KILLER CAPTAINS: PRODUCING COMPANY COMMANDERS WHO WIN TACTICAL ENGAGEMENTS

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

KILLER CAPTAINS: PRODUCING COMPANY COMMANDERS WHO WIN TACTICAL ENGAGEMENTS, by Major Joseph S. McLamb, 98 pages.

This study examined selected training methods used to train officers at three institutions charged with the development of tactically competent company commanders: the Army's Armor Captains Career Course at Fort Knox, Kentucky; the Marine Corp's Amphibious Warfare School at Quantico, Virginia; and the Australian Army's Combat Officer Advanced Course. Using fourteen evaluation criteria, the study measured the degree to which thirteen training methods aligned with the principles of adult learning, based primarily on course documents and other primary sources. The study concluded that current training methods do generally align well with the three principles of motivation, readiness to learn, and the role of experience, but do not align well with the principles of the learner's self-concept, orientation to learning, and need to know. These findings indicate that, although current training methods enjoy important strengths, significant room for improvement exists in the methods used to produce tactically competent company commanders.

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Finally, this work would never have progressed beyond an interesting concept were it not for the encouragement and assistance of my wife Rachel, whose patience and graceful spirit are the primary reason for the project's completion.

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LIST OF ACRONYMS

AA	Australian Army
ACCC	Armor Captains Career Course
ANCOC	Advanced Non-Commissioned Officers Course
AOBC	Armor Officer Basic Course
ASPT	Academic Study and Preparation Time
AWS	Amphibious Warfare School
BG	Battle Group
CCTT	Close Combat Tactical Trainer
COAC	Combat Officer Advanced Course
CPX	Command Post Exercise
CROAC	Combined Regimental Officer Advanced Course
DA	Department of the Army
FACAD	Faculty Advisor
FTX	Field Training Exercise
IPB	Intelligence Preparation of the Battlefield
JANUS	Joint Army/Navy Uniform Simulation
MAGTF	Marine Air/Ground Task Force
MAP	Military Appreciation Process
O/C	Observer/Controller
PE	Practical Exercise
RCC	Recognized Current Competency
SGI	Small Group Instructor

SIMNET	Simulation Network
TEWT	Tactical Exercise Without Troops
USMC	United States Marine Corps

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CHAPTER 1

INTRODUCTION

Although it is unclear what the future of the next ten to fifteen years will hold for the American armed forces, the Army's historic requirement for tactically competent company commanders is almost certain to remain. Companies fight the tactical engagements, the building blocks of operational and strategic victory, and the captains commanding those companies play a significant role in determining whether engagements are won or lost. The importance of competent company commanders may in fact increase in the future, as decentralized operations become the norm in the objective force. In the future as in the past, the tactically sound company commander who can consistently win in the close fight remains a mainstay of success.

Providing such commanders, however, is no simple task, and little consensus exists as to the training methods most likely to produce the officers required. A brief survey of the Army's current institutional tactical training for company commanders reveals a wide range of often diverging training techniques and methods. Any effort to compare techniques and methods is hampered by the lack of a common set of evaluation criteria for determining effectiveness. At a time when the Army is making significant decisions about the future of institutional tactical training for company commanders, it lacks a clear methodology for comparing and selecting training methods.

Thesis

This study sought to analyze selected training methods used in institutional tactical training for company commanders by applying the principles of adult learning as evaluation criteria. It aimed to answer the basic research question, Are the institutional

training methods used to develop tactically competent company commanders aligned with the principles of adult learning? Supporting research questions included:

1. What are the principles of adult learning?

2. What measures of performance can be used to assess alignment with the principles of adult learning?

3. What are the most significant training methods used in institutional tactical training for company commanders?

Significance

The results of this study are directly applicable to the decisions facing senior Army leaders today concerning the future path of the Army's officer professional development system. The study offers Army decision makers a scientific, detached analysis of training methods used at a variety of institutions to produce tactically competent company commanders. Perhaps more importantly, by employing the principles of adult learning as evaluation criteria it offers a common, useful measuring tool for identifying promising training techniques for the future. To the extent it is successful in answering the primary and secondary research questions, this study serves as a decision making aid for officers and civilians tasked with designing and implementing institutional tactical training for company commanders in the years ahead.

Limitations

This study analyzed the training methods of three institutions charged with producing tactically competent company commanders. The institutions selected shared a positive educational reputation within the military community, some unique aspect to set them apart from other potential candidates, and open access to their training documents

and other sources of information. Within each institution, the study selected training methods based on frequency of use, importance to the overall training plan, and availability of pertinent information.

The study lacked the ability to directly measure the tactical competence of company commanders subsequent to institutional training. While a study linking specific training methods to verifiable changes in tactical competence would be of tremendous value to the Army, the information necessary to produce such a study was neither available nor attainable. While the Army has historically gone to great lengths to collect data on unit performance at its Combat Training Centers, no database on individual performance existed outside of the confidential Officer Evaluation Reports for each officer. The Army abandoned an early effort to produce a database of individual performance after studies indicated only marginal success in predicting tactical and leadership performance based on institutional training (Dyer and Hilligoss 1974).

With no means of directly measuring tactical competence subsequent to institutional training, this study used the principles of adult learning as a means for indirectly measuring the effectiveness of training methods. Adult learning theory, although still far from a closed field of study, had matured to the point that it formed a reasonable framework for comparing educational approaches and making judgments about their relative value. While some academic debate remained concerning the nuances of adult learning theory, sufficient agreement existed to allow the confident employment of adult learning theory as a reliable aid for making relevant observations about how institutions train company commanders.

Assumptions

Two critical assumptions underlay this study. First, the study assumed a correlation between the training method and the tactical competence of the officer receiving the training. The selection of training method, in other words, has a direct impact on the subsequent performance of the trainee. Second, the study assumed that the correlation between the training method and subsequent performance is defined by the extent to which the training method aligns with the principles of adult learning. The more closely a training method aligns with the adult learning principles, the more effective the method.

Definitions

In order to maintain internal consistency throughout the thesis, several definitions proved necessary as a prerequisite for clarity. These definitions apply throughout the study.

"Institutional training method" refers to any specific technique used as part of a training school or course. Examples include assigned readings, classroom discussions, lectures, war games, staff rides, and historical analyses. For the sake of brevity, "training method" substitutes for "institutional training method."

"Tactical competence" refers to the ability to: (1) recognize tactical problems and develop feasible solutions in an environment of limited information, time and resources; (2) communicate solutions to subordinates with clarity and brevity; (3) supervise the execution of the solution in an environment of rapid and often unpredictable change; and (4) evaluate the results of the solution to allow for necessary modification.

"Maneuver force" refers to those portions of the Army tasked with closing with and destroying the enemy as part of the close fight. Generally, these include armor and infantry forces, although attack aviation is sometimes included.

The study uses the standard Army terms for simulation training. Live simulation is training involving actual weapons and equipment, employed on real terrain, under conditions approaching those anticipated in combat. The combat training centers serve as primary examples of live simulation. Virtual simulation replaces real weapons and equipment with detailed models, and includes an immersive computer-generated environment that maintains the look and feel of real terrain. The Close Combat Tactical Trainer (CCTT) and Simulation Network (SIMNET) serve as examples of virtual simulation. Constructive simulation uses computers or other means to provide visual feedback to unit and individual actions. Joint Army/Navy Uniform Simulation (JANUS) and *Decisive Action* are examples of constructive simulations.

Two additional terms received considerable attention early in the preparation of the study. Many scholars differentiate between "education" and "training" in their published works, raising the issue of whether the institutions charged with producing company commanders are primarily focused on education or training. Unfortunately, although many scholars agree there is a difference between education and training, few can agree on the exact nature of the difference. Scholarly works often define the terms internally, but these definitions rarely agree with those found in works of equal worth. After considerable contemplation, the words are used interchangeably throughout this study. Whether company commanders are trained or educated depends primarily on how one chooses to define the terms. For the purposes of this study, making such a distinction

adds nothing to the value of the work and requires the reader to take sides in a debate outside the scope of the current topic.

Summary

By applying a framework of established principles of adult learning, this thesis allows leaders to make informed decisions when selecting the institutional training methods for developing the company commanders of the future. Before applying those principles, it is necessary to take a thorough look at the contemporary state of adult learning theory. Chapter 2 examines the current state of adult learning theory.

CHAPTER 2

LITERATURE REVIEW

The review of pertinent literature for this research focused on two areas: adult learning and institutional tactical training for captains. The first area revealed a broad array of works from multiple fields of study, displaying broad agreement but interesting differences in emphasis. The second area proved surprisingly shallow. Despite the interest of senior Army leaders in officer professional development, few scholarly works touch on the topic of institutional training for captains.

The Principles of Adult Learning

Adult learning as a field of study lies at the intersection of several major disciplines. Clinical psychologists, behaviorists, cognition specialists, learning theorists, and educators have all contributed to what is now known about how adults learn and the methods which best support adult learning. As in any field with broad participation, disagreement exists in many areas, typically more in emphasis and degree than in basic concept. Each school of thought tends to focus on the areas of adult learning reflecting its own areas of expertise.

Even so, it is possible to identify the primary principles of adult learning without fear of significant argument. Building upon years of earlier research and thought, Dr. Malcolm Knowles summarized these principles in 1975. Multiple studies have subsequently tested the principles, and within a quarter century the list expanded from four to the current six principles.

> *The need to know*. Adults need to know why they need to learn something before undertaking to learn it.

> *The learners' self-concept*. Adults have a self-concept of being responsible for their own decisions, for their own lives.
>
> *The role of the learners' experiences*. Adults come into an education activity with both a greater volume and a different quality of experience from youths.
>
> *Readiness to learn*. Adults become ready to learn those things they need to know and be able to do in order to cope effectively with their real-life situations.
>
> *Orientation to learning.* In contrast to children's and youths' subject-centered orientation to learning (at least in school), adults are life-centered (or task-centered or problem-centered) in their orientation to learning.
>
> *Motivation.* While adults are responsive to some external motivators (better jobs, promotions, higher salaries, and the like), the most potent motivators are internal pressures (the desire for increased job satisfaction, self-esteem, quality of life, and the like). (Knowles et al. 1998, 64-69)

Since Knowles published his summary of the principles, many theorists and researchers have contributed significantly to the discussion of adult learning. Although their contributions do not always completely agree with the principles from Knowles' list, his work offers a rational framework for reviewing the pertinent theories and findings of adult learning.

The Need to Know

Although many people have traditionally assumed children accept their need to know without question, this assumption appears to bear little validity for adults. Adults undertake a learning project only when it is apparent to them that they need to do so. Although curiosity is sometimes a factor in adult learning decisions (Kolb 1984, 132), the primary factor is a perceived need for the knowledge or skill to be gained.

The requirement for a recognized learning need appears to stretch across cultural differences and include adults in widely varied circumstances. A recent study of adult learning in Africa discovered adult villagers, both male and female, showed little interest in learning except where such learning offered knowledge or skill with clear "community

usefulness" (Diouf et al. 2000). A less scientifically rigorous study of adult learners in the United States found a similar desire for learning to focus on a perceived need. One adult learner summed it up in the words, "I need to know what the point is" (Caudron 2000).

Since adults universally want to know why they need to learn, a key task of the learning facilitator becomes helping the learner recognize his own need to know (Knowles et al. 1998, 65). When attempting to provide such help, learning facilitators are limited to creating conditions favorable to learner recognition of his need to know. The learning facilitator cannot compel such recognition. Even prior to the establishment of the principles of adult learning, foreword thinking educators argued that helping the learner establish his learning objectives is a critical task for the learning facilitator (Rogers 1969, 164).

The Learner's Self-Concept

Psychologically, the development of a self-concept includes an acceptance of personal responsibility and is the defining characteristic of an adult (Knowles et al. 1998, 64). Adults perceive themselves to be in control of their own lives and the decisions in their lives. Their sense of control extends to learning decisions and is the driving factor in their need to know why they need to learn.

Unfortunately, the adult self-concept can work for or against the process of learning, depending largely on how well the learning facilitator adapts to his learning adults. In the best case, the learning facilitator includes the learner in a mutual decision concerning learning objectives and other aspects of the learning process (Knowles et al. 1998, 93). The best learning facilitators adjust their teaching methods to match the

desires of the learner (Rogers 1969, 164). These actions allow the adult learner to approach the learning process with his self-concept intact.

Not all learning facilitators are willing to make these concessions to their students, however. In a survey of educators in British universities, research uncovered significant resistance to the idea that adults require different treatment than the more numerous adolescent students. One professor of biological sciences spoke for many when he said, "I don't see why they [adult learners] should need different methods" (Merrill 2001, 14). Nor are such views without some supporting evidence. At least one researcher concluded that children require greater instructional flexibility than adults (Rose 1997). The study of British universities concluded that, although the schools made few changes to accommodate older students, "adults learnt how to cope with the university system" (Merrill 2001, 13). It would appear a strong self-concept can even overcome deficiencies in the training facilitator.

Even when learning facilitators are willing to accommodate the learner's self-concept, the learner himself may find his self-concept at odds with the learning process. In Africa, for example, adult males proved unwilling to learn modern farming practices simply because farming is considered a field of study for young men. Adults are expected to have all the farming knowledge they need. Men could not attend government-sponsored farming training without undermining their perceptions of themselves as men (Diouf et al. 2000).

The learner's self-concept is a crucial player in the learning process. It can inhibit or enhance the learner's ability to learn, and can even, in some circumstances, overcome the learning facilitator's shortfalls as a teacher.

The Role of the Learner's Experience

Experience, according to the old cliché, is the best teacher. Adult learning theory maintains that things are not quite that simple. Experience is indeed a vital factor in adult learning, to include experience gained prior to and during the learning process. Yet experience alone is not synonymous with learning. It is necessary for adult learning, but it is not always sufficient.

Adult learning theory recognizes adults come to any learning activity with various levels of past experience. In fact, the experience level of the adult is one of the primary factors differentiating adult and child learning. Adult learning focuses on "techniques that tap into the experience of the learners, such as group discussion, simulation exercises, problem-solving activities, case method, and laboratory methods, instead of transmittal techniques" (Knowles et al. 1998, 66). These are designed to either produce a new experience for the learner or cause him to reflect on an experience gained prior to the learning activity.

The process of creating an actual experience and using it for learning is referred to as the "experiential learning model," elaborated in its most recent form by David A. Kolb. Kolb argues adult learning at its best requires four phases: a concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb 1984, 42). In more simplistic terms, adults learn best when they experience an event (feel), observe an explanation of the event (watch), reflect on the event and the explanation (think), and then attempt to put what they have learned into action (do) (Kolb 1984, 68). Experience plays a key part in the learning process, but "knowing requires

both a grasp or figurative representation of experience and some transformation of that representation" (Kolb 1984, 42).

The correct balance of experience and reflection is a point of some contention, with behaviorists favoring experience (stimulus-response model), and cognitive theorists favoring internal aspects of learning. A study of cognitive development in moral education, for example, found "critical reflection also seems to have played a significant role in the adults' learning" (Leicester and Pierce 1997). Similarly, a study of adult education at New American College institutions determined "for experience to lead to learning . . . we must reflect on our experience in a continuous process." The same study noted the guidelines for granting college credit for life experiences differentiate between life experiences and the learning that may result from such experiences (Washbourn 1996, 11). Although scholars may disagree over the details, most evidence seems to support the supposition that experience and reflection go together in the learning process.

Determining which teaching methods lend themselves to the experiential learning model has proven more problematic. When presented with a series of teaching methods and asked to determine whether they are examples of experiential learning, British adult educators found the task difficult. While most agreed role playing and simulations constituted experiential learning, opinion split widely on many other methods. "I don't know where to draw the line," wrote one educator, unintentionally summarizing the position of many (Cherrington and Van Ments 1994, 25). A separate study of higher education in Britain maintained, although adults initially found lectures like "being on another planet," they eventually learned to see the lecture as a useful tool (Merrill 2001, 8). One educator argues extensively for the case study as an experiential learning model,

even though many do not classify it as such (Kreber 2001). Still another researcher claims the availability of new technology, not a rational approach to the learning environment, is driving educators to select experience-based methods for adults (Rose 1997).

Whether any one method follows the experiential learning model depends more on how it is implemented than the basic method itself. In the end, effective experiential learning follows the model discovered among the Africans of Senegal: "Adults learned or listened to something, practiced it, and then received feedback or obtained more information from a knowledge provider" (Diouf et al. 2000, 41). Experience and reflection go together in adult learning.

Readiness to Learn

Adults learn best when they learn about something with relevance to their personal lives. In many cases, readiness to learn increases during times of significant changes in an adult's life. Teenage girls, for example, show less interest in learning about child care than expectant mothers (Knowles et al. 1998, 67). The role of the learning facilitator, then, is to assist the adult learner in identifying the life problems that can be solved or mediated by the learning activity (Knowles et al. 1998, 93).

This principle has proven itself of tremendous value in the world of human resource development. From a learning perspective, human resource management differs from adult education in that an institution, rather than the learner, makes decisions about the learning objectives of the training program. In adult education, the voluntary nature of the program allows the adult considerable latitude in determining the learning objectives (Knowles et al. 1998, 121). In a human resource development program, in

contrast, the onus is largely on the learning facilitator to assist the learner in recognizing a clear connection between the training and one or more life or job problems facing the learner. Without this connection, adults typically demonstrate a low readiness to learn.

Orientation to Learning

The adult drive to learn relates directly to the connection between the learning activity and the performance of a task (Knowles et al. 1998, 67). Although Kolb's model indicates some adults prefer to contemplate events more than others, most adults eventually move beyond thinking to doing. Learning activities that focus on a specific task tend to help adults to complete the learning cycle.

The facilitator's role becomes one of resource provider. He ensures adult learners have all the tools and resources necessary to perform the task, provides information and feedback as required, and allows the learners to actually complete the task (Rogers 1969, 164). One study even purports this to be the "primary task" of the learning facilitator (Puliyel and Puliyel 1999).

Motivation

British adult educators, although divided over the needs of adult learners, almost universally describe adult learners as "highly motivated, enthusiastic, committed" (Merrill 2001, 14). Motivation based on internal factors, rather than external circumstances, appears to be one of the fundamental characteristics of adult learning (Knowles et al. 1998, 68).

However, recognizing adults are internally motivated offers little benefit for the learning facilitator. What can the facilitator do to maintain an adult learner's motivation?

How should he intervene if motivation fails? These are more difficult questions, and no single answer commands universal acceptance.

Rogers, an early proponent of adult education, offers little in the way of advice, stating the learning facilitator should simply "rely on the desire of each student . . . as the motivational force" (Rogers 1969, 164). This seems to fall short of useful advice. Two other approaches, however, offer better resolution.

Adult motivation, says one study of adult learners in higher education, stems from an internal life mission. A life mission is the overarching purpose of one's life, and all adults are assumed to have a life mission even though they may not be consciously aware of it. Learning facilitators can have a positive influence on adult motivation by assisting learners to recognize and pursue their life mission (Kroth and Boverie 2000).

A different approach centers on the concept of self-directed learning. This model expands the idea of the learner's responsibility for learning to include not just selection of the learning objectives but an internal assessment of the learning process itself. The learner accepts "responsibility to 'construct meaning' and to cognitively monitor the learning process." Since self-monitoring is dependent on external feedback as well as internal reflection, learning facilitators can assist in maintaining adult motivation by providing regular feedback to the learner on his performance and his learning itself (Garrison 1997, 21).

Life mission and self-directed learning have some value as concepts for learning facilitators attempting to influence adult motivation. They are not, however, integral parts of the basic principle of adult learning called "motivation." Adult motivation comes primarily from internal factors, and those factors can prove extremely difficult to

categorize or quantify. An effective training method must account for the difficulties presented by adult motivation.

The Principles

A review of the literature revealed widespread academic agreement over the basic principles of adult education, as well as a tendency to focus on the experiential learning model as the most effective method for implementing the principles. On specific methods for facilitating learning and motivating adults, however, debate continues.

Institutional Tactical Training for Captains

Unlike adult learning theory, no common theme or set of principles guides the studies conducted and the theories offered on the topic of institutional tactical training for captains. Instead, writers have addressed particular aspects of the topic, often without reference to how their recommendations might affect other areas. As a result, the relevant literature on this topic has a more disjointed appearance.

The most basic question surrounding tactical training for captains centers around the relative importance of institutional and unit training. Perhaps the most widely accepted answer is found in General Paul Gorman's book on tactical training:

> Schooling they [Army officers] must have, although the current kind and amount of schooling should not delimit thought about better approaches. But learning about what it takes to move the point of the arrow swiftly and surely to the selected objective occurs most surely in operational units, in the field. (Gorman 1994, III-43)

Most work in the field has centered on the "kind and amount of schooling" captains should receive, with answers almost always dependent upon the evaluation criteria selected for comparing the various options. The recommendations derived are, not surprisingly, widely varied in scope and content.

