to say the TRADOC Army) Army and therefore what USMA is doing with simulations is not new but it is unique in that we are trying to create a greater pool of experiences for future officers who have had little to no field experience. One of the challenges in a traditional educational environment, there is not the flexibility to spend large blocks of hours (whether it be four hours or 12-24 hours) to dedicate to a training event, we work in 55 minute blocks. We have implemented simulations in these because time and resources limit us, but if we focus we can get 2-3 iterations of a military mission with appropriate lessons learned as well as select students experiencing the many challenges of mission command and the “fog of war”. As an educator, based on my experience utilizing simulation as a tool to teach concepts to my students over the last two years I have become a believer of the capabilities that a dynamic instructor can impart to his/her students through this medium. However, as Gagne points out in his article, Military Training and Principles of Learning, that practice of a task is not sufficient to learn it, there must be an understanding of the theory/subtasks/etc. to effectively train someone (1962, p. 86).

A couple of characteristics that I have seen in the simulation lab between effective instructors and those that are wasting their students and their own time are as follows; instructors must have a breadth and depth of the subject matter, they must impart a serious and focused attitude toward the training event, they also must have the awareness to know when the training value is being enhanced by the chaos or if they need to limit the variables to allow their trainees to draw lessons/experiences out of the exercise.

How do we help our future officers deliberately reflect on those experiences and accomplish learning, knowledge that led to action and with reflection things are adjusted, confirmed or discarded? Kolb in summarizing/quoting Jerome Bruner “the purpose of education is to stimulate inquiry and skill in the process of knowledge getting, not to memorize a body of knowledge: ‘Knowing is a process, not a product’ (1984, p. 27).” We want to develop our students into lifelong learners, who are able to step back from time to time and be deliberate about what their assumptions were and if they led to a theory and practical application that was ultimately successful and if not then what needs to change to correct/improve their theory.
Conclusion

So, at USMA are we more providing experiences for them to reflect upon and learn from, providing experiences in a diverse environment and creating learning in a transitive process with teachers, or a little bit of both? After our research and own reflection we were able to determine that we really provide experiential education with the hope that our Cadets begin to model, in their future, the reflection and assessments that we facilitate. We certainly provide a multitude of different experiences for Cadets to reflect upon; be them in a classroom, lab, in the field or out at a military school and at active units. We found that as an organization we could do better with providing the right people at the right time and location to best provide mentorship throughout a Cadet's developmental experience at the academy but, by and large it is the Cadet's responsibility to take ownership of their education and development understanding that it will continue throughout their lifetime. It is apparent that the Military is not the sole proponent to utilize experiences as a means to develop professionals within their organization, and that the use of experiences provides a better product in either the realm of instructor development or student development.
Bibliography