In 1974, a student of the training methods at the Armor School predicted "instructors, in the future, will be facilitators of the learning situation" and that small group instruction would see greater implementation (Baughman 1974, 127). This prediction appears to be based more on the contemporary state of educational theory than on any rational recommendation for training methods. Even so, the prediction proved remarkably accurate, at least in as much as small group instruction became the standard method for institutional training for captains over the next thirty years.

The relatively high cost of small group instruction drove the Army to revise its training methods for captains in the early 1990s. A RAND study considered the methods of conference, computer-based instruction, demonstration, practical exercise, television seminar, and written examinations, with an eye to determining the viability of implementing distance learning as a training tool (Winkler et al. 1993, 53). Using cost-benefit analysis as the evaluation criterion, the study concluded contemporary training methods, particularly small group instruction, could be more efficient, but no other alternative option provided significant savings (Winkler et al. 1993, 74-76).

The advent of Officer Professional Management System XXI created an opportunity for renewed consideration of captains' training, and a study conducted by a Command and General Staff College student concluded the new officer management system lacked a common set of tasks and associated standards to direct captains' institutional training (Webster 1999, 62-63). The study recommended institutional training for captains focus on a set of core tasks identified by the Army, to include "a directed reading and discussion program" (Webster 1999, 67).

As adult learning theory became both more mature and more widely known within the Army, some effort to evaluate training within the context of adult learning became practically inevitable. A civilian instructor at an Army school opened the discussion with the question, "Are we treating our students like children?" and concluded that, in many cases, tactical training for captains did so (Saunders 1991). A more scholarly analysis of the training methods used at the Armor Captains Course at Fort Knox, again conducted by a student at the Command and General Staff College, analyzed those methods using cognitive theories of learning. The study concluded contemporary training methods used for the institutional training of captains did not reach the highest and most important levels of cognition (Dixon 2000, 98).

A common theme in most works concerning tactical training for captains is the need for actual experience. As the resolution and fidelity of computer simulations rose, instructors responsible for training captains found simulations could allow captains to gain valuable tactical experience within the institution (Cherry and McLamb 2001). The advent of effective simulations appeared to offer a new dimension to learning in an academic environment.

Scholarly work on the methods for institutional tactical training for captains is less than complete, and research that compares those methods to what is now known about adult learning can make a significant contribution to the field. Chapter 3 details how this study attempted to do so.

CHAPTER 3

RESEARCH DESIGN

Despite a general preference for quantitative analysis within the military, the subject of institutional training for company commanders required a more subjective, qualitative method of study. Even cursory consideration of the problem revealed alignment with the principles of adult education is neither binary nor exact. Training methods differ in the degree to which they align with adult learning principles, and determining the degree of compliance demanded some disciplined yet subjective judgment.

The study approached the problem using the content analysis method as described by Fraenkel and Wallen (2000, 468-481). The content analysis method uses researcher-defined evaluation criteria to analyze the content of documents, speeches, and other sources of information. This study applied the method by examining the content of training plans of three training institutions using evaluation criteria derived from the principles of adult learning. Although each evaluation criterion measured the degree of alignment with only a single principle of adult learning, the cumulative scores of a training method across all the evaluation criteria provided a reasonable basis for answering the primary research question. The study employed the individual training method as described in course documents as the unit of analysis.

Sampling Plan

A fair number of training institutions play some role in developing tactically competent company commanders, and they employ a wide range of training methods in pursuit of their mission. Determining which institutions to include and which training

methods to analyze required a rational sampling plan. The sampling plan included two phases. The first phase compared potential training institutions based on the criteria of educational reputation, uniqueness, and availability of data. Phase two compared the training methods used within each selected institution based on the frequency of use, the importance to the overall training plan within the institution, and the availability of information concerning the training method. The training methods selected in the second phase became the data points for the study. Figure 1 graphically portrays the sampling plan.

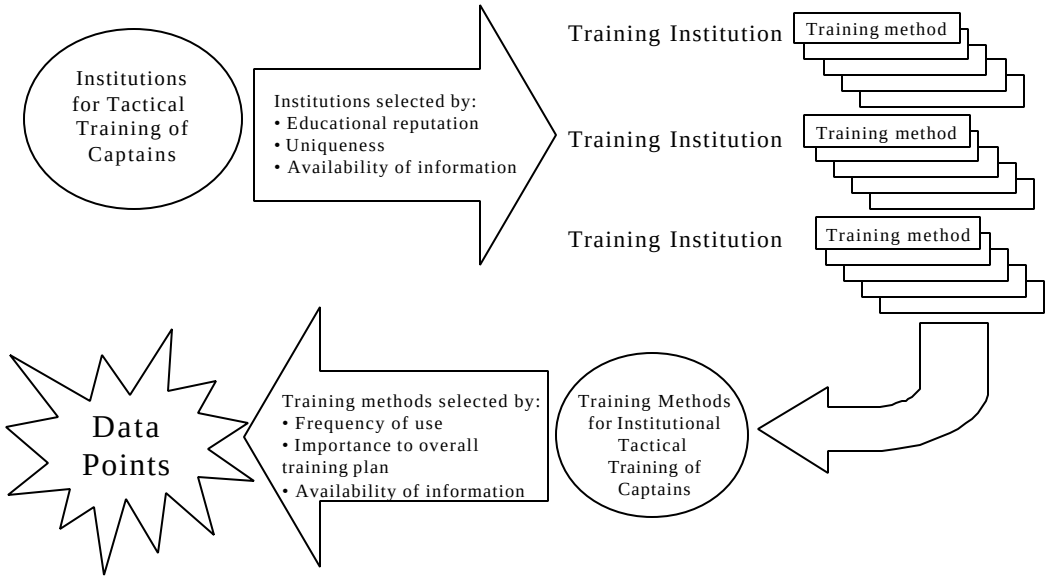

Figure 1. The Sampling Plan

The first phase identified three institutions for inclusion in the study: the Infantry School, 1931-1933; the Armor Captains Career Course (ACCC), 2000-2001; and the Australian Army's Combat Officer's Advanced Course (COAC), 2000-2001.

The Infantry School under Lieutenant Colonel George C. Marshall enjoyed a reputation as a first-class training institution, a reputation which remains intact into the present. Marshall's changes to training became known in the Army as the "Benning Revolution" and are often cited as a factor in preparing the Army's leaders for the Second World War. The course itself, which focused on preparing officers for company command, predated almost all current understanding of how adults learn. The annual reports of the Infantry School to the War Department, Marshall's personal correspondence, and historical accounts of the training provide information for accessing the training methods used in this institution.

The Armor Captains Career Course also enjoyed a favorable contemporary reputation. The course employed classroom technology and live, virtual, and constructive simulations to a degree unique among Army officer professional development schools of the period. The training methods employed in the course were captured in the formal course documentation, written after action reviews, and detailed instructor notes.

The Australian Army's Combat Officer's Advanced Course was designed to prepare Australia's combat officers for company command. In the Australian Army, company commanders are assigned to company command later in their military careers and are typically majors, not captains. Nevertheless, the purpose of the COAC was equivalent to the ACCC. The unique aspect of the course, its Australian pedigree, introduced an international flavor to the study. Due to the extensive US-Australia officer exchange program, details of the course were available through both the official

instructional documents and personal interviews with US and Australian officers with experience in the course.

As originally designed, then, the study included a historic Army school, a contemporary Army school, and a school of an allied nation. Subsequent research, however, caused a significant modification of this plan. The extant historical documents for the Infantry School proved to lack the detail necessary for a meaningful analysis of the training methods. This left only the ACCC and the COAC as viable sources of data for the study.

After due consideration, the Marine Corps Amphibious Warfare School (AWS) replaced the Infantry School as the third institution. The AWS enjoyed a solid reputation as a training program and allowed the study to consider the training methods of a sister service. The contemporary nature of the course, as well as the assignment of several of its graduates to Fort Leavenworth, insured the availability of sufficient information to allow an adequate analysis. Making this substitution in the original research design produced a study which included an Army course, a sister service course, and a course from an allied nation.

With the courses selected, the second phase of the sampling plan identified three to five training methods per training institution for analysis as data points. The frequency of use, importance to the overall training plan, and availability of an adequately detailed description factored into the selection of specific training methods. Subsequent chapters discuss the individual training methods for each institutional, to include the rationale for inclusion in the study.

Evaluation Criteria

Selection of evaluation criteria proved to be the most challenging and important aspect of the research design. Although the principles of adult learning were well established, they were far too broad to serve as direct evaluation criteria in a study of training methods. Translating the broad principles into specific, measurable evaluation criteria required considerable effort early in the research process.

The principle summarized by Knowles as "the role of the learner's experience," for example, is unsuitable as an assessment instrument. If one refines the principle into its major components, two more definitive ideas become apparent. First, adult learners bring varied levels of experience into the learning environment. Second, adults learn best when using experiential learning methods. These ideas combine to form Knowles' principle, but must be measured individually when applied to a specific training method.

The process did not end at identifying the major components of each principle. Most of the major components were themselves overly broad and required additional refinement before they could serve as evaluation criteria. Returning to the earlier example, the second component of Knowles' "experience" principle is itself a multi-faceted concept, including four distinct ideas (concrete experience, reflection, conceptual framework, and experimentation) in even its simplest form. Each of these ideas eventually formed the basis for its own evaluation criterion.

The complexity of the problem caused the study to refine the principles of adult education in three phases. The first phase defined the principles in terms of one or more major component. The second phase refined each of the major components into one or more specific, measurable evaluation criteria. The third phase established a scoring scale

for each evaluation criteria. The scoring scale included a numeric score of one to five, with one indicating a low degree of alignment with the associated principle and five indicating a high degree. The scoring scale also included examples that might be associated with scores of one, three, and five to assist the researcher in calibrating scores. Together, the three phases of development produced the evaluation matrix displayed in Table 1.

Methodology

With the training institutions and training methods selected and the evaluation criteria established, the remainder of the research required hard work but posed few significant obstacles. The study used fourteen evaluation criteria to analyze thirteen training methods, scoring each method on a scale of one to five on each criterion. The researcher recorded the score and the scoring rationale for each training method in a detailed table. The resulting data tables exceeded the size limitations of the thesis, but are included in the appendix. A simple bar chart summarized the results of the analysis, as modeled for a notional training method in figure 2.

With the analysis of each evaluation criterion complete and the results summarized in tabular format, the study drew conclusions about the degree to which the training method aligned with the principles of adult learning. Figure 2 depicts the summarized analysis of a notional training method for illustrative purposes only. Given the data in the figure, one may conclude this notional training method moderately aligns with three of the principles of adult learning, but does not allow the learner flexibility in the choice of training technique, does not account for varied experience levels among learners, and does not include a method for learner feedback on the learning process.

Table 1. Evaluation Matrix					
Principle	Component	Evaluation Criteria	Scale		
			1 – Low	3 – Moderate	5 – High
1. The need to know (Knowles et al. 1998, 65)	The learner must recognize a gap in his skills or knowledge (Knowles et al. 1998, 65).	1.a. Does the training method establish the learner's need to know early in the process?	The trainer informs the learner he lacks necessary skill or knowledge.	The trainer provides an example of performance well above the learner's current ability or knowledge.	The training includes an early practical exercise exceeding the learner's current skills and knowledge.
	The learner must believe that the benefits of gaining the new skill/knowledge outweigh the costs (Diouf et al. 2000).	1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	The training method does not connect the skill/knowledge with a future benefit to the learner.	The trainer discusses the value of the skill/knowledge or provides a historical example of its benefit.	The training method requires the learner to apply the skill/knowledge in an environment the learner expects to encounter in the future.
2. The learner's self-concept (Knowles et al. 1998, 65)	The learner seeks a meaningful role in making decisions about the training objectives and methods (Knowles et al. 1998, 93).	2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	All learners must follow the same techniques in the same sequence.	The trainer has the latitude to make slight adjustments in training based on input from the learner.	The training method includes multiple, equally beneficial training techniques, and the learner is allowed to select from among them.
3. Orientation to learning (Knowles et al. 1998, 67)	The learner seeks skills and knowledge that match the environment in which he expects to use them (Knowles et al. 1998, 67).	3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	The learner applies the skill/knowledge in a classroom or academic environment.	The learner applies the skill/knowledge using live, virtual, or constructive simulations to replicate the environment in which he expects operate.	The learner applies the skill/knowledge in the environment in which he expect to operate (on-the-job training).

Principle	Component	Evaluation Criteria	Scale		
			1 – Low	3 – Moderate	5 – High
4. Role of the learner's experience (Knowles et al. 1998, 65)	The learner brings his personal experience level to the learning process (Knowles et al. 1998, 65).	4.a. Does the training method account for the learner's personal experience level?	The training method discounts prior experience and assumes no prior learning.	The training method allows the trainer to make slight adjustments to the training plan based on the learner's experience.	The training method assesses the learner's experience and adjusts the techniques employed accordingly.
	The learner learns best using experiential learning methods. [Definitions of the four components of experiential learning are from Kolb (1984, 30).]	4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	The training method begins with a lecture, briefing, or other information transfer technique.	The training method begins with group discussion or a demonstration.	The training method begins with a practical exercise that requires all learners to participate.
		4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	The training method does not allocate time for learner reflection.	The trainer alone provides feedback to the learner on his performance.	The training method includes group (trainer and learners) feedback on performance.
		4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	The training method does not attempt to connect the conceptual framework to the learner's experience.	The trainer uses the conceptual framework to explain the learner's experience.	The trainer uses group feedback to guide the learner to self-discovery of the conceptual framework.
		4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	The training method requires the learner to demonstrate memorization of the conceptual framework.	The training method requires the learner to demonstrate comprehension of the conceptual framework.	The training method requires the learner to apply the conceptual framework to solve a problem or make a decision.

Principle	Component	Evaluation Criteria	Scale		
			1 – Low	3 – Moderate	5 – High
5. Readiness to learn (Knowles et al. 1998, 67)	The learner seeks skills/knowledge related to the life problems he expects to face (Knowles et al. 1998, 67).	5.a. Does the training method focus directly on life problems the learner is likely to face?	The training method does not include the application of skills/knowledge to specific problems.	The training method focuses on applying skills/knowledge to generic situations the learner may or may not face in the future.	The training method focuses on the application of the skill/knowledge to life problems the learner is likely to face.
	The learner seeks skills/knowledge appropriate to his level of development (Diouf et al. 2000).	5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	The training method devotes training time to skills/knowledge contained in lower development levels.	The training method uses non-training time and out-of-class assignments to develop skills/knowledge contained in lower development levels.	The training method assumes the learner's competence in skills/knowledge contained in lower development levels.
6. Motivation (Knowles et al. 1998, 68)	The learner's primary motivation comes from internal factors (Knowles et al. 1998, 68).	6.a. Does the training method reinforce the learner's internal desire to learn?	The training method relies on grades and the fear of failure to reinforce motivation.	The training method relies primarily on competition among learners to reinforce motivation.	The training method connects the desired skills/knowledge with the learner's internal values (honest, etc.).
	The learner's motivation is enhanced by providing feedback on the learning process (Knowles et al. 1998, 143).	6.b. Does the training method provide an opportunity for learner feedback on the learning process?	The training method provides no mechanism for feedback on the learning process.	The training method allows the learner to voluntarily submit written or verbal feedback on the learning process.	The training method devotes training time to group discussion and feedback on the learning process.
	The learner's motivation is enhanced by valid self-assessments of his own performance (Knowles et al. 1998, 94).	6.c. Does the training method require the learner to conduct a self-assessment?	All feedback to the learner comes from the trainer.	The training method allows time for learner self-assessment.	The training method requires the learner to openly comment on his own performance.

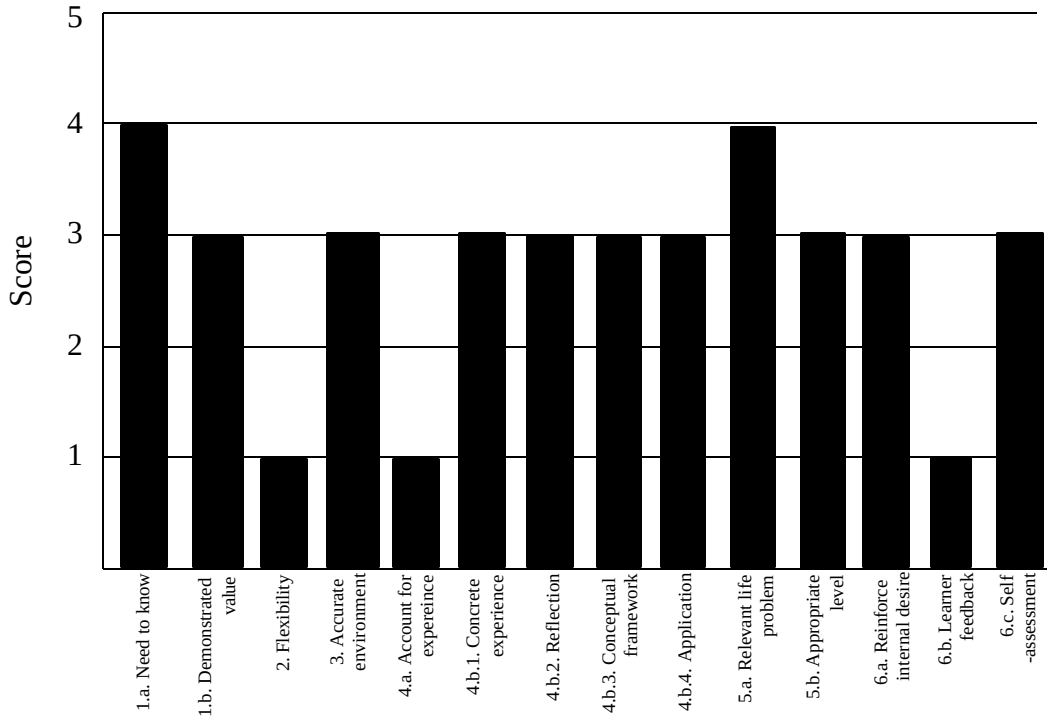

Figure 2. Notional Training Method at Notional Institution

Validity

An early analysis of the research design revealed two major threats to internal validity. These included the potential for bias in the selection of data points and the potential for errors in measurement of the data. Where feasible, the study employed measures to reduce the threats to validity, as outlined in the discussion below.

Bias in the selection of training institutions and training methods proved a difficult problem to solve. The availability of training records and other documents played a substantial factor in determining the data points, thereby introducing significant bias in the research. The use of educational reputation, admittedly a subjective term, as a selection criteria compounded the problem of bias.

Although a random sample of training institutions and methods offered the best defense against bias, the limited time and resources of the study made a truly random sample an infeasible solution. Research limitations drove the study to select institutions and training methods with sufficient documentation to allow informed analysis without the requirement to collect personal observations. In the end, the study accepted the bias inherent in the methodology as a consequence of the scope of the study and made no additional efforts to control for bias in selection.

A second threat to internal validity, errors in measurement, arose from at least two potential sources. First, because the study relied exclusively on written documents to analyze the data points, any errors in the documents themselves would be passed directly to the study. Second, even accurate documents may be misinterpreted by the researcher, a particular danger when the documents come from a sister service or a foreign country. The study attempted to control both these problems by using documents from multiple sources when available and by interviewing both students and instructors of the contemporary courses. Although some errors in measurement undoubtedly remain, these control measures offered sufficient assurance of validity.

Summary

This study analyzed a sample of training methods used at three institutions charged with tactical training for company commanders. It used evaluation criteria derived from the principles of adult education, rating each training method against fourteen evaluation criteria on a scale of one to five. The analysis for each training method was summarized graphically, allowing the study to draw conclusions about the

degree to which the training method aligned with the principles of adult learning. The results of the analysis are related in the subsequent chapters.

CHAPTER 4

THE ARMOR CAPTAINS CAREER COURSE, 2000-2001

At the beginning of the twenty-first century, the Armor Captains Career Course (ACCC) at Fort Knox was in the midst of a significant transformation of its training resources and methods. The course had just occupied a new training facility boasting large screen projection capability in each classroom, local area network and Internet access from each student officer desk, and a new laptop computer for each officer in the course. New software gave the small group instructors (SGIs) the ability to project three-dimensional representations of terrain and fight simulated battles without leaving the classroom. From their seats, student officers could access information ranging from the full array of Army doctrinal manuals to the library of the Army Center for Lessons Learned to the latest news at commercial news-provider websites (Wick 2001). In terms of the latest in training facilities, the course appears to have been exceptionally well resourced.

The ACCC commitment to incorporating new and emerging technologies into tactical training made it a natural candidate for inclusion in this study. The course used live, virtual, and constructive simulations as part of its training program, as well as more conventional methods, such as Tactical Exercises Without Troops (TEWTs), staff rides, battle analyses, assigned reading, group discussion, and lecture. The course employed more than a dozen different training methods, but the study examined only five in detail. To understand the reasons some were selected and others were not, it is necessary to understand the basic design of the course itself.

The ACCC, as it existed in the early months of 2001, consisted of an eighteen-week program of instruction divided into ten major sub-components, called "volumes." Volumes 1-4 focused on basic tactical decision making, issuing written orders, and operating as a battle captain within a tactical operations center. Volumes 5-6 focused on tactical operations at the company level, both offensive and defensive. Volumes 7-8 focused on operating as a member of a battalion or brigade staff. Volume 9 was the capstone tactical training exercise, and Volume 10 focused on the garrison duties of a company commander. Dispersed throughout the course, events called Gauntlets brought students from the ACCC and other courses together to conduct multigrade, multiechelon training outside of the standard program of instruction (Department of the Army 2001d, slide 8). Still in the early stages of development, Gauntlets were a relatively new concept and were not yet integrated into the formal program of instruction (Wick 2001). Taken together, the volumes attempted to achieve the course mission of "providing the mounted force with self-confident, adaptive leaders who can motivate teams to solve complex problems" (DA 2001d, slide 2).

Officers typically attended the ACCC as newly promoted captains, having just completed their first assignment in the Army. As a rule, student officers arrived at the course after serving in two to three roles within the same battalion. For a host of reasons, most student officers came into the course with limited experience in tactical problems (DA 2001f, slide 4). As a result of a field survey of brigade commanders in 2000, the ACCC course designers attempted to use simulations within the course to offset the perceived lack of experience among the student population (DA 2001f, slide 5).

Five Key Training Methods

In light of the purpose and general structure of the course, five particular training methods demanded close examination because of their frequency of use and importance to the overall course design. As one might expect, the majority of selected training methods fell within the company tactical training portion (Volumes 5-6) of the course. The study included two other methods, found outside Volumes 5-6, primarily for their importance to the course.

Within Volumes 5-6, three training methods comprised the vast majority of training time. A combination of reading, practical exercises, and after action reviews collectively referred to as "classroom training" within this study accounted for almost one-half of the time devoted specifically to company tactical training. Subsequently, student officers spent several days conducting virtual simulation training using the Close Combat Tactical Training (CCTT) facility. The company volumes concluded with an evaluated TEWT on local terrain. Comprising the vast majority of company tactical training, these three training methods clearly deserved inclusion in the study.

During the capstone training exercise (Volume 9), students participated in a series of constructive simulation battles, serving as commanders and staff officers at company, battalion, and brigade levels. This event marked the final phase of tactical training within the ACCC, and was included in the study for its importance as a capstone training event.

Finally, although not fully integrated into the course, Gauntlets demanded inclusion as an emerging training method requiring closer examination. Several versions of the Gauntlet existed, but the most prominent was the ten-day field training exercise conducted with students from the ACCC, the Armor Officer Basic Course, and the

Advanced Non-Commissioned Officers Course (Wick 2001). The study included this method primarily for its importance in the evolution of the course.

Specific Sources of Data

The primary source of information on the ACCC was the *Armor Captains Career Course CD, 15 January 2001*, a compact disc, read only memory (CD-ROM) containing course materials and advance sheets for each lesson. Issued to each student officer in the course, the disc identified lesson training objectives, student officer assignments, and graded requirements.

Augmenting the basic information found on the student officer disc, the school maintained a library of Microsoft PowerPoint presentations and Microsoft Word documents detailing specific day-to-day training guidance for the SGIs. The library referred to these presentations as "instructor notes" or "lesson plans," and generally organized them by volume. Also part of the school document library, student and SGI after action reports provided insights into how training was actually conducted. Finally, the course maintained standard Army training schedules, providing details on time allocation and other training issues.

Gauntlets lacked the organizational documentation of the standard training methods. No set of "instructor notes" or student advance sheets delineated this training method (Wick 2001). Instead, a series of fairly detailed operation and fragmentary orders directed its implementation. Additionally, detailed after action reports offered insights into this method of tactical training. As Gauntlets were initially termed "Crucibles," some orders and after action reviews used this term instead.

The sources outlining the training methods used at the ACCC were almost uniformly primary sources. As they were not designed to answer the research question, but were intended for the much narrower purpose of directing the ACCC operations, they often required additional explanation or refinement. Major Eric Wick, the operations officer for the ACCC from November 1999, through June 2001, provided the additional details through a personal interview with the author.

Training Method 1: Classroom Training

Description

Classroom training, as it applies to the ACCC within this study, is an umbrella term incorporating several training methods in an established sequence. For tactical training at the company level, the ACCC relied on a specific sequence when integrating reading assignments, practical exercises built on constructive simulations, and after action reviews. The training plan organized the material into lessons focused on specific company collective tactical tasks, such as breach, assault, and defend a battle position. As the sequence of training was essentially identical for all tasks, any task can serve as representative of this training method. In this case, the study analyzed the training method as it was applied to the tactical task of breaching an enemy mine and wire obstacle.

The ACCC training schedule allocated eight hours of classroom instruction for training on breaching (DA 2001h, 1). The associated advance sheet directed student officers to read specific passages from Field Manual 71-1, to understand certain terms and concepts and to memorize specific material prior to attending the scheduled training (DA 2001b, 1). The actual classroom training occurred over a two-day period, including

the afternoon of the first day and the morning of the second. The training focused on two practical exercises, the second more complex than the first. During the afternoon of the first day, the SGI began the training by issuing a short, one-page tactical scenario and directing each student to prepare a verbal fragmentary order for a company breach based on the provided scenario. After a brief planning period, the SGI selected a single student to act as the company commander, assigning the remainder of the students roles as subordinates within the company. The student identified as the commander issued his order, then the students fought the battle using a constructive simulation in the classroom. At the conclusion of the battle, the SGI led an after action review based on the combat training center model and designed to get student officers to identify critical aspects of the operation. Overnight, student officers applied the lessons of the first practical exercise to a more complex problem based on a formal written battalion operations order. Student officers arrived at class the next morning with their operations orders for the company breach completed. Again, the SGI identified a single officer as the commander, and the class fought the battle on a constructive simulation following the student commander's operation order. The training concluded with a second SGI-led after action review (DA 2001f, slides 10-11).

Analysis

Classroom training scored the highest possible value in two evaluation criteria relating to the experiential learning model and scored above midrange in the remaining criteria associated with experiential learning (see figure 3). In other aspects, however, the training method delivered a more checkered performance.

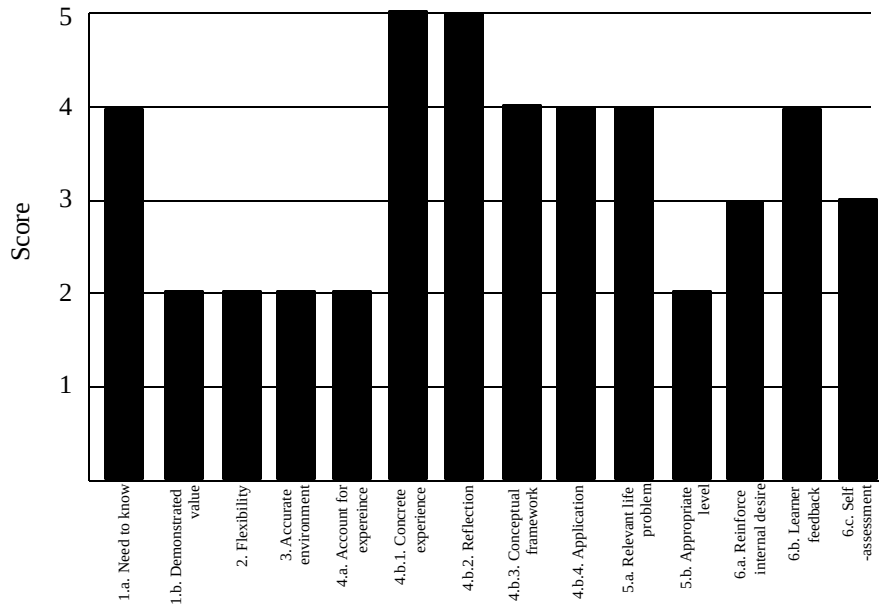

Figure 3. Classroom Training at ACCC

The early use of a practical exercise aligned nicely with the requirement to establish the student's need to know (1.a.), but the training method offered no clear effort to demonstrate the value of the skills involved in the training (1.b.). The lack of acceptable alternative training techniques severely limited the ability of the SGI to acknowledge the student's self-concept (2.) in making decisions about the training plan. The limitations of the classroom environment, when contrasted with the anticipated future work environment of the learner, caused a similar degradation in the learner's orientation to learning (3).

Although classroom instruction did little to recognize and respond to the student's previous experience (4.a.), it did exceptionally well in conforming to Kolb's experiential learning model. Beginning with an inclusive simulated battle as a concrete experience

(4.b.1.), the training method included an after action review designed to provide both the time and the feedback necessary for effective reflection (4.b.2.). The after action review also served to establish a conceptual framework (4.b.3.) for understanding the experience, although the effectiveness of this effort probably varied from SGI to SGI. Finally, the subsequent practical exercise served to force the student to apply the conceptual framework to a new, complex problem (4.b.4.). The chief limitation of the entire experiential experience within classroom training lay in the limited number of students who actually participated as a commander.

The limitations on participation likewise affected the scores of the training method on the remaining principles of adult learning. While the direct applicability of the training objective to the future lives of the students (5.a.) undoubtedly had a positive impact on their readiness to learn, this was clearly offset by the requirement for most of the students to spend a great deal of the training time performing tasks below their level of professional development (5.b.). The training method did not require most students to openly comment on their own performance (6.c.), nor was the training directly tied to the student's value system (6.a.). Despite missing these two opportunities to enhance student motivation, however, the training method did include an opportunity for student feedback on the learning process (6.b.), although later in the training program.

Training Method 2: Virtual Training

Description

Following classroom training, students in the ACCC transitioned to the Close Combat Tactical Training (CCTT) facility for several days of virtual simulation training. The training tasks for CCTT mirrored the training tasks in classroom training. The

scenarios used in the second practical exercise for each training task during classroom training became the scenario for the corresponding CCTT exercise (Wick 2001). The CCTT scenario for breach training, for example, was identical to the scenario used during the practical exercise conducted on the second day of breach training in the classroom. As with classroom training, each training event largely mirrored the others of this type, and one event may be used as representative of the others. The study again followed the training conducted on breaching operations.

The ACCC committed a single eight-hour day of simulator time to training on breaching operations (DA 2001i, 1). The students from all small groups combined into two company teams for the exercise. Each company team conducted the virtual simulation in identical but independent scenarios. Within each company, one student performed as the company commander. Other students filled roles as company executive officer, first sergeant, platoon leader, and platoon sergeant. The majority of students served as gunners, loaders, and drivers of leader vehicles. Typically, each company performed a single iteration of the training scenario in the morning, conducted a formal, SGI-led after action review, switched student leaders, and conducted a second iteration and after action review in the afternoon. Throughout the exercise, SGIs served as observer/controllers and role-played as higher headquarters, adjacent units, and enemy forces (DA 2001e, 1).

Analysis

Although virtual simulation has attained increasingly impressive levels of detail and fidelity over the past decades, the fair to poor scores of this training method imply it may fall short of a training panacea, at least for the immediate future (see figure 4).

Given the high levels of realism associated with the modern CCTT facility, the fair to high scores of the training method in areas associated with experiential learning are not surprising. The low scores in other areas, however, indicate this training method, at least as conducted in the ACCC, is not closely aligned with the principles of adult learning.

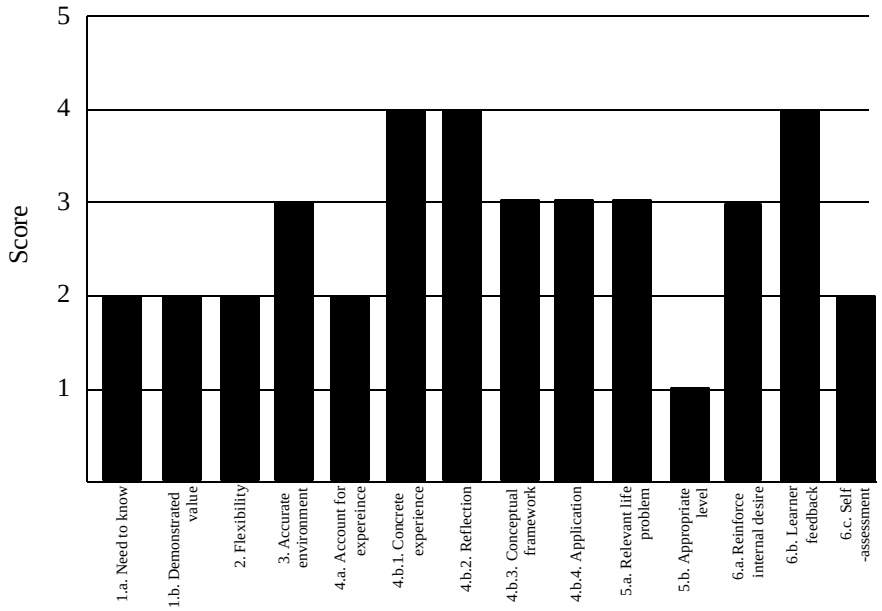

Figure 4. Virtual Training at ACCC

Virtual training scored poorly in establishing a gap in the learner's skills or knowledge (1.a) and in demonstrating the value of the training (1.b.). As a result, most students likely entered virtual training with some degree of ambivalence about their personal need for the training. The constrained training time line and the lack of established alternative approaches to the training effectively eliminated any opportunity for the student to participate in decisions about the conduct of training (2.). The realism

of the training environment (3.), in theory a major strength of virtual simulations, suffered from the use of peers as subordinate leaders and crew members. Although clearly more realistic that the traditional classroom setting, virtual simulations do not of themselves guarantee an accurate reflection of the future work environment.

The biggest surprise in scoring virtual simulations came in the area of experiential learning. Prior to this study, the author assumed that virtual training must, almost by definition, be the definitive example of experiential learning. A more careful analysis revealed that how one employs virtual simulations is actually more important than the realism of the individual simulation.

In the ACCC, virtual training was applied in a uniform, predetermined manner, making little effort to account for the individual learner's previous experience (4.a.). Although the exercise itself certainly functioned as a concrete experience (4.b.1.), the degree of involvement in the experience varied widely. Given a class of about ninety students, the availability of simulators at Fort Knox limited participation to seventy-two. At any given moment in the exercise two functioned as company commanders, two as executive officers, two as first sergeants, two as company fire support officers, six as platoon leaders, and six as platoon sergeants. A total of twenty students filled leadership; the remaining fifty-two served as gunners, loaders, and drivers (Wick 2001). One may safely assume those with gunner, driver, and loader duties found the concrete experience of the simulation somewhat less compelling than did those in leadership positions.

The SGI-led after action review provided both an opportunity for reflection (4.b.2.) and a reinforcement of the conceptual framework (4.b.3.) associated with the tactical task. Again, however, both criteria suffered from the lack of meaningful

involvement of a significant portion of the students. It is difficult to imagine that the loader for a platoon sergeant vehicle found the after action review a significant moment of reflection, especially if he knew he would fulfill a similar role in the following iteration. The lack of opportunities for repeated leadership positions meant few students had to apply their experiences to a problem (4.b.4.) in the final step of experiential learning.

Although virtual simulation scored in the midrange in focusing on specific life problems (5.a.), it scored very low in training skills and knowledge appropriate to the learner's level of development. If one limited the analysis to only those students who served as company commanders, virtual training might score much higher. For the majority of students, however, virtual training focused on skills several levels below that appropriate to their level of development.

Virtual training provided a mixed effort at enhancing student motivation. While offering an opportunity for student feedback on the learning process (6.b.), the training method relied primarily on competition and fear of public failure to reinforce motivation (6.a.). Although the opportunity for self-assessment (6.c.) existed for all students, and those in leadership positions participated in the after action review, most students would have found little basis for self-assessment in their assignments as junior enlisted crew members.

Training Method 3: Tactical Exercise Without Troops

Description

Tactical exercises without troops (TEWTs) played a role in three training volumes in the ACCC. Although the methodology differed slightly between the three TEWTs, all shared a common approach and used many of the same methods (Wick 2001). For the purposes of analysis, this study examined the TEWT associated with Volume 6, Company/Team Defense. This graded TEWT of a defensive position set the stage for the final evaluation within the company tactics portion of the course, the development of an oral company/team defensive operations order (DA 2000i, 1).

The ACCC training schedule allocated one day for this TEWT, a fairly detailed exercise that included a written script for the SGI to follow and a graded requirement for the students (DA 2001j, 1). The SGI conducted the training in two field locations, the first corresponding to the company battle position and the second to a portion of the company defensive sector forward of the battle position. Upon arrival at the battle position, the SGI assumed the role of battalion commander and demonstrated the steps of engagement area development by talking through his actions and decisions in preparing the battalion engagement area. In conducting this demonstration, the SGI followed the script provided with the lesson plan. At the conclusion of the demonstration, the SGI issued instructions to the students for the development of their company engagement areas, again following the script. The students then spent one hour conducting the first practical exercise, the development of the company engagement area. After a short break, the SGI moved the students forward in the company sector and provided guidance on the defense in sector, scheduled to precede the defense of the battle position. The

second practical exercise required students to plan the defense in sector within two hours. At the end of the practical exercise, each student spent twenty minutes briefing the SGI on his concept for both the defense in sector and the defense of the battle position. The SGI evaluated the concept based on an established scoring criteria worksheet. The student officer's concept then formed the nucleus for his operation order in Test Point 5/6 (DA 2000i, 1-2).

Analysis

Despite pre-dating the modern understanding of adult learning by several decades, the TEWT scored surprisingly well in many areas of analysis (see figure 5). By focusing exclusively on leader tasks, the TEWT aligned very well with many aspects of the principles of adult learning. In fact, most of the significant shortfalls of the training method stemmed from the administrative restrictions imposed by the graded nature of the event.

The SGI demonstration, scripted in order to assure a high degree of proficiency, established the student's need to know (1.a.) early in the exercise. Because the training environment closely matched the environment in which the students would expect to conduct the task (3.), the students could clearly understand the value of the skill involved (1.b.). The SGI demonstration also served as an early and effective concrete experience (4.b.1.), and established the conceptual framework (4.b.3.) for the remainder of the training event. Both practical exercises required the student to apply the conceptual framework to a complex problem (4.b.4.). The feedback from the SGI at the conclusion of the practical exercises fell short of the preferred group interaction, but met the midrange requirement for reflection (4.b.2.). By presenting the learner with a problem he

would almost certainly face in the future (5.a.) and selecting only those tasks associated with the duties of a company commander (5.b.), the TEWT scored extremely well in establishing the student's readiness to learn. Like other training methods at ACCC, the TEWT provided a later opportunity for student feedback on the learning process (6.b.)

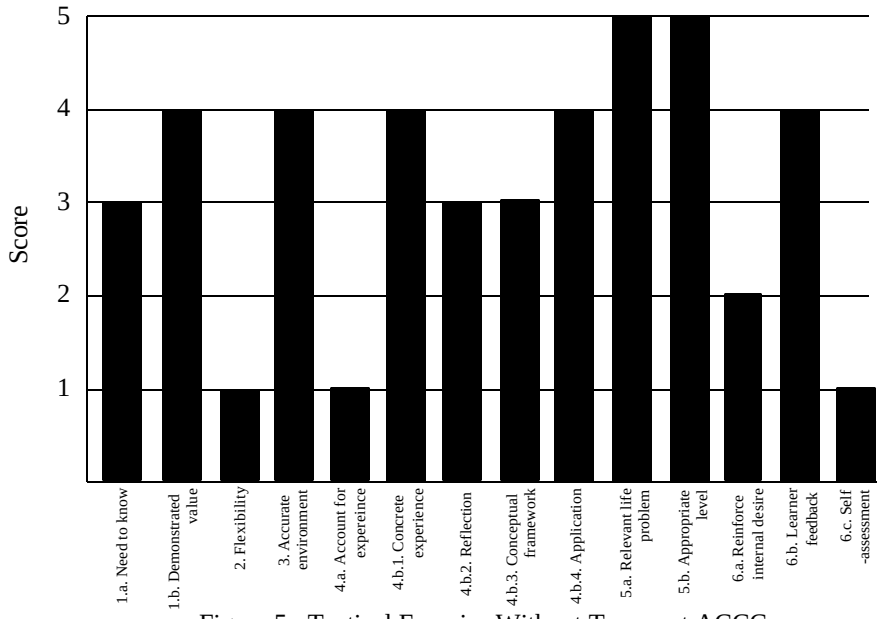

Figure 5. Tactical Exercise Without Troops at ACCC

In contrast to the high and midrange scores identified above, the TEWT scored very poorly in those areas affected by the administrative requirements of a graded event. The scripted demonstration and scoring criteria worksheet placed significant limitations on the flexibility of the training method (2.), and completely ignored any differences in personal experience among the students (4.a.). The TEWT relied primarily on grades to

enhance internal motivation (6.a.), and did not include any requirement for self-assessment by the student (6.c.). It is interesting to contemplate the potential for this training method were the requirements of the graded event removed.

Training Method 4: Capstone Constructive Training Exercise

Description

Originally a large command post exercise based on the design of the capstone exercise at the US Army Command and General Staff Officer Course, by 2001 the ACCC capstone exercise had evolved into a series of single-day, force-on-force constructive simulations (Wick 2001). Over a period of five training days, the training method used a commercial constructive simulation called *TacOps* to allow small groups to fight other small groups in a series of unrelated and increasingly complex tactical scenarios (DA 2001g, slide 1).

The training method, called "Warfighter" in course documents, used a standard time line and sequence of events for each training day. At 0815, those students from each small group identified by their SGIs as observer/controllers (O/Cs) for the day reported for their mission brief. In addition to the traditional role of observer/controller, student O/Cs received the latitude to make any adjustment to the training scenario agreeable to both the blue and red O/Cs for a particular battle. SGIs played a small role in decisions to modify the scenario; student O/Cs acted as the primary decision-makers (DA 2001k, 2).

At 0830, one student per small group, identified by the SGI as the commander, reported for his written mission orders. Of the six small group commanders, three received identical orders for the blue force, and three received identical orders for the red

force. A training matrix paired the red and blue forces as opponents. Orders for both the red and blue force consisted of a single sheet of paper with an overlay depicting unit boundaries, a specified mission, a short description of the enemy situation, and any administrative instructions. The commanders reported back to their small groups, conducted a brief planning session, and entered their initial orders into the computer hosting the simulation. The SGI assigned a duty position to each member of the small group, as either a staff officer supporting the student commander or a subordinate commander. Beginning at 1030, students from both small groups began the computer simulation, under the observation of the observer/controllers. The battle ended no later than 1430, and the student observer/controllers led small group after action reviews at 1500 each day. At the conclusion of the small group after action review on the fifth day, the SGI led a comprehensive after action review of the training event itself (DA 2001k, 2).

Analysis

Although markedly different from the large, multi-day command post exercises typically used as the capstone training event in many Army officer schools, Warfighter scored well in a number of evaluation criteria (see figure 6). The shortcomings of the training environment and the placement of the training method at the conclusion of the course appear as the primary causes for low scores in some evaluation criteria.

While Warfighter made no specific attempt to convince the students of the value of the training (1.b.), the close correlation between the training event and the command post exercises students could anticipate in their next units probably served this purpose to some limited extent. The sense of value in the training was likely reinforced by a rather

unique aspect of Warfighter: the use of students as observer/controllers with authority to modify the training scenario. This single facet of the training provided a degree of flexibility in the training plan (2.), allowed the students to adjust the training based on their own experiences (4.a.), established an environment for reflection (4.b.2.), and markedly increased the requirement for self-assessment (6.c.). The training exercise itself served as an effective concrete experience (4.b.1.), focused at the appropriate level of professional development (5.b.) for the vast majority of the students. Unlike other ACCC training methods, Warfighter included an opportunity for student feedback (6.b.) within the training method itself, although at the very end of the training period.

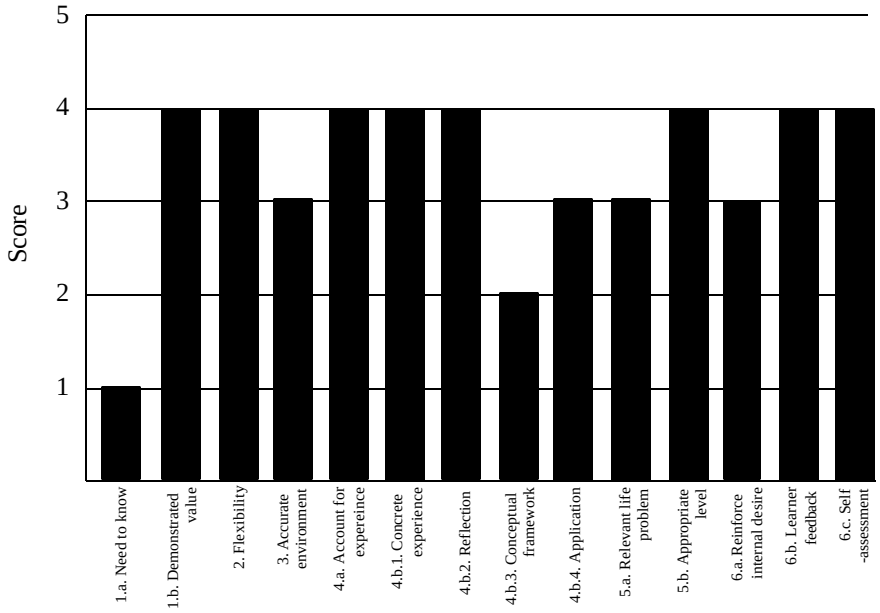

Figure 6. Capstone Constructive Training Exercise at ACCC

However, the training environment was not without its shortfalls. Although Warfighter resembled unit-level command post exercises, it lacked the senior leaders normally found at the battalion and brigade levels. As a result, student officers filled these positions, providing a less than accurate reflection of the anticipated future environment (3.). The use of widely varied terrain and tactical problems likewise limited the accuracy of the training environment and introduced some problems the students were unlikely to face in their future (5.a.). Few US armor captains, for example, will operate with T-80s and BMP-3s as their equipment. Students assigned as red force commanders, however, faced just that problem in Warfighter.

The use of the training method as the capstone exercise of the course generated low scores in several areas. Apparently assuming the training method served as practice of skills and knowledge gained earlier in the course, Warfighter made no attempt to establish the students' need to know (1.a.) and left the development of a conceptual framework (4.b.3.) to those students assigned as O/Cs. The exercise did not follow the sequence of experiential learning, apparently viewing the exercise itself as both the concrete experience and the final application of experience (4.b.4.). Given the perception of the exercise as a final step in the learning process, the lack of an effort to reinforce motivation (6.a.) is perhaps not surprising.

Training Method 5: Field Training Exercise (Gauntlet)

Description

The field training exercise (FTX) was unique in many aspects. It was the only training exercise using live simulation training aids in a field environment, the only one conducted by one small group at a time, and the only one combining captains from the

ACCC, lieutenants from the Armor Officer Basic Course (AOBC), and non-commissioned officers from the Advanced Non-Commissioned Officers Course (ANCOC). Fort Knox referred to the last feature as the defining characteristic of a Gauntlet: a multiple grade, multiple echelon training event. Although many versions of the Gauntlet would eventually evolve, the FTX Gauntlet initiated this form of training in the ACCC (Wick 2001).

The training method called for a single small group to deploy to the field on the morning of the first training day. Upon arrival, the SGI split the students into red and blue teams. The teams separated, then received battalion operations orders for operations scheduled for the next morning. Later in the afternoon, the students linked up with their respective companies, red and blue, to conduct troop leading procedures. Each company consisted of two or three platoons of tanks manned by lieutenants from the AOBC and non-commissioned officers from the ANCOC. The next morning, the two companies fought a force-on-force engagement. The SGI led an after action review of the operation, then the students rotated leadership positions and fought the engagement a second time. A second after action review typically concluded the training event for the small group, although a third iteration was possible in some cases (DA 2000j, 1-3). In addition to leading the two after action reviews, the SGI provided individual feedback to those students serving as company commanders (DA 2000g, 1).

Over the course of a standard rotation through the FTX, the members of a small group filled two red company commander slots, two blue company commander slots, and eight platoon observer/controller (O/C) slots. With only one-half of these slots available at any given time, the remainder of the small group served as company executive officers,

fire support officers, and tank crewman (DA 2000d, 1). About 30 percent of a small group served as company commanders during the exercise.

Analysis

The Gauntlet's use of students from multiple courses in duty positions appropriate to their rank and experience added a marked degree of realism to the field training exercise missing in the other training methods employed in the ACCC (see figure 7). Having lieutenants and noncommissioned officers as subordinates substantially affected the scoring of the training method in several evaluation criteria. The general lack of flexibility inherent in a multiple course training event, however, offset this effect to some degree.

The training method scored the highest possible score for its accurate reflection of the future work environment (3.), and on its demonstration of the value of the skills and knowledge associated with the training (1.b.). The FTX scored above midrange in its focus on life problems likely to face the student in the future (5.a.), missing the maximum score primarily because many students did not get an opportunity to participate as a company commander. The presence of lieutenants and non-commissioned officers also presumably enhanced the students' internal desire to learn (6.a.). The training method basically followed the experiential learning model, with a solid concrete experience (4.b.1.) and an opportunity for reflection (4.b.2.), but was less successful in developing a conceptual framework (4.b.3) and allowing the student to apply the framework in problem solving (4.b.4.).

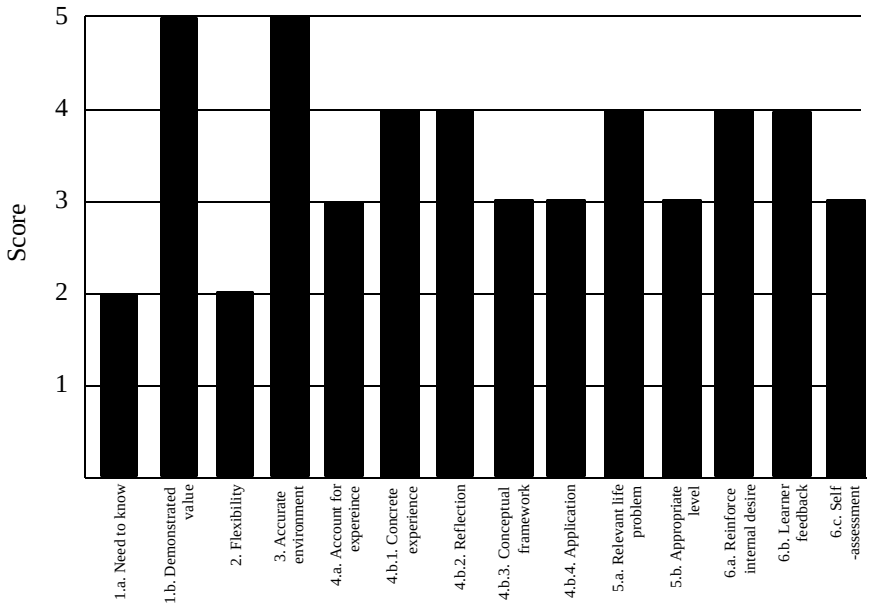

Figure 7. Field Training Exercise at ACCC

The nature of the multiple course training made it difficult for the SGI to allow student involvement in determining training techniques (2.) or to adjust the training based on the student's prior experience (4.a.). The training method made little effort to establish the student's need to know (1.a.), apparently assuming the student would inherently recognize the need.

The FTX scored in the midrange in its focus on tasks appropriate to the student's level of professional development (5.b.), again largely as a result of some students spending their time as tank crewmen. For similar reasons, the training method scored in the midrange in its requirement for student self-assessment (6.c.).

Conclusions

Not surprisingly, the training methods employed at the ACCC differed substantially in their degree of alignment with the principles of adult learning. One method aligned nicely with particular principles, not so nicely with others. The next method shared some degree of commonality, but differed significantly in one or more principle. Even so, a cumulative analysis of the training methods reveals seven significant trends, four reflecting positive alignment and three negative (see table 2).

Table 2. Summarized Scoring Data for ACCC

	Classroom Training	CCTT	TEWT	Capstone	FTX	Mean	Low	High	Median
1.a.	4	2	3	1	2	2.4	1	4	2
1.b.	2	2	4	4	5	3.4	2	5	4
2.	2	2	1	4	2	2.2	1	4	2
3.	2	3	4	3	5	3.4	2	5	3
4.a.	2	2	1	4	3	2.4	1	4	2
4.b.1.	5	4	4	4	4	4.2	4	5	4
4.b.2.	5	4	3	4	4	4	3	5	4
4.b.3.	4	3	3	2	3	3	2	4	3
4.b.4.	4	3	4	3	3	3.4	3	4	3
5.a.	4	3	5	3	4	3.8	3	5	4
5.b.	2	1	5	4	3	3	1	5	3
6.a.	3	3	2	3	4	3	2	4	3
6.b.	4	4	4	4	4	4	4	4	4
6.c.	3	2	1	4	3	2.6	1	4	3

In four evaluation criteria, the training methods of the ACCC consistently scored above the midrange. In the use of a concrete experience to initiate the learning process, all five training methods scored above the midrange, with a course average score of 4.2 and a median score of 4. In providing an opportunity for the student to reflect on his experiences, four training methods scored above midrange, with a course average and

median score of 4. In allowing student feedback on the learning process, all five training methods scored above midrange, with both a median and course average score of 4. The course also scored above midrange in presenting the student with problems relevant to his future work environment, with a course average of 3.8 and a median score of 4.

In other areas, the training methods of the ACCC consistently scored below the midrange. Three of the five training methods scored below midrange in establishing the learner's need to know, with a course average score of 2.4 and a median of 2. Four training methods scored poorly on allowing the student flexibility in determining training techniques, with a course average score of 2.2 and a median of 2. And three training methods scored below the midrange in adjusting to the personal experience level of the student, with a course average of 2.4 and a median of 2.

Together, these scores seem to indicate a commitment to experiential learning, or at least to the first two elements of experiential learning, as well a focus on relevant tasks. The course provided multiple opportunities for the student to provide feedback on the learning process. The lower scores seem to indicate the course assumed students understood their need to learn the skills offered and provided little flexibility in the route taken to achieve those skills.

CHAPTER 5

THE AMPHIBIOUS WARFARE SCHOOL, 2001-2002

The Amphibious Warfare School (AWS) of 2002 represented over eighty years of United States Marine Corps thought on the methods appropriate to the training of company commanders. Created in its original form in 1921, the course underwent several periods of significant change in course length and placement in the student officer's career progression, but the focus of the course consistently remained on preparing graduates to serve as company commanders. During the last major redesign of the course in 1989, the US Marine Corps (USMC) continued this focus by emphasizing combined arms operations, war-fighting, and decision making skills in the new design (USMC 2002a, 3-5). The 2002 version of the school's mission statement tasked it to "prepare graduates to function as [company] commanders and staff officers at appropriate levels within the operating forces" (USMC 2002a, 1).

To accomplish this mission, the AWS used a nine-month curriculum which included 981 hours of training (USMC 2002b, 9). The curriculum divided the training time into three major phases. In Phase I students focused on fundamental concepts, organizations, and processes. In Phase II, students applied the knowledge gained in Phase I while training on offensive and defensive operations as part of a Marine Air-Ground Task Force (MAGTF). Finally, the basic tactical problems of Phase II gave way to the more complex problems of amphibious operations and stability and support operations in Phase III (USMC 2002a, 6).

Officers generally attended the AWS between their fourth and eighth year of commissioned service, with the vast majority attending during their sixth year.

Typically, students arrived at AWS after one assignment in a combat unit and one assignment in an administrative unit. Most returned to combat units following the course. Since students at the AWS included a wider mix of officer specialties than typically found in an Army school for captains, graduates of the AWS faced greater diversity in their subsequent assignments (Travis 2002). The AWS split a standard class of 205 students into fifteen "conference groups," each numbering between thirteen and fourteen students. A facility advisor (FACAD), typically a major, served as the primary instructor and evaluator of student learning throughout the course (USMC 2002a, 2-3).

Three Key Training Methods

The documentation for the AWS identified eleven specific training methods used throughout the course. However, the majority of these training methods saw rare use, and the three most common training methods collectively accounted for 73.9 percent of the course's training hours (USMC, *AWS program of instruction*, 2002). The lecture, the practical exercise, and academic study and preparation time were by far the most frequently employed and most important training methods within the AWS.

Lectures accounted for 21.2 percent of the training hours in the AWS. Typically used to introduce new material or to allow students to hear from subject matter experts, the lecture played a key role in all three phases of the course. Practical exercises accounted for 38.9 percent of the AWS training schedule, and ranged from an hour to several days in length. Academic study and prep time (ASPT), a training method in which the course provided written materials and time to the student and allowed him to work through the training requirements at his own pace, accounted for 14.2 percent of the course. Although the course offered several other interesting training methods, none of

them compared to the lecture, the practical exercise, or ASPT for frequency of use or overall importance to the structure of the course.

Specific Sources of Data

The AWS proved to be the most difficult course to study using course documentation as the primary source. While both the ACCC and COAC analyses benefited from the study of course documents written with the course instructors as the target audience, in the case of the AWS all available documents were designed for the student. As a result, the AWS documents lacked the detailed description of training found in the documents of the other two courses. Even so, the "course cards," which detailed the student requirements for each lesson, proved beneficial in gaining a broad concept of the training methods.

A more detailed understanding required communication with those with personal experience in the course. Major Matthew Travis, a Marine Corps officer and 1995 graduate of the AWS, proved invaluable in understanding the basic structure and methodology of the training methods. Lieutenant Colonel Mark A. Westerbeck, the Deputy Director of the AWS, provided a wealth of information about the course in a series of electronic correspondence with the author. Major Joseph J. Russell, a third-year faculty advisor at the AWS, reviewed and provided comments on draft descriptions of the training methods. Together, these officers added a degree of detail missing from the course documentation. Even so, the level of detail in the analysis of the AWS is admittedly short of that for the ACCC and the COAC.

Training Method 1: Lecture

Description

Although most training in the AWS occurred in conference groups, the lecture brought all 205 students together in a single setting. The course used lectures to optimize the availability of subject matter experts within the faculty, or to introduce new material to the class (Russell 2002). Lectures were combined with other training methods or used as the sole training method for a particular topic. In either case, the training method followed the same general pattern.

Representative of this training method, the class *Engineer Operations in the Offense* offers insight into the lecture as a training method. Prior to the scheduled lecture, students read excerpts from a doctrinal manual and two historical accounts of engineer operations in the offense. The lecture itself occurred in a large auditorium and lasted for ninety minutes with the instructor, typically employing visual aids, lecturing the students on the material associated with the lesson. The instructor reserved the last minutes of the class for questions from the students (USMC 2002d, 1-3). Most lectures featured some type of demonstration as the central element of the presentation. In the case of *Engineer Operations*, after a short introductory briefing the students split into several small groups and moved to terrain models in and near the auditorium. Selected students, notified in advance of their role, then used the terrain models to demonstrate breaching operations to the other students in their group. Students selected as assistant instructors typically held a special skill pertinent to the topic; in this case, students with a background in engineering served as assistant instructors. A faculty advisor observed the student demonstration and contributed to the student discussion which followed. At the

conclusion of the lecture, the students departed for their next scheduled event, typically a short discussion of the lecture within their conference groups (Travis 2002). At some point following the lecture, students had to use the material in the lecture to complete a practical exercise or graded event (USMC 2002d, 3).

Analysis

Although the lecture at the AWS included more student involvement than the name might imply, the training method nevertheless scored poorly in its alignment with the principles of adult learning. The lecture scored below the midrange in seven of the fourteen evaluation criteria, and earned the lowest possible score in five criteria (see figure 8).

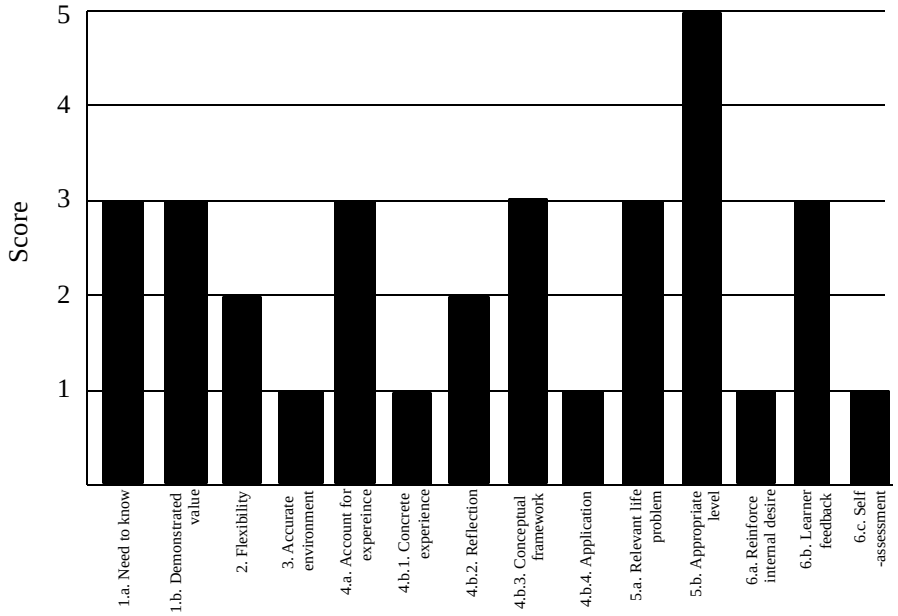

Figure 8. Lecture at AWS

Most of the method's short-comings related to the unrealistic training environment (3.) and the lack of a requirement for student application (4.b.4.). Lectures generally lacked an initial concrete experience (4.b.1.), allowed little flexibility in the conduct of the training (2.), and offered little opportunity for the student to assess his own performance (6.c.). The training method made no apparent effort to reinforce the student's internal desire to learn (6.a.).

In contrast to these low scores, the lecture scored in the midrange or higher in several evaluation criteria. For its focus on skills appropriate to the student's level of professional development (5.b.), the lecture earned the highest possible score. The focus on a demonstration of the underlying conceptual framework (4.b.3.) assisted in establishing the student's need to know (1.a.), while the clear connection between the lecture and subsequent graded events served to demonstrate the value of the training (1.b.). The lecture made some concession to a student's prior experience (4.a.) by employing selected students as assistant instructors, and generally remained focused on problems relevant to the student's future work environment (5.a.). Only selected students provided feedback on the learning process (6.b.).

Training Method 2: Practical Exercise

Description

From the creation of the course, the practical exercise played a key role in the AWS. In the 1921 version of the course, the school dedicated the last six weeks to an extended practical exercise on the local terrain (USMC 2002a, 4). In 2002, the practical exercise remained the most frequently used training method in the course.

Although the practical exercise took may forms in the AWS, the *Fisher's Hill Practical Exercise* serves as a reasonable representative. This exercise, part of the MAGTF offensive operations training, followed four and one-half days of introductory training on planning and conducting offensive operations at the battalion level. The exercise itself served as the primary training vehicle for the fifth through the eighth day of the fourteen days allocated for training on MAGTF offensive operations (USMC 2002c).

On the first day of the exercise, students received a written operations order for a brigade attack. The faculty advisor also issued written commander's guidance in his role as the battalion commander for the exercise unit. The faculty advisor assigned each student in the conference group to a specific staff position within the exercise battalion. Over the next three days, the student staff used the Marine Corps Planning Process to develop a written battalion operations order for the attack (USMC 2002e). Throughout the period, the faculty advisor role-played as the battalion commander and served as an observer/controller for the exercise. In his observer/controller role, the faculty advisor provided individual and group feedback to the students throughout the planning process (Travis 2002). The students spent the final three hours of the exercise briefing their operations order to the faculty advisor, who then provided feedback on the operations order and staff actions throughout the exercise. Individual students did not receive a grade for the practical exercise, but a subsequent individual graded requirement largely mimicked the practical exercise in both type of tactical problem and student requirements (USMC 2002e).

Analysis

The practical exercise scored at the midrange or better in the vast majority of evaluation criteria, suggesting its prominent place in the AWS curriculum to be a sound decision. Scoring above midrange in five evaluation criteria and falling below midrange in only two, the practical exercise aligned with the principles of adult learning to a greater degree than any other AWS training method (see figure 9).

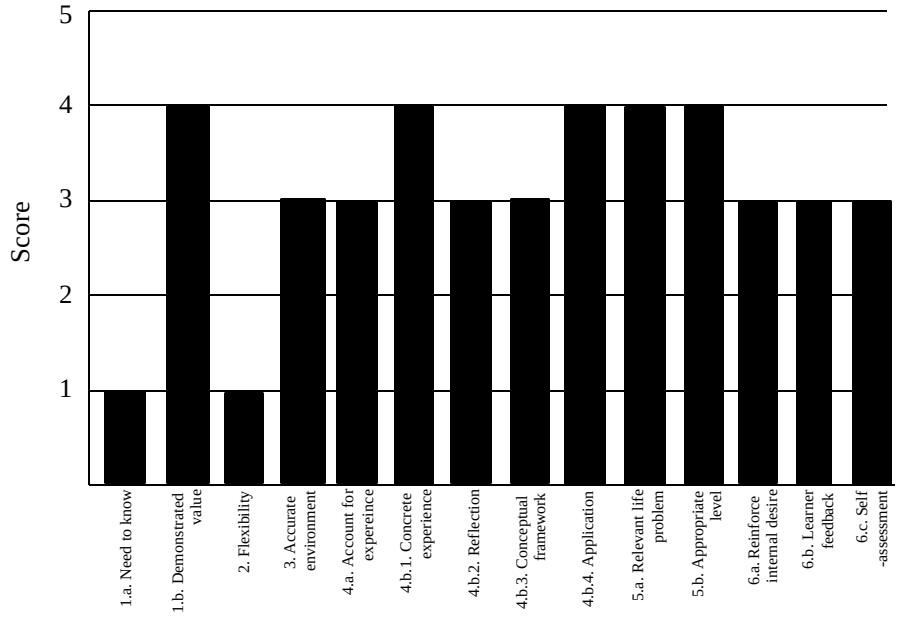

Figure 9. Practical Exercise at AWS

The practical exercise required the student to apply a conceptual framework (4.b.4.) to a complex problem which was both relevant to the student's future assignments (5.a.) and appropriate to the student's level of professional development

(5.b.). The participatory nature of the exercise served as a concrete experience (4.b.1.), while the fair degree of realism in the training environment (3.) assisted in demonstrating the value of the training to the student (1.b.).

The practical exercise scored in the midrange in several areas. The ability of the instructor to assign students to different staff positions allowed him to account for a student's past experience (4.a.), and the frequent instructor feedback based on the conceptual framework (4.b.3.) allowed an opportunity for student reflection (4.b.2.) and self-assessment (6.c.) throughout the exercise. The practical exercise relied primarily on peer pressure to reinforce the student's internal desire to learn (6.a.). As with the lecture, only selected students provided feedback on the learning process (6.b.).

The practical exercise scored below midrange in its efforts to establish the student's need to know (1.a.), and in the student's ability to participate in decisions about the training method (2.).

Training Method 3: Academic Study and Prep Time

Description

Academic Study and Prep Time (ASPT) accounted for almost one hour of every seven in the AWS. In most cases, the training schedule provided ASPT to the student based on a formula used to calculate one-half of the time required to complete homework assignments associated with other training methods (Russell 2002). In some cases, however, ASPT served as a training method in its own right. In these cases, the course provided the student with a self-paced text and sufficient ASPT to complete the requirements in the text. Subsequently, students took a formal examination.

The AWS lesson *Task Organization* serves as a representative example of how AWS employed ASPT as a training method. During Phase I of the course, the training schedule allocated ninety minutes of ASPT training to this lesson. During the ninety minute period, students had no other conflicting requirements, and could employ the time as they thought best. The course card directed the students to the self-paced text for the lesson, an 88-page booklet containing a series of lessons and twenty-five quizzes with their solutions. The students received the self-paced text and the time to complete it, but no other training on the topic. Three days later, the faculty advisor administered a graded written examination covering the material in the self-paced text (USMC 2002f, 1-3). Faculty advisors provided additional instruction to students who requested assistance based on their results with the self-paced text (Travis 2002).

Analysis

The scores for ASPT varied widely across the fourteen evaluation criteria. The training method scored above the midrange in four criteria, at the midrange in three, and below the midrange in seven. ASPT achieved its best scores in those areas associated with a training method's ability to adapt to different levels of student experience, and its poorest scores in those areas associated with experiential learning (see figure 10). Significantly, such scores run counter to the broad trends of the other training methods examined in this study.

ASPT left to the student many decisions about the training, earning above midrange scores for flexibility (2.) and accommodating various experience levels (4.a.). ASPT also focused on problems relevant to the student (5.a.) and appropriate to the student's level of professional development (5.b.). The written examination required the

student to apply his skills and knowledge to a problem (4.b.4.), while the quizzes and solutions in the self-paced text offered the opportunity for self-assessment (6.c.). As with all AWS training methods, only selected students provided feedback on the learning process (6.b.).

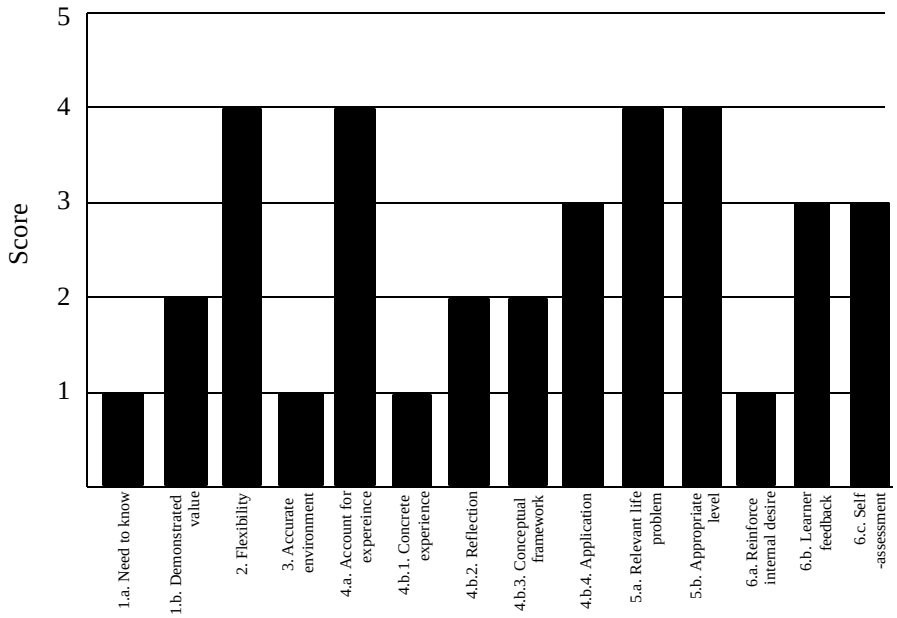

Figure 10. Academic Study and Prep Time at AWS

In other aspects, ASPT scored poorly. The training method offered no concrete experience (4.b.1.), and made no effort to connect the student's prior experience with the conceptual framework (4.b.3.) or require the student to reflect on his experience (4.b.2.). The training environment lacked realism (3.), and ASPT appeared to assume the students accepted the value of the training (1.b.) as well as his need to know (1.a.). Grades served as the primary reinforcement to the student's internal desire to learn (6.a.).

Conclusions

As stated earlier in this chapter, the information available for the AWS lacked the detail of that available for the other institutions considered in this study, and any conclusions one may draw about the course as a whole are, therefore, somewhat less reliable than those for the other courses. The limited number of AWS training methods considered in this study only serves to strengthen this caveat. Even so, it is possible to identify five broad trends for the analysis of AWS, two indicating positive and three negative alignment with the principles of adult learning (see table 3).

Table 3. Summarized Scoring Data for AWS

	Lecture	Practical Exercise	Academic Study and Prep Time	Mean	Low	High	Median
1.a.	3	1	1	1.7	1	3	1
1.b.	3	4	2	3.0	2	4	3
2.	2	2	4	2.7	2	4	2
3.	1	3	1	1.7	1	3	1
4.a.	3	3	4	3.3	3	4	3
4.b.1.	1	4	1	2.0	1	4	1
4.b.2.	2	3	2	2.3	2	3	2
4.b.3.	3	3	2	2.7	2	3	3
4.b.4.	1	4	3	2.7	1	4	3
5.a.	3	4	4	3.7	3	4	4
5.b.	5	4	4	4.3	4	5	4
6.a.	1	3	1	1.7	1	3	1
6.b.	3	3	3	3.0	3	3	3
6.c.	1	3	3	2.3	1	3	3

In two evaluation criteria, the training methods of the AWS consistently scored above midrange. All three methods scored above midrange in focusing on skills and knowledge appropriate to the student's level of professional development, with a course average of 4.3 and a median score of 4. Two of three scored above midrange in focusing

on problems relevant to the student's probable future environment, with a course average of 3.7 and a median score of 4.

In three areas, the AWS training methods scored low consistently, although in no evaluation criteria did all three training methods fall below midrange. The course scored below midrange in establishing the student's need to know, with a course average of 1.7 and a median of score of 1. With the notable exception of the practical exercise, the AWS training methods scored poorly in creating a training environment which accurately reflected the anticipated future work environment. The course averaged 1.7, with a median score of 1. Finally, the course scored below midrange in reinforcing the student's internal motivation to learn, with a course average of 1.7 and a median score of 1.

From these five trends one may draw two broad conclusions about the training in the AWS. First, the training focused narrowly on the application of skills and knowledge needed in future assignments. Second, the training assumed that the student arrived at the AWS already convinced of his need for the training offered by the school, sufficiently motivated to complete the course without external prompting, and with a satisfactory understanding of the future work environment in his subsequent assignments.

CHAPTER 6

THE COMBAT OFFICER ADVANCED COURSE, 2000-2001

In 2001, the Combat Officer Advanced Course (COAC) represented years of evolution in officer professional development in the Australian Army (AA). Responsibility for preparing officers for command at the company level initially rested with the individual branches, referred to as "corps" in the Australian literature. In 1994, the AA recognized the short-comings of its stove-piped approach to training, and modified the training plan to allow more combined arms training. Beginning in that year, officers trained at their branch schools for several weeks, then attended the Combined Regimental Officer Advanced Course (CROAC) which brought officers of all combat arms branches together for a week of capstone training. By 2000, the success of the CROAC led the AA to abandon branch training and combine all institutional training for combat arms company commanders into a single course, the Combat Arms Advanced Course. By 2001, the AA referred to the COAC as "the flagship of the Combined Arms Training Center and . . . the core business of combined arms training" (AA 2001c, 5).

The AA tasked the COAC to "prepare combat officers to fulfil [*sic*] combat sub-unit [Australian terminology for company-level] commands and perform the duties of combat unit operations staff." To complete its mission, COAC trained officers in three major phases, referred to as "modules" in the course documentation. Module One, a two week phase, focused on basic doctrine and the Military Appreciation Process (MAP), the Australian equivalent to the US Army's Military Decision Making Process. Module Two, a three week phase, focused on branch-specific training for company commanders. During this phase, officers trained with instructors from their respective branches on the

tasks associated with company command within that branch. Module Three, a two week phase, combined all students into a single capstone command post exercise using JANUS as the simulation (AA 2001c, 5). During the final phase, training focused almost equally on company command and staff operations (Kennedy 2001).

Officers typically attended the COAC with approximately eight years of active duty service. They arrived at COAC as senior captains or junior majors, but typically had not yet commanded at the company level. Their performance at COAC would largely determine who would get an opportunity to do so. Based on the order of merit at graduation, students at COAC would receive assignments as either company commanders or staff officers in their subsequent duty. Only those sent to command companies enjoyed any real possibility of command at the higher levels, making an officer's performance at COAC a key determinate of his future career pattern (Kennedy 2001). In this, COAC differed significantly from the ACCC, the American course examined in Chapter 5, where an officer's academic performance played almost no role in determining his subsequent assignment.

The COAC enjoyed a high student to instructor ratio, with a class of up to sixty students typically assigned to small groups, or "syndicates," of eight students. Lacking many of the classroom resources often found in officer schools in the United States, the COAC relied heavily on training conducted in field conditions (Kennedy 2001). In Module Two, for example, infantry students spent more than fifty percent of the allocated training time in the field (AA 2000c, 2-4).

Five Key Training Methods

In light of the purpose and general structure of the course, five specific training methods demanded attention because of their frequency of use or importance to the course. A review of the course documentation revealed four recognized training methods within Modules One and Two of COAC: central presentation, syndicate discussion, practical exercise, and tactical exercise without troops (TEWT). The study included all of these and the capstone command post exercise of Module Three.

Conducted largely in the classroom, Module One relied heavily on central presentation and syndicate discussion as training methods. Of all the training hours allocated for Module One, central presentation accounted for thirty percent and syndicate discussion for forty-three percent (AA 2000a, 1-3). Together, the two methods formed the vast majority of instruction in the early portion of the course, and clearly required examination within the study.

Practical exercises played an important role in both Module One and Module Two. Two practical exercises accounted for twenty percent of the training time in Module One (AA 2000a, 1-3). Although Module Two featured the TEWT as its primary training method, the training schedule allocated several hours to other practical exercises (AA 2000c, 2-4). Despite less frequent employment than other methods of instruction, the importance of the practical exercise argued for its inclusion in the study.

"The true training vehicle is the TEWT" (Kennedy 2001). This comment from a former instructor at the COAC summarized the importance of the TEWT to the course. During the three weeks of Module Two, students spent more than half the allocated

training time in the field conducting TEWTs (AA 2000c, 2-4). For both frequency and importance, the TEWT demanded close examination in the study.

The Module Three command post exercise earned inclusion in the study both for its length and its importance. This training method alone accounted for two of the seven weeks of the course. The course documentation called the command post exercise the "COAC Main Effort," highlighting its importance to the training plan (AA 2001c, 5).

To a much greater degree than in the ACCC, the five training methods selected for study within the COAC essentially accounted for the entire allocation of time within the course. The course training plan included only two other training methods: self-paced study and visiting lecturer. Together, these made up an extremely small percentage of the training time. Central presentation, syndicate discussion, practical exercises, TEWTs, and the capstone command post exercise collectively constituted practically all of the training time for the COAC.

Specific Sources of Data

The AA's *Combat Officer Advanced Course Training Management Package* provided basic information about course mission and structure, types of training methods, and time allocations within the course. Developed primarily as a management tool, the *Training Management Package* offered little detail as to how instructors executed training, but provided a great deal of information about resource allocation. This multi-part document provided the foundation for research and assisted in establishing a broad understanding of the course.

The compact disc *Combat Officer Advanced Course*, also published by the AA, offered a more detailed examination of the course. Issued to students of the course, the

CD included daily schedules, lesson outlines, and the slide packets used during central presentations and syndicate discussions. The CD also described homework assignments, other requirements, and graded events.

Early in the research process, discrepancies between the *Training Management Package* and the CD caused considerable difficulty. Internal discrepancies within the *Training Management Package* compounded the problem. In many cases, it proved impossible to determine if apparent contradictions in the documents were real or simply misunderstandings created by the differences between U.S. and Australian terminology. The need for first-hand knowledge of the course became increasingly, and painfully, apparent.

The study resolved that need through a detailed interview with Major James D. Kennedy. Major Kennedy served as the U.S. Infantry Exchange Officer to the COAC for the period May, 1999, to July, 2001. During that period, he assisted in designing the then new COAC, and subsequently served as a primary instructor in the course. His recorded interview allowed for a more intelligent interpretation of the written documents, and often provided detailed information unavailable in written form.

Recognized Current Competency

Before turning to specific training methods, one aspect of the COAC requires some exploration. The administrative guide for the course included a detailed explanation of a program called Recognized Current Competency (RCC). This program allowed students scheduled to attend a future course to apply for and receive credit for portions of the training within the course based on their previous experience. The course required the student to produce evidence of his past experience, to include such items as

certificates from other schools, log books, references, and portfolios or samples of previous work. The course administrators then assessed the student's prior experience based on demonstrated learning, authenticity of documentation, attainment of course standards, relevance of the experience to the course material, the student's grasp of the underlying concepts and principles, the sufficiency of the experience, and the currency of the experience. If the student's experience met all of these criteria, the student would not be required to attend the corresponding training within the course, or might be used as a peer tutor (AA 2001c, 41-44). In theory, a student might be excused from all, some, or none of the training scheduled in the course, depending upon his prior experience.

In reality, students practically never made use of this program, for reasons not uncovered by the research for this study. When questioned about RCC, a former instructor and course developer expressed some surprise at the program's existence, then stated flatly that in two and one-half years at the course he had never seen a single student apply for or receive credit under the RCC program (Kennedy 2001). From the study's perspective, this is unfortunate. An institutional effort to recognize a student's prior experience and modify the course structure in light of those experiences would provide a valuable and apparently unique aspect to the training of company commanders. Given the emphasis on the learner's experience within the principles of adult learning, a functioning RCC program would likely receive a very favorable analysis. As the program had no practical existence, however, it was not included in the analysis of the training methods below.

Training Method 1: Central Presentation

Description

Central presentation played an important part in the instruction in Module One, used most frequently to introduce material covered in more depth using other training methods. Unlike all other training in the COAC, central presentation placed all sixty students in a room with a single instructor. The instructor lectured the class on the new material, typically taking a relatively brief period of time and focusing only on the larger, foundational aspects of the training topic. In most cases, the instructor used a Microsoft PowerPoint presentation as a visual aid, although occasionally a terrain board served the same role (Kennedy 2001).

A typical use of central presentation is found in the introduction to Intelligence Preparation of the Battlefield (IPB) in Module One. Following a homework assignment of required reading, the training schedule allocated a total of three and one-half hours to instruction on the first two steps of IPB, beginning with thirty minutes of central presentation (AA 2000b, 1). This short presentation proposed to "outline to trainees steps one and two of the Intelligence Preparation of the Battlefield" and "describe each of the activities of each step and provide generic examples" (AA 2000d, 1). Remarkably, the thirty-minute class included a presentation of forty-four slides, making it unlikely the students interacted with the instructor to any great degree. A former instructor confirmed this conclusion, stating that most students held their questions for the more detailed instruction to follow (Kennedy 2001). The advance sheet further limited the goal of central presentation by stating training "will be confirmed within the context of the syndicate instruction," thereby relieving the central presentation instructor of any

responsibility to assess student learning (AA 2000d, 2). Central presentation, then, started and ended with a single instructor lecturing the assembled students as an introduction to new material.

Analysis

To some degree central presentation offered a window into the past, for here one finds the traditional lecture in a pure form. In many modern works on adult learning, one is likely to find something very similar to central presentation used as an example of classical pedagogical instruction. Not surprisingly, this traditional training method scored very poorly in its alignment with the principles of adult learning, earning the lowest possible score in eight of the fourteen evaluation criteria (see figure 11).

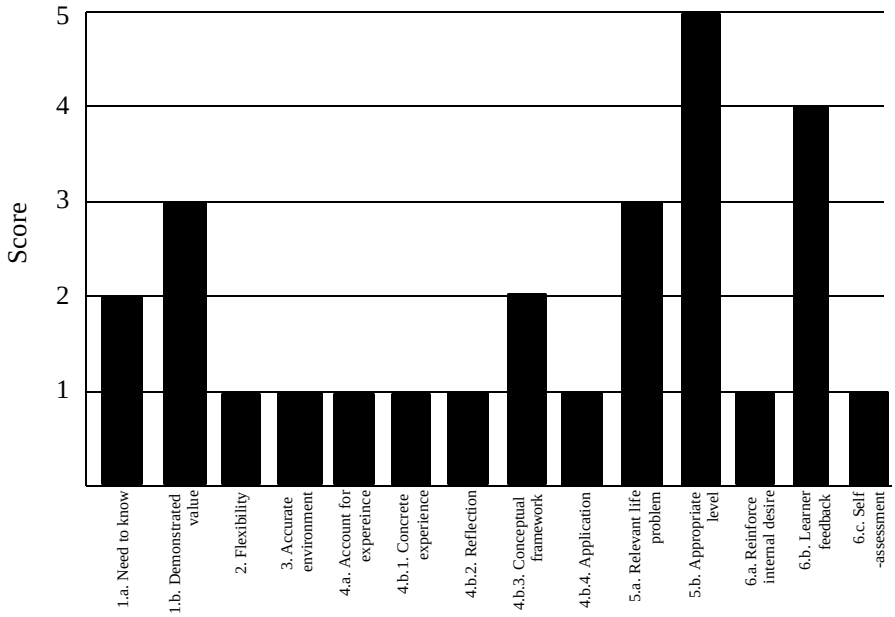

Figure 11. Central Presentation at COAC

Central presentation made little attempt to convince the student of his need to know (1.a.), and offered the student little flexibility in its application (2.). The training environment clearly bore no resemblance to the anticipated work environment (3.), and made no adjustments to account for students' past experiences (4.a.). The training technique scored very poorly as an experiential learning experience, lacking a concrete experience (4.b.1.), an opportunity for reflection (4.b.2.), and a requirement for application (4.b.4.). Although the instructor provided a conceptual framework for the students (4.b.3.), he did not tie the framework to past experience. Central presentation provided little time or incentive for a student self-assessment (6.c.).

As with all five of the training methods examined within the COAC, central presentation scored poorly in reinforcing the student's internal desire to learn (6.a.). This score reflects the use of grades within the course as the primary reinforcement to internal motivation. Competition for grades and the command billets assigned based on those grades provided essentially the only institutional motivator for COAC students.

Even with these shortcomings, central presentation scored in the midrange or better in several areas. By using historical examples during lectures, the instructor attempted to demonstrate the value of the training to the student (1.b.). The instruction focused on problems the student would likely encounter in his next assignment (5.a.), and focused on those skills appropriate to the student's level of professional development (5.b.). As with all the training methods examined within the COAC, central presentation included a formal venue for student feedback on the learning process (6.b.), to include both written surveys and a weekly verbal after action review (Kennedy 2001).

Training Method 2: Syndicate Discussion

Description

Syndicate discussion accounted for almost one-half of the training time allocated to Module One, making it by far the most frequently employed training method in the early portion of the course. The syndicate, or small group, consisted of eight officers representing a mix of officers from the infantry, armor, artillery, and engineer branches. The COAC established syndicates on the first day of training, and students remained in their assigned syndicate with their assigned syndicate instructor throughout Module One (Kennedy 2001).

Syndicate instruction lacked the fairly rigid formality of central presentation. It consisted largely of an instructor-led demonstration of the training topic, often involving students as actors in the demonstration (Kennedy 2001). Returning to the example of IPB, students spent three hours in syndicate discussion following the thirty minute introduction in central presentation (AA 2000b, 1). During this three hour period, the passive role of listener gave way to a more active role in demonstrating and applying the principles described by the lecturer in central presentation. While the advance sheet called on the instructor to "describe each of the activities of each step, and provide examples," it added that students would "be required to answer questions relating to steps one and two of the IPB" and "complete steps one and two for BG [Battle Group] BOAR [a notional unit used throughout the training]" (AA 2000d, 1-2).

In syndicate discussion, the instructor used dry erase boards and terrain models to demonstrate the task being studied, often calling on students to provide input into the demonstration or even to perform one or more of the steps of the demonstration

themselves. With the demonstration complete, students applied the lessons learned to a notional scenario, conducting the first two steps of IPB as individuals with the instructor assuming the role of coach and monitoring student progress. The instruction ended when the student completed the assignment, although the results of his efforts carried forward into future training (Kennedy 2001).

Analysis

Syndicate discussion scored in the midrange across most of the evaluation criteria, reflecting its position somewhere between the formal lectures of central presentation and the more execution-focused training methods to follow (see figure 12). This training method appears to have featured a high degree of instructor latitude, making it difficult to establish the exact procedures employed within the classroom. Indeed, specific classroom procedures almost certainly differed from instructor to instructor, making the scoring for syndicate discussion somewhat less reliable than those for other training methods and perhaps contributing to the tendency of midrange scoring. Even so, the scores offer some insights into this training technique.

Syndicate discussion scored above midrange in four evaluation criteria. The final staff problem required students to apply what they had experienced in central presentation and the earlier stages of syndicate discussion (4.b.4.). The demonstration and individual work reflected problems the student would likely face in future assignments (5.a.), and focused on the skills appropriate to the students' level of professional development (5.b.). The formal system of student feedback on the learning process continued during syndicate discussion (6.b.).

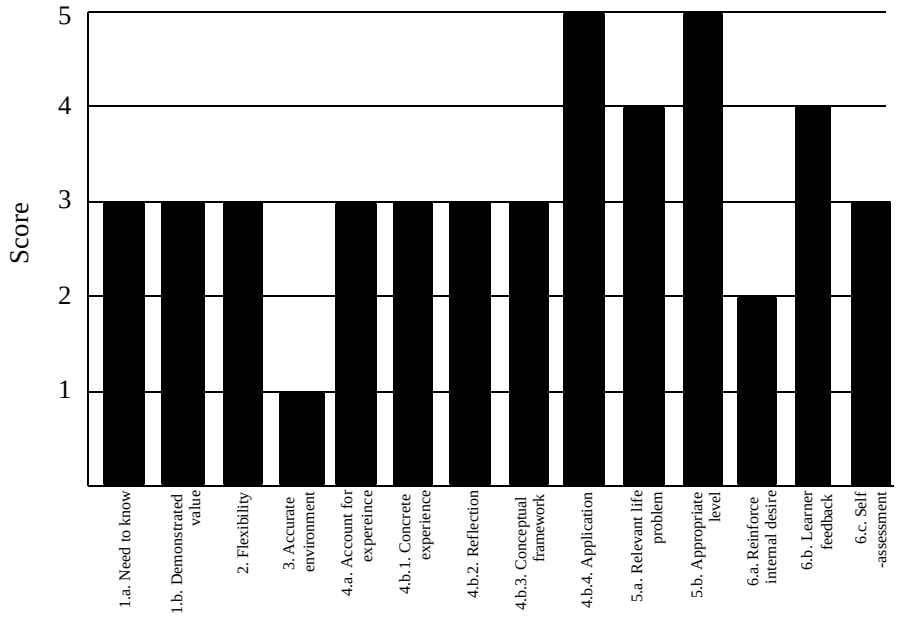

Figure 12. Syndicate Discussion at COAC

The training method fell below midrange in only two areas. The classroom setting did not accurately reflect the anticipated future work environment (3.), and the training methods relied on competition for grades as the primary reinforcement to the student's internal desire to learn (6.a.).

In the remaining eight evaluation criteria, syndicate discussion fell into the midrange. Student involvement in the initial demonstration assisted the student in identifying his need to know (1.a.), while the use of historical examples established to some degree the value of the skill to be trained (1.b.). Although the student played no formal role in selecting the training technique (2.), the instructor enjoyed considerable

latitude in executing syndicate discussion and undoubtedly made minor adjustments based on student comments. The small class size allowed the instructor to make additional modifications based on his informal assessment of student experience (4.a.). The group discussion and demonstration served as a concrete experience to start the learning process (4.b.1.), while the instructor feedback during both the demonstration and the staff problem served to encourage individual reflection (4.b.2.). Throughout both, the instructor attempted to tie the learning experience back to the conceptual framework (4.b.3.) identified in the central presentation. Although the training method did not require the student to assess his own performance (6.c.), certainly the group demonstration and the subsequent individual work offered him an opportunity to do so.

Training Method 3: Practical Exercise

Description

The COAC documentation used the term "practical exercise" in a much more restricted sense than normally applied within US Army doctrine. Within the COAC, practical exercises often occurred outside of the classroom in a field environment, but lacked the formal requirements and structure of the TEWT. Practical exercises emphasized the application of skills learned in the classroom, and formed the bridge between classroom instruction in Module One and the more demanding TEWTs of Module Two.

Typical of the Module One practical exercise, students spent two and one half hours conducting a reconnaissance practical exercise immediately following syndicate discussion training on the first two steps of IPB (AA 2000b, 1). Having just completed his analysis of the terrain in the classroom, during the practical exercise the student

conducted a reconnaissance of the same terrain by traveling with his syndicate along a pre-established route to five pre-established vantage points on the battlefield. At each vantage point, selected students briefed an analysis of the local terrain and changes to their intelligence collection plans. Each student modified his products from the classroom analysis based on his revised analysis of the actual terrain (AA 2000e, 1-2). As with syndicate instruction, the products developed by students during the practical exercise went forward into the next phase of instruction.

Analysis

The first of the COAC training methods to move outside the classroom, the practical exercise benefited from a substantial increase in realism when compared to the two previous training methods. As the name might imply, the practical exercise focused heavily on the experiential learning model, and generally scored midrange or better in the majority of evaluation criteria (see figure 13).

In two areas, however, the training method scored below the midrange. The practical exercise made little effort to establish the student's need to know (1.a.), apparently assuming the student would infer such a need from the subsequent requirement to use the skills developed in the practical exercise. Such an assumption seems to align with the training method's reliance on competition for grades as the primary reinforcement to internal motivation (6.a.).

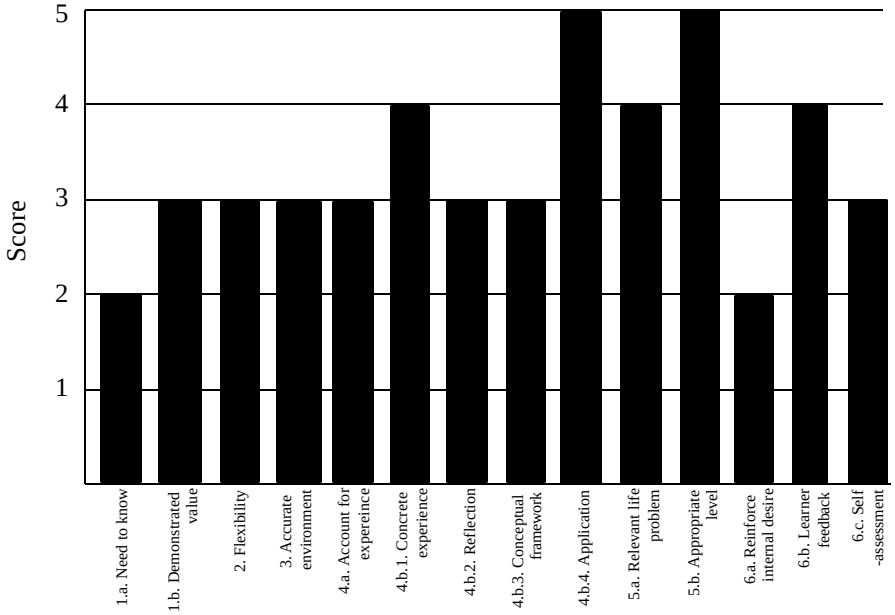

Figure 13. Practical Exercise at COAC

Off-setting these short-comings, the practical exercise scored above midrange in five criteria. The exercise itself served as a concrete experience (4.b.1.), fully involving all students in solving a problem. The requirement to revise and brief one's individual terrain analysis during the exercise forced each student to apply the skills and knowledge developed earlier (4.b.4.). The exercise focused on skills appropriate to the student's level of professional development (5.b.), and the problems within the exercise reflected problems the student would likely face in his next assignment (5.a.). The weekly after action reviews provided an opportunity for student feedback on the learning process (6.b.). In all these areas, the practical exercise aligned well with the principles of adult education.

To a somewhat lesser degree, the training method aligned with the remaining evaluation criteria. The instructor's comments and the training environment itself represented the only effort to demonstrate the value of the training (1.b.). The training environment represented the anticipated future work environment to a moderate degree (3.), and the instructor enjoyed some latitude in adjusting the training technique (2.), to include making minor modifications to account for a student's previous experiences (4.a.). The instructor feedback attempted to tie the exercise experience to the conceptual framework (4.b.3.), and the student had an opportunity to reflect on his own experience as well as that of his peers (4.b.2.). The practical exercise provided an opportunity, but no requirement, for student self-assessment (6.c.).

Training Method 4: Tactical Exercise Without Troops

Description

Of the 142.5 hours dedicated to Module Two, students spent 88.5 hours (sixty-two percent) participating in tactical exercises without troops (TEWTs) (AA 2000c, 2-4). These exercises, which focused on the application of planning skills to tactical problems at the company level, featured a very structured approach to the training, with all students following the same general sequence on the same timeline. In the words of an US Army officer who taught in the course, "The Australians have the TEWT down to a science" (Kennedy 2001).

Although each TEWT varied slightly in length and sequence of events, the TEWT associated with the company defense of a battle position serves as representative of this training method. At the conclusion of the first day of training in Module Two, students received a "TEWT paper" which included a brief description of a tactical situation and

some written guidance from the notional battalion commander. Overnight, the students individually completed their mission analysis and an initial IPB for the company defense, as outlined in the TEWT paper. On the morning of the second day of training, the students and their instructor moved to a location overlooking the battle position, where the instructor conducted a short briefing on the terrain to orient the students (AA 2000c, 2). Selected students briefed the results of their mission analysis and IPB from the previous evening, which the instructor and remaining students then critiqued. After about two hours of such briefings, the instructor assumed the role of the battalion commander and issued further instructions for the company defense. After answering questions, he released the students to conduct their personal reconnaissance and prepare their plans (Kennedy 2001).

After three hours of individual work, the students reassembled at a central location. Selected students briefed their plans, after which the instructor and other students provided a critique of the plan. The instructor provided a formal grade to each student briefer. At the conclusion of the training day, the instructor collected the written plans of all the students (Kennedy 2001). Prior to their release for the day, the students received the TEWT paper for the subsequent TEWT on the following day (AA 2000c, 2). Overnight, while the students worked on their mission analysis and IPB for the next TEWT, the instructor graded the written plans collected at the end of the day. On the morning of the third day of training, the instructor handed back the graded plans from the previous day, then spent about an hour discussing the common deficiencies (Kennedy 2001). Following this review, the students moved back to the field and began the same process for the subsequent TEWT (AA 2000c, 2).

Analysis

As with the ACCC, the TEWT in the COAC scored well in all but a handful of areas. Of the fourteen evaluation criteria, the TEWT scored above midrange in eight. These scores reflect slightly higher scoring than that of the ACCC TEWT, with the primary difference lying in the degree of latitude allotted to the instructor. In the ACCC, instructors followed formal procedures to insure equitable conditions for the graded event. In the COAC, instructors enjoyed considerably more leeway, although the TEWT remained a graded event (see figure 14).

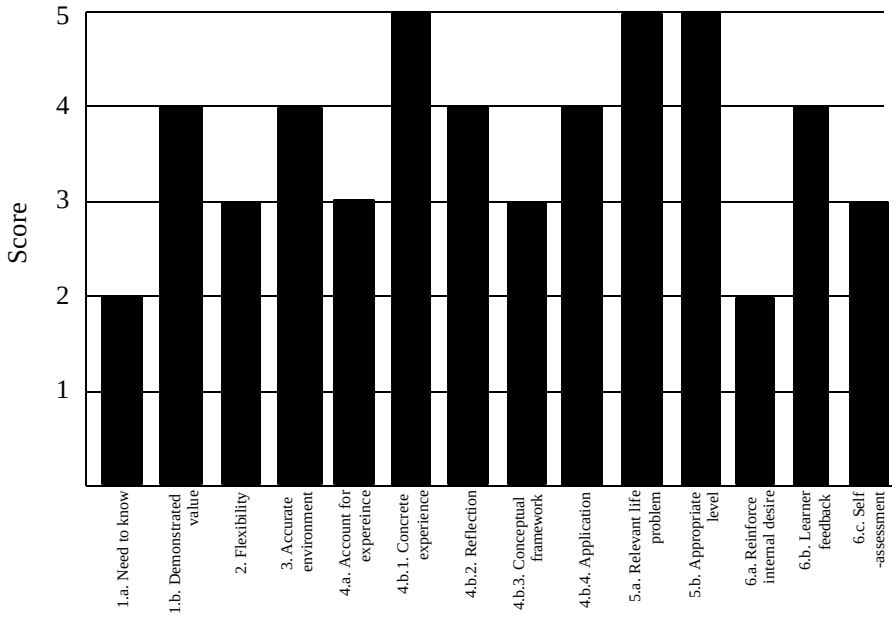

Figure 14. Tactical Exercise Without Troops at COAC

The TEWT as practiced in the COAC exhibited many of the strengths found in the ACCC version. The training environment closely reflected the anticipated work

environment (3.) and problems the student would likely face in his next assignment (5.a.), which contributed to the demonstrated value of the training from the student's perspective (1.b.). Although the training task remained the same for all students, the instructor could modify the standards to reflect the student's prior experience (4.a.) and keep the problem at a level appropriate to the individual's level of professional development (5.b.). The training method followed the experiential learning model, beginning with the concrete experience (4.b.1.) of the overnight individual exercise, then proceeding to a period of reflection (4.b.2.) based on instructor feedback in the morning, and finalized with a requirement for application (4.b.4.) during the afternoon hours. As always, the weekly after action reviews provided an opportunity for feedback on the learning process (6.b.).

In five areas, the TEWT scored at or below midrange. The training method made little effort to establish the student's need to know (1.a.), reflecting the course's dependence on competition for grades as the primary reinforcement to internal motivation (6.a.). Although the instructor enjoyed a fair degree of flexibility in selecting the training technique (3.), the student played no formal part in the selection. Only instructor feedback tied the student's experience to the conceptual framework (4.b.3.), and the training method did not require, although it certainly allowed, individual self-assessment (6.c.).

Training Method 5: Capstone Command Post Exercise

Description

The final training event of the COAC, called "Warfighter" within the course documentation, consisted of two week-long command post exercises combining a

constructive simulation (JANUS) and reconnaissance of local terrain. Throughout the two week period, instructors evaluated student performance in the roles of staff officer and company commander (AA 2001a, 7). The average student spent approximately one week in each of the roles (Kennedy 2001).

On Monday of the first week, activities included several administrative tasks followed by the brigade operations order in the early afternoon (AA 2001b, 2). The brigade staff consisted of only field artillery and engineer officers. The brigade staff assembled late in Module Two and developed the brigade operations order during that module. At the beginning of Module Three, the remaining students received assignments as either primary staff officers in one of the two subordinate battalions, or as company commanders within the battalions. Students remained in their assignment for the first week, then moved to a different assignment for the second week (Kennedy 2001). On Tuesday morning, battalions issued their operations orders. Subsequently, the battalion commanders and company commanders spent the remainder of the morning conducting reconnaissance of the actual terrain involved in the exercise (AA 2001b, 2). Actual battalion commanders from the AA filled the role of battalion commanders within the exercise (Kennedy 2001). On Tuesday afternoon, the brigade and battalions conducted rehearsals and all elements input their required information into JANUS (AA 2001b, 2).

Beginning at 0800 on Wednesday, students participated in a real-time simulation of the operation they had planned over the two previous days. Battalion and brigade staffs operated from mock command posts, while company commanders manned JANUS terminals and reported to the battalions by radio (Kennedy 2001). While the simulated battle progressed, the brigade staff issued a series of warning orders throughout the day to

allow battalion staffs to begin planning for the next day's exercise. At 1530, the instructors halted the exercise and conducted a series of after action reviews (AA 2001b, 2). Over a two hour period instructors conducted after action reviews at the brigade, battalion, and company levels, using the model of the US Army combat training centers (Kennedy 2001). Immediately following the final after action review, battalion staffs issued their operations orders for the next day's exercise. The schedule for Thursday and Friday mimicked that of Wednesday, except the battalions did not issue an operations order on Friday afternoon. Instead, students received their new assignments for the next week. Beginning on Monday of the second week, the training scheduled repeated the activities of the first week (AA 2001b, 2-3).

Analysis

The capstone command post exercise (CPX) scored better than any other training method in the COAC, surpassing even the staple of Australian institutional tactical training, the TEWT. Several factors contributed to the high scores for this training method, but most dealt either directly or indirectly with the high degree of realism within the exercise. Whereas many command post exercises in the US Army place many students in supporting roles such as radio and computer operators, the COAC version placed essentially all students in roles they would likely face in their future assignments (see figure 15).

The COAC CPX succeeded in accurately reflecting the anticipated future work environment (3.), and in focusing on problems both relevant to the student (5.a.) and appropriate to his level of professional development (5.b.). All of these factors contributed to demonstrating the value of the training to the student (1.b.). As always, the

weekly after action reviews provided an opportunity for feedback on the learning process (6.b.).

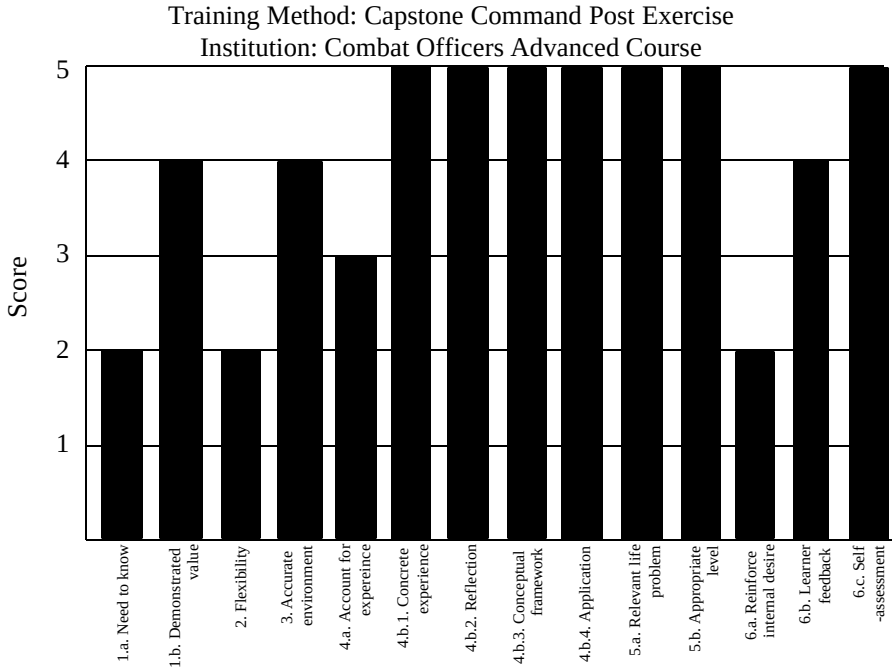

Figure 15. Capstone Command Post Exercise at COAC

The CPX scored the highest possible rating on all aspects of the experiential learning model. The CPX began with the concrete experience (4.b.1.) of a higher headquarters order followed by a staff planning exercise in a time-constrained environment. The computer-simulated battles filled a similar role. The daily after action reviews played a significant part at several levels. First, they provided a period of reflection for the student (4.b.2.). Second, they allowed the student, with the assistance of the instructor leading the after action review, to connect the day's experiences with the conceptual framework developed throughout the course (4.b.3.). Finally, the after action

reviews required the student to comment upon his own performance, thereby requiring a self-assessment (6.c.). Following the after action review, the student applied all the lessons from the day's battle to a subsequent battle (4.b.4.).

Despite all these strengths, the CPX scored at the midrange or below in four areas. The training method made no explicit effort to establish the student's need to know (1.a.). The student played no part in determining the training method, and the instructor's flexibility consisted primarily of input into student staff and command assignments within the exercise (2.). The training method offered little flexibility to account for a student's prior experience (4.a.). As with the entire course, the training method relied primarily on competition for grades to reinforce internal motivation (6.a.).

Conclusions

Although none of the training methods employed by the COAC aligned perfectly with the principles of adult learning, with one notable exception all demonstrated at least a fair degree of alignment with most of the principles. The one exception, central presentation, skewed the cumulative results (see table 4). The mean score for criterion 4.b.4., for example, is 4.0 if central presentation is included, but rises to 4.75 if it is not. The scores for central presentation differ from the other training methods to such a degree that one is tempted to discard it as a data point and draw one's conclusions from the other four. The temptation must be avoided, however, as central presentation plays too significant a role in the course to be ignored.

Even with the inclusion of central presentation in the data, some broad trends are apparent from the analysis of the COAC. Five reflect positive alignment with the principles of adult learning; two reflect negative alignment. Of note, while discarding

central presentation from the data would alter the numeric value associated with the six trends, it would not negate any of them.

Table 4. Summarized Scoring Data for COAC

	Central Present-ation	Syndicate Discussion	Practical Exercise	TEWT	Cap-stone CPX	Mean	Low	High	Median
1.a.	2	3	2	2	2	2.2	2	3	2
1.b.	3	3	3	4	4	3.4	3	4	3
2.	1	3	3	3	2	2.4	1	3	3
3.	1	1	3	4	4	2.6	1	4	3
4.a.	1	3	3	3	3	2.6	1	3	3
4.b.1.	1	3	4	5	5	3.6	1	5	4
4.b.2.	1	3	3	4	5	3.2	1	5	3
4.b.3.	2	3	3	3	5	3.2	2	5	3
4.b.4.	1	5	5	4	5	4	1	5	5
5.a.	3	4	4	5	5	4.2	3	5	4
5.b.	5	5	5	5	5	5	5	5	5
6.a.	1	2	2	2	2	1.8	1	2	2
6.b.	4	4	4	4	4	4	4	4	4
6.c.	1	3	3	3	5	3	1	5	3

In five evaluation criteria, the training methods of COAC consistently scored above the midrange. Three of the five scored above midrange in use of a concrete experience, with a course average of 3.6 and a median score of 4. Four of the five training methods scored above midrange in requiring the student to apply the skills and knowledge gained during the training as the final step in the learning process, with a course average of 4 and a median score of 5. With the exception of central presentation, all of the training methods scored above midrange in reflecting problems and skills relevant to the student, with a course average of 4.2 and a median score of 4. All five of the training methods scored above midrange in their focus on skills and knowledge

appropriate to the student's level of professional development, with a course average of 5 and a median score of 5. Finally, the course's robust program of after action reviews and student surveys generated uniformly high scores in allowing student feedback on the learning process, with a course average and median score of 4.

In two areas, the course aligned less well with the principles of adult learning. All five training methods scored below midrange in seeking means to reinforce the student's internal motivation to learn, with a course average of 1.8 and a median score of 2. Four of the five methods scored below midrange in establishing the student's need to know, with a course average of 2.2 and a median score of 2.

From these six trends one may draw two broad conclusions about the training in the COAC. First, the training focused narrowly on the application of skills and knowledge needed in future assignments. Second, the training assumed the student, convinced in advance of his need for the training, brought within himself all the motivation necessary for the course.

CHAPTER 7

CONCLUSIONS

This study examined thirteen training methods employed by three contemporary institutions tasked to produce tactically competent company commanders for ground forces. The study evaluated each training method using fourteen evaluation criteria derived from the principles of adult learning. The study aimed to answer the primary research question: Are the institutional training methods used to develop tactically competent company commanders consistent with the principles of adult learning?

The Results

As anticipated, the final answer proved to be one of degree rather than a simple yes or no. When the scores for all thirteen training methods were tallied, the final results indicated current institutional training methods for captains align fairly well with some principles and more poorly with others. The range of scores prevented any conclusive, absolute statement about current training methods and the principles of adult learning, but did offer some enticing insights into the topic (see table 5).

The training methods examined in the study aligned quite well with three of the principles of adult learning: *the role of experience*, *readiness to learn*, and *motivation*. More specifically, current institutional training methods used to train company commanders generally employ some type of experiential training model, focus the majority of their efforts on tasks the student will likely face in his near future, allow the student to provide feedback on the learning process, and require the student to make some type of self-assessment about his own performance. All of these characterize training aligned with the principles of adult learning.

Table 5. Cumulative Summarized Scoring Data

Principle	Explanation	Percent of Total Scores Falling		
		Below Midrange (1-2.4)	Midrange (2.5-3.5)	Above Midrange (3.6-5)
The need to know	Adults learn best when they recognize a gap in their skills or knowledge and believe the benefit of gaining the skill or knowledge exceeds the cost.	46.2	26.9	26.9
The learner's self-concept	Adults learn best when they play a meaningful role in making decisions about the training methods and objectives.	61.5	23.1	15.4
Orientation to learning	Adults learn best when the training environment matches the environment in which the adults anticipate using them.	38.4	30.8	30.8
Role of experience	Adults learn best when the learning process recognizes their prior experience and uses an experiential learning method.	23.1	36.9	40.0
Readiness to learn	Adults learn best when the training focuses on problems the adults expect to face and which are appropriate to the adults' developmental level.	7.7	19.2	73.1
Motivation	Adults learn best when training reinforces internal values, allows for feedback on the learning process, and requires a self-assessment.	30.8	35.9	33.3

Current training methods aligned less well with the other three principles: *the need to know*, *the learner's self-concept*, and *orientation to learning*. Contemporary training methods typically make little effort to convince the student of his need to know or of the benefit of the training, apparently assuming the student inherently recognizes his need or else has little need for such recognition. With only a handful of exceptions, the training methods examined in the study allow the student almost no role in making decisions about the objectives of the training or the methods used to achieve them. The established curriculum typically restricts all students to a single path for learning. Finally, current training methods often fall short of replicating the environment in which the student expects to operate in the future. Although the recent advances in computer

simulations have certainly increased the realism of many training events, students almost always train in an environment where instructors or peers role-play both subordinates and superiors, providing a less than realistic training environment. In helping the student recognize his need to know, allowing him some role in development decisions prior to the training, and in providing a realistic training environment, current training methods do not align with the principles of adult learning.

Significance of the Results

The answer to the primary research question has significant implications almost everyone involved in the institutional training of company commanders. Instructors, course administrators, and senior leaders can draw meaningful implications about how they develop, resource, and execute training programs for captains.

The instructor can draw three major lessons from this study. First, the instructor will be well served to develop method(s) that assist the student in recognizing his need for the training. This is no simple task; at a minimum it requires the instructor to demonstrate a level of performance well above that of the student. Yet it clearly deserves the instructor's attention, as the principles of adult learning indicate the student will learn little until he, rather than his instructor or the school, decides he needs to learn.

The study also gives the instructor some insight into the need for individualized instruction. The principles of adult learning indicate the education of a company commander is not like the assembling of an automobile in the factory. One size does not fit all, and only through individual assessments and counseling can the instructor give the student a voice in the training methods and make adjustments appropriate to the individual.

Finally, the instructor can draw from the study the need to introduce greater levels of realism in the training environment. Some instructors will find this more difficult than one might think, as every increase in realism equates to less control of the training variables for the instructor. For example, if the instructor role-plays as an adjacent unit platoon leader during a coordination meeting, he controls the amount and accuracy of information passed to the student. When the role is filled by a real lieutenant who really has a platoon and his own mission to focus on, the instructor has little influence over the information his student gains from the coordination meeting. Friction, however, is a very real element on the battlefield, and institutional training should not dampen its effect in the training environment.

For the course administrator, the results likewise offer some clear insights into areas with potential for improving institutional tactical training for captains. First, the administrator can recognize the need to use the best available officers as instructors for company commanders. Instructors must be not only tactically and technically proficient, but so sure of their own abilities they can relinquish control of much of the training while still achieving the school's training objectives. Such individuals are, if not rare, certainly not overly common, and the course administrator would do well be very selective about the officers assigned as instructors. Second, the course administrator should recognize the need to provide a great deal of flexibility in how instructors conduct training. It does little to select good officers as instructors, then require them to follow the same instructional path for each student. Instead, training should be decentralized to a point which allows the instructor to adjust to the needs of each student individually. That this

runs counter to the Army's model of institutional training cannot be denied. It is, however, a logical conclusion drawn from the research.

The most significant lesson of this study, however, is particularly pertinent to senior leaders responsible for the institutional training of company commanders. Simply put, the lesson is this: there is a conflict between *efficiency* and *effectiveness* inherent in most training programs. Those training methods which best align with the principles of adult learning are typically the most expensive in terms of instructor hours and training time. Those training methods which allow the instructor to train a large number of students in a short typically prove less effective than desired. Even so, they continue to find a role in most institutions simply because they are, in fact, efficient methods of training large numbers of students. For the senior leader, the implication is clear. As the training objectives or student population of a training institution grows, or as training resources decrease, the institution is driven to select efficiency over effectiveness. Effective training is expensive, in dollars, people, and time. Senior leaders should recognize the need to make the necessary investment in the future. When resource constraints prevent such an investment, the Army is better served by reducing the institutional training objectives than by sacrificing effectiveness for efficiency.

Conclusion

Perhaps the most valuable conclusion of this study lies not in a positive assertion, but in a negative observation. The evidence does not indicate the principles of adult education have played a major role in the design of institutional training methods for company commanders. Indeed, none of the course designers interviewed during the research displayed a familiarity with the principles as they currently exist. This is

unfortunate. If one assumes, as this study has from its inception, that the principles of adult learning do in fact represent a road to effective training for adults, certainly they should play a deliberate part in how organizations design training for adults. That resource and other constraints will require actual training to fall short of the ideal is both undeniable and inevitable. That training methods should fall short of their full potential only out of ignorance of the principles of adult learning, however, is neither. At the very least, the principles of adult learning offer one the opportunity to make educated decisions in designing the training which will produce tomorrow's killer captains.

EVALUATION TABLES

Table 6. Classroom Instruction, Armor Captains Career Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• Reading assignments do not include any check on learning to assist learner in determining his need to know. • Short PE on the first day seems designed to force the learner into recognizing his own lack of proficiency. • Since all learners may be at the same low level of proficiency at the task, the lack of a demonstration of acceptable proficiency may cloud the learner's perception of his need to know. • Only one learner performs the task as a commander; all others role play subordinate leaders.	4
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• Advance sheet does not explicitly discuss the future value of the skill, but does make reference to the Army Readiness Evaluation Training Package (ARTEP), a standard for assessing company collective performance that the learner knows to be part of his future. • Although the environment has some characteristics of the anticipated real world environment (higher operations order, subordinates, limited time, limited information), it is substantially different in many respects (classroom versus field, fellow captains versus lieutenants as subordinates). • Training method appears to assume that the learner will automatically recognize the utility of the training.	2
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• SGIs have the latitude to deviate from basic model, but must remain within the established time constraints. • Deviations from established sequence are not part of the base material; the SGI would have to develop supporting materials on his own time. • The learner is not formally included in making decisions about training technique.	2
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• Although the environment has some characteristics of the anticipated real world environment (higher operations order, subordinates, limited time, limited information), it is substantially different in many respects (classroom versus field, fellow captains versus lieutenants as subordinates).	2
4.a. Does the training method account for the learner's personal experience level?	• The training method does not access the learner's prior experience in order to adjust the training plan in advance. • Although the SGI could potentially modify the training plan based on the results of the first PE, his assessment would be based on the performance of only a few learners (the commander, possibly the executive officer, etc.). • The training method has little flexibility in coping with varying experience levels within the small group.	2

Table 6. Continued

Evaluation Criteria	Observations	Score
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with a practical exercise (constructive simulation) that requires all learners to participate.	5
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• The training method includes an after action review of the first PE to allow for reflection; all learners participate in the after action review. • As only one learner participates in the battle in the capacity of commander, other learners may find less interest in a reflection period; the knowledge of the future practical exercise (PE) probably offsets this tendency to some degree. • The learner who acts as the commander receives feedback from both his fellow learners and the SGI	5
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• During the after action review, the SGI leads the discussion to the doctrinal framework for the training task (in the case of breaching, the fundamentals of suppress, secure, secure, reduce). • Learners are issued a slide packet along with the advance sheet for the lesson. The slide packet explains the fundamental doctrinal concepts involved in the task. • The degree to which the learners are led to the discovery of the conceptual framework is directly related to the skill of the SGI as a discussion facilitator – a complex task not part of the SGI training.	4
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The final PE requires the learner to apply the conceptual framework and his experience on the previous day to a complex problem. • Only one learner actually gets the opportunity to test his solution to the problem. The remainder of the learners are only required to demonstrate comprehension by executing the orders of the selected commander.	4
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The vast majority of learners can expect to conduct a breach as a commander in their next assignment. • Only two learners actually perform this task during the training; the others perform supporting roles that they are almost certain not to perform in their next assignment (platoon leader, company executive officer, etc.).	4

Table 6. Continued

Evaluation Criteria	Observations	Score
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training focuses on the tasks facing a company commander, a level appropriate for the learner. • With the exception of two learners, the learners spend much of the PE time performing tasks at the lieutenant or non-commissioned officer levels. These tasks are not appropriate to the learner's professional development level.	2
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method does not make an open attempt to connect the training to any particular set of values. • The training method does not employ grades as a motivator. • The primary motivator is the possibility of success or failure in the presence of peers.	3
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• Learners participate in an after action review at the end of each volume in which they identify strengths and weaknesses in the training plan. • The training method does not allocate time within the training process for learner feedback.	4
6.c. Does the training method require the learner to conduct a self-assessment?	• Learners selected as commanders for the PEs participate in the after action reviews and must frequently comment on their own performance. • Learners in supporting roles may or may not comment on their own performance.	3

Table 7. Virtual Simulation, Armor Captains Career Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The learner's perception of his need to know is largely dependent upon his experience in this task during classroom training. Those who did poorly during classroom training may see the CCTT exercise as an opportunity to improve. Those who did well in classroom training may view the CCTT exercise as unnecessary. • The vast majority of learners know they will not be required to demonstrate their skill as a company commander during the simulation; they therefore have little immediate need to know.	2
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The advance sheet does not specifically address the value of the skill, but does make reference to ARTEP standards; learners know they will be evaluated in future jobs based on ARTEP standards. • Although the training environment has many of the characteristics of the anticipated future environment of the student, it differs in significant ways. A primary difference is the use of peers as subordinate leaders, rather than lieutenants and non-commissioned officers. • The training method appears to assume that the student will recognize the value of the training. This may be a fair assumption for those learner's assigned as company commanders. It appears to have less validity for those assigned as gunners, loaders, and drivers.	2
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• CCTT has some inherent flexibility in establishing the conditions of the training (day versus night, moderate enemy versus proficient enemy, etc.). • The basic approach to training is fairly inflexible, with no established alternatives. • The learner is not formally involved in making decisions about the training method.	2
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• Although the training environment has many of the characteristics of the anticipated future environment of the student, it differs in significant ways. A primary difference is the use of peers as subordinate leaders, rather than lieutenants and non-commissioned officers.	3
4.a. Does the training method account for the learner's personal experience level?	• The training method does not formally account for the learner's prior experience. • SGIs take prior classroom performance into account when selecting company commanders for the training exercise (Wick 2001). • The vast majority of learners (all but the four selected as company commanders) spent the training time performing duties that they have already experienced (platoon leader, company executive officer, vehicle crewman).	2

Table 7. Continued

Evaluation Criteria	Observations	Score
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with a virtual simulation exercise that involves all learners. • The involvement level of the learner differs drastically across the population. Certainly all members of the exercise chain-of-command are very involved in the concrete experience. It is unclear to what degree this can be asserted for the learner assigned as the loader on a platoon sergeant's tank.	4
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• The training method includes an after action review after each iteration to allow for reflection; all learners participate in the after action review. • As only a select few learners perform in the capacity of commander, other learners may find less interest in a reflection period. This is particularly true if a learner does not serve in a leadership position during either iteration. • The learner who acts as the commander receives feedback from both his fellow learners and the SGI during the after action review.	4
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The training method includes an SGI-led after action review designed to assist the learner in recognizing the application of the conceptual framework developed in classroom training. • The skill of the SGI in facilitating discussion is a critical factor in determining the success of the after action review. • The vast majority of learners have little vested interest in the after action review, as they played only a very minor role in determining the outcome of the exercise.	3
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• In most cases, learners rotate leadership positions following each after action review. Learners rarely have an opportunity to apply their personal experience in a subsequent iteration. • Learners are required to demonstrate comprehension during the after action review.	3
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training task is very relevant to the learners; most will conduct this task in their next assignment. • The overwhelming majority of learners do not actually train on the company task. At any given moment in the training, only two learners are operating as company commanders. The remainder are focusing on problems more germane to their previous assignments than to their future.	3

Table 7. Continued

Evaluation Criteria	Observations	Score
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training is designed to train tasks of the company commander, a level appropriate to the learners. • Many learners perform tasks at the lieutenant and non-commissioned officer levels. This is not an appropriate level. • The majority of learners perform tasks at the junior enlisted level. This is not an appropriate level.	1
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method does not make an open attempt to connect the training to any particular set of values. • The training method does not employ grades as a motivator. • The primary motivator is the possibility of success or failure in the presence of peers.	3
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• Learners participate in an after action review at the end of each volume in which they identify strengths and weaknesses in the training plan. • The training method does not allocate time within the training process for learner feedback.	4
6.c. Does the training method require the learner to conduct a self-assessment?	• Learners selected as commanders participate in the after action reviews and must frequently comment on their own performance. • Learners in supporting roles as subordinate leaders may or may not comment on their own performance. • Learners in the role of junior enlisted soldiers almost never comment on their own performance. This is the case for the majority of learners.	2

Table 8. Tactical Exercise Without Troops, Armor Captains Career Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The SGI demonstrates engagement area development at a level of proficiency well above that of the learner.	3

1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The learning environment directly links the training to the environment the learner expects to encounter in the future.
	  • The SGI role plays as the battalion commander.
	  • The SGI issues guidance on the actual terrain of the operation.
	  • The learner has a limited amount of time to prepare his plan.
	  • The learner is required to backbrief his plan to the notional battalion commander.
		4

2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The training event is completely scripted. • The SGI has little latitude to adjust the training event, as it is graded in its own right and sets the conditions for the follow-on graded event. • In order to meet the requirements for a graded event, the training must be administered uniformly across the student population.	1
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The environment closely reflects the anticipated future environment of the learner. The student's presence on actual terrain, the SGI role-playing as the battalion commander, and the limited time contribute to the realism of the exercise. • The exercise misses the true environment on several counts. The student does not have his own vehicle, as he would in an actual operation. He would also expect to have the assistance of his subordinates. This limitations in the training environment are somewhat offset by the focus on critical individual leader tasks rather than collective tasks.	4
4.a. Does the training method account for the learner's personal experience level?	• In order to meet the requirements for a graded event, the training must be administered uniformly across the student population. The experience level of the individual learner is essentially irrelevant in determining the training method.	1
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with a scripted demonstration by the SGI. • The learner's tendency to become involved in the demonstration is enhanced by the requirement, known in advance, to replicate the demonstration at the company level during the TEWT.	4

Table 8. Continued

Evaluation Criteria	Observations	Score
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• The SGI provides feedback on the learner's concept at the conclusion of the day. • Learners are allowed, but not required, to discuss their solutions with each other during the practical exercises. Typically, time restrictions limit these discussions.	3
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The demonstration at the beginning of the exercise explicitly connects the actions of the battalion commander (role-played by the SGI) to the conceptual framework associated with engagement area development. • Learners receive feedback from the SGI individually. The SGI comments, guided by the scoring criteria worksheet, connect the learner's actions to the conceptual framework.	3
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The practical exercises require the learner to apply the conceptual framework experienced in the demonstration to a complex problem. • Feedback from the SGI comes after the requirement to solve the problem.	4
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training method mimics almost exactly the type of problem the learner is likely to face in the future. The requirements to select vehicle fighting positions, identify start and end points for obstacles, and emplace target reference points are all tasks associated with company command.	5
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training method focuses exclusively on critical leader tasks associated with company command. • Each learner performs the role of company commander, a role appropriate to his level of professional development. • The training method assumes learner competence in tasks associated with lower levels of development.	5
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method relies primarily on the graded nature of the event to enhance motivation. • The close correlation between the training and real world environments may also play a role in enhancing internal motivation.	2

Table 8. Continued

Evaluation Criteria	Observations	Score
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• Learners participate in an after action review at the end of each volume in which they identify strengths and weaknesses in the training plan. • The training method does not allocate time within the training process for learner feedback.	4
6.c. Does the training method require the learner to conduct a self-assessment?	• The training method does not have a requirement for self-assessment. The SGI is the sole source of feedback.	1

Table 9. Capstone Constructive Training Exercise, Armor Captains Career Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The training method makes no direct attempt to establish the learner's need to know. As the capstone exercise, it appears to focus on the learner's use of skills and knowledge acquired earlier in the course.	1
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The training method does not explicitly address the value of the trained skill. • The training environment closely resembles one environment, the CPX, which the learner is very likely to encounter in his next assignment. It places learners in roles as commanders and staff officers, both likely future assignments. • The training environment differs from the real world environment in the use of peers as subordinate commanders and supporting staff officers. Some learners fill roles as battalion and brigade commanders, unlikely assignments in their near future.	4
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The training method includes instructions to the student observer/controllers (O/Cs) allowing them to modify the scenarios with the agreement of both red and blue observer/controllers. As all learners rotate through the O/C position, learners do in fact modify the training methods and have a significant voice in how the exercise is conducted. • SGIs play a limited role in directing the training; learners are the primary decision-makers.	4
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The training environment closely resembles one environment, the CPX, which the learner is very likely to encounter in his next assignment. It places learners in roles as commanders and staff officers, both likely future assignments. • The training environment differs from the real world environment in the use of peers as subordinate commanders and supporting staff officers. Some learners fill roles as battalion and brigade commanders, unlikely assignments in their near future.	3
4.a. Does the training method account for the learner's personal experience level?	• The training method does not make a formal assessment of learner experience. • The training method allows learners to modify the scenario based on their own past experiences.	4

Table 9. Continued

Evaluation Criteria	Observations	Score
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with a practical exercise designed to force the learner to apply his past experiences to a complex problem with limited time and information. • All learners are involved in the practical exercise, but those with assignments as staff officers are likely to have less involvement that those in command positions.	4
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• The training method includes a learner-led after action review designed to provide feedback from both participants and disinterested parties. • The training method does not include a designated channel for SGI feedback to the learner.	4
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The training method does not include a formal mechanism for tying the events of the constructive simulation to a conceptual framework. • Although the learner-led after action reviews are likely to produce this connection, the training method has no control measures to ensure this happens. • SGI involvement in the after action review increases the likelihood of establishing a conceptual framework, but does not guarantee such an outcome.	2
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The training method requires the learner to apply a conceptual framework to solve a complex problem. • The sequencing of the training method places the problem-solving exercise prior to the discussion of the conceptual framework. • The training method appears to assume learner familiarity with the conceptual framework from earlier learning experiences in the course. This is probably not an unreasonable assumption for a capstone training method.	3
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training environment closely resembles one environment, the CPX, which the learner is very likely to encounter in his next assignment. It places learners in roles as commanders and staff officers, both likely future assignments. • The scenarios used in the exercise contain tactical problems that most are of the learners are not likely to face in their next assignment. Few armor captains plan battalion-sized air assaults, for example. • The use of tactical principles to solve complex, unpredictable problems, which appears to be at the heart of the exercise, is a problem that all learners anticipate facing in their future.	3

Table 9. Continued

Evaluation Criteria	Observations	Score
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The exercise requires learners to function as company, battalion, and brigade commanders, as well as battalion and brigade staff officers. With the exception of battalion and brigade commander, all of this roles are appropriate to the learners' level of professional development. Battalion and brigade commander exceed the levels normally associated with captains, and may exceed the capacity of some learners. • The training method assumes the learners' competence at skills associated with lower levels of professional development.	4
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method does not make an open attempt to connect the training to any particular set of values. • The training method does not employ grades as a motivator. • The primary motivator is the possibility of success or failure in the presence of peers.	3
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• The training method devotes training time to group discussion and feedback on the learning process. • Since the opportunity to provide feedback comes at the very end of the exercise, it has limited utility in providing the learner with a sense of influencing the direction of the learning process.	4
6.c. Does the training method require the learner to conduct a self-assessment?	• The learner-led after action reviews require all learners to provide feedback to one another and to comment on their own performance. • Depending on the learner's duty position on a given day, his involvement in the after action review may be more or less intensive. Some staff officers, for example, might find that their particular battlefield operating system played a small role in the battle, and their involvement in the after action review might be minimal.	4

Table 10. Field Training Exercise (Gauntlet), Armor Captains Career Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The training method makes no explicit effort to establish the learner's need to know. • The close correlation between the training exercise and the learner's future assignment as a company commander may offer some incentive for the learner to assume a need to know.	2

1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The training method requires the learner to apply skills in an environment that reflects the anticipated future environment to a marked degree.
	  • Subordinate platoon leaders are lieutenants.
	  • Subordinate platoon sergeants are non-commissioned officers.
	  • Learner operates in a field environment, using the same equipment he will face in his next assignment.
	  • Learner receives orders from a higher headquarters.
	  • Learner's performance is evaluated against the ARTEP standard.
		5

2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The small group instructor has some latitude in modifying the training technique. • The presence of multiple training objectives from the three courses involved in the FTX severely limits the ability of the ACCC SGI to modify the training in accordance with desires of ACCC learners.	2

3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The training method requires the learner to apply skills in an environment that reflects the anticipated future environment to a marked degree.
	  • Subordinate platoon leaders are lieutenants.
	  • Subordinate platoon sergeants are non-commissioned officers.
	  • Learner operates in a field environment, using the same equipment he will face in his next assignment.
	  • Learner receives orders from a higher headquarters.
	  • Learner's performance is evaluated against the ARTEP standard.
		5

4.a. Does the training method account for the learner's personal experience level?	• The small group instructor has some latitude in modifying the training technique to match the experience of the learner. The SGI might, for example, provide more "coaching" to an inexperienced learner, while allowing the more experienced to operate with little guidance.	3

Table 10. Continued

Evaluation Criteria	Observations	Score
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with a concrete experience in which all learners participate. • The level of participation is connected to the assigned duty position. Learners assigned as tank crewmen are probably less involved than those assigned as company commanders.	4
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• The training method includes an after action review after each iteration to allow for reflection; all learners participate in the after action review. • As only a select few learners perform in the capacity of commander, other learners may find less interest in a reflection period. This is particularly true if a learner does not serve in a leadership position during either iteration. • The learner who acts as the commander receives feedback from both his fellow learners and the SGI during the after action review.	4
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The training method includes an SGI-led after action review designed to assist the learner in recognizing the application of the conceptual framework developed in classroom training. • The skill of the SGI in facilitating discussion is a critical factor in determining the success of the after action review.	3
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• Learners rotate leadership positions following each after action review. Learners rarely have an opportunity to apply their personal experience in a subsequent iteration. They do, however, have an opportunity to apply the collective lessons from the last iteration. • Learners are required to demonstrate comprehension during the after action review.	3
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training tasks are very relevant to the learners; almost all will conduct these tasks in their next assignment. • Those learners not in leadership positions are faced with the problems of a junior enlisted tank crewman. These are not problems the learner is likely to face in his future assignments.	4

Table 10. Continued

Evaluation Criteria	Observations	Score
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training is designed to train tasks of the company commander, a level appropriate to the learners. • Some learners perform tasks at the junior enlisted level. This is not an appropriate level.	3
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method does not make an open attempt to connect the training to any particular set of values, although the presence of non-commissioned officers and lieutenants tends to focus captains on setting a positive example. • The training method does not employ grades as a motivator. • The primary motivator is the possibility of success or failure in the presence of peers and subordinates, and the close correlation between the training and future assignments.	4
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• Following the training event, learners completed surveys in which they were asked to identify positive and negative aspects of the training (Wick 2001).	4
6.c. Does the training method require the learner to conduct a self-assessment?	• Learners selected as commanders participate in the after action reviews and must frequently comment on their own performance. • Learners in supporting roles may or may not comment on their own performance, but are included in the after action review.	3

Table 11. Lecture, Amphibious Warfare School

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The training method does not make an explicit effort to establish the learner's need to know. • The demonstration by a subject matter expert during the lecture provides an example of performance above the level of competence of the average learner. • The learner may assume his need to know based on the requirement to use the skills and knowledge in subsequent practical exercises and graded requirements.	3
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The training method explicitly states the value of the training by connecting the skills and knowledge to be gained to future graded requirements. • Instructors discuss the value of the current training for future practical exercises and graded requirements.	3
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The learner is not formally involved in making decisions about the training technique. • Although the instructor enjoys some degree of latitude in adjusting the training method, the learner lacks a method of influencing those decisions prior to the training.	2
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The learner applies the skills and knowledge in a classroom environment. • The training environment bears almost no resemblance to the anticipated future environment.	1
4.a. Does the training method account for the learner's personal experience level?	• For most learners, the training method makes no adjustments based on the learner's past experience. • The training method uses selected learners with particular skills as assistant instructors, allowing for significant adjustment in the training for those selected.	3
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with a lecture focused on information transfer.	1

Table 11. Continued

Evaluation Criteria	Observations	Score
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• For most learners, the training method does not allocate time for learner reflection. • For those learners selected as assistant instructors, feedback from faculty advisors and peers offers some opportunity for reflection.	2
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The instructor describes the conceptual framework during his lecture. • Any connection between the instructor's presentation and the learner's previous experience is purely coincidental. • Learner's selected as assistant instructors are likely to use their own past experience as a basis for their demonstration.	3
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The training method does not require the learner to demonstrate any aspect of learning (memorization, comprehension, or application).	1
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training method focuses on generic problems representative of those the learner will face in subsequent practical exercises and graded events. • Depending on a learner's subsequent assignment, he may or may not face the problems reflecting in the training.	3
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training method assumes the learner's competence in skills and knowledge contained in lower developmental levels. • The training methods focuses exclusively on skills and knowledge appropriate to company commanders and battalion and brigade staff officers.	5
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method makes no open attempt to connect the training to a particular set of values. • The training method does not employ grades or other forms of competition as a motivator. • The training method appears to have no established method of reinforcing adult motivation.	1

Table 11. Continued

Evaluation Criteria	Observations	Score
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• Randomly selected learners complete a short questionnaire on the training to provide feedback to the course administrators. • The course does not employ any other method to collect learner feedback.	3
6.c. Does the training method require the learner to conduct a self-assessment?	• The training method provides no feedback to the learner, nor does it require him to comment on his own performance.	1

Table 12. Practical Exercise, Amphibious Warfare School

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The training method makes no explicit effort to establish the learner's need to know. • The training method assumes the learner recognizes his need to know, perhaps based on earlier training or the subsequent graded requirement.	1
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The training method requires the learner to apply skills and knowledge in an environment that resembles one the learner is likely to face in the future.	4
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The training method provides the instructor considerable leeway in adjusting the training to the learners. • The training method lacks a method for learners to provide input into decisions about the training technique prior to the training.	2
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The training method reflects, to a moderate degree, the staff planning environment the learner will face in subsequent assignments. • The lack of a field environment, the extended planning periods, and the absence of competing activities detract from the realism of the training environment.	3
4.a. Does the training method account for the learner's personal experience level?	• The training method allows the instructor to make adjustments to the training based on the experience levels of the learners. • The instructor takes learner experience into account when assigning learners to staff positions for the exercise.	3
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with the receipt of a higher operations order and the requirement to conduct mission analysis.	4
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• Throughout the exercise, the instructor provides individual and group feedback to the learners, allowing for reflection prior to continuing with the exercise. • The training method does not include provision for feedback from peers.	3

Table 12. Continued

Evaluation Criteria	Observations	Score
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The instructor uses the conceptual framework developed during the lecture as the basis for his group and individual feedback throughout the exercise.	3
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The training method requires the learner to apply the conceptual framework to a complex tactical problem and produce a feasible solution. • The degree of effort required differs among the population of learners. The learner assigned as the S3, for example, faces a much more rigorous problem than the learner assigned as the assistant engineer.	4
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training method focuses on solving the types of problems the learner is likely to face in subsequent assignments. • Because of the variety of subsequent assignments, not all learners face problems typical of their future environments.	4
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training method assumes the learner's competence in skills and knowledge contained in lower developmental levels. • The training methods focuses exclusively on skills and knowledge appropriate to battalion staff officers. Many, but not all, learners will fill these duty positions in their next assignment.	4
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method does not make an open attempt to connect the training to any particular set of values. • The training method does not employ grades as a motivator, although the clear connection to the subsequent individual graded requirement plays some role. • The primary motivator is the possibility of success or failure in the presence of peers.	3
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• Randomly selected learners complete a short questionnaire on the training to provide feedback to the course administrators. • The course does not employ any other method to collect learner feedback.	3

Table 12. Continued

Evaluation Criteria	Observations	Score
6.c. Does the training method require the learner to conduct a self-assessment?	• Learners are not required to comment on their own performance. • During the final period of instructor feedback, selected learners, typically those in the more demanding staff positions, are given the opportunity to comment on their own performance.	3

Table 13. Academic Study and Prep Time, Amphibious Warfare School

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The training method does not explicitly attempt to establish the learner's need to know. • The training method assumes the learner recognizes his need to know.	1
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The training method relates the value of the training only to the learner requirements encountered later in the course. • The training method explicitly ties the value of the training to the graded examination.	2
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The learner is free to modify the training method to match his personal desires, with the single exception of the graded examination. • The learner may opt to complete the self-paced text, read the doctrinal sources, rely upon his own knowledge, or follow other courses of actions in preparing for the examination.	4
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The training environment is not established; the learner determines the training environment for most of the training period. • The examination occurs in a classroom setting, not an environment likely to be encountered by the learner in future assignments.	1
4.a. Does the training method account for the learner's personal experience level?	• The training method provides the same set of resources to each learner, regardless of prior experience. • The availability of the instructor for additional instruction allows learners with little prior experience to receive assistance outside of the standard training methodology. • The training method allows the learner himself to adjust the training based on his assessment of his own experience.	4
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with assigned reading, a basic information transfer technique.	1

Table 13. Continued

Evaluation Criteria	Observations	Score
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• The training method provides an opportunity for reflection by providing approved solutions to the quizzes in the self-paced text. • The training method does not provide any individual feedback until after the graded examination.	2
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The written examination checks the learner's understanding of the conceptual framework. • The training method does not make an effort to connect the conceptual framework to the learner's experience.	2
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The written examination requires the learner to demonstrate his understanding of the conceptual framework. • The training method does not require the learner to apply the conceptual framework to a complex problem.	3
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training method focuses on generic problems that the learner is certain to face in subsequent course requirements and likely to face in future assignments.	4
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training method assumes the learner's competence in skills and knowledge contained in lower developmental levels. • The training methods focuses exclusively on skills and knowledge appropriate to battalion staff officers. Many, but not all, learners will fill these duty positions in their next assignment.	4
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method relies primarily on the graded examination to reinforce the learner's desire to learn.	1
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• Randomly selected learners complete a short questionnaire on the training to provide feedback to the course administrators. • The course does not employ any other method to collect learner feedback.	3

Table 13. Continued

Evaluation Criteria	Observations	Score
6.c. Does the training method require the learner to conduct a self-assessment?	• The training method does not require the learner to comment on his own performance. • The self-paced text provides an opportunity for the learner to assess his performance.	3

Table 14. Central Presentation, Combat Officers Advanced Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The training method makes no explicit effort to establish the learner's need to know. • The training method does not include a check on learning from the assigned readings to assist the learner in determining his need to know. • Learners may perceive a need to know based on the requirement to use the skills and knowledge in subsequent syndicate discussion.	2
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The instructor discusses the value of the skill or knowledge to be gained, typically by connecting the skill or knowledge to a short-term requirement or future duty position. • Instructors often use historical quotes or examples to demonstrate the value of the skill or knowledge.	3
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The learner is not formally involved in making decisions about training technique. • The structure of this training method is firmly established, with little latitude for adjustment by the instructor or the learner.	1
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The learner applies the skills and knowledge in a classroom environment. • The training environment bears almost no resemblance to the anticipated future environment.	1
4.a. Does the training method account for the learner's personal experience level?	• In theory, learners may apply for and receive Recognition of Current Competency, allowing them to forego training their prior experience makes needless. • In reality, all learners go through exactly the same instruction, regardless of prior experience.	1
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with a lecture focused on information transfer.	1

Table 14. Continued

Evaluation Criteria	Observations	Score
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• The training method does not allocate time for learner reflection.	1
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The instructor describes the conceptual framework during his lecture. • Any connection between the instructor's presentation and the learner's previous experience is purely coincidental.	2
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The training method does not require the learner to demonstrate any aspect of learning (memorization, comprehension, or application).	1
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training method focuses on skills and knowledge the learner will need later in the course and in future assignments. • The training method focuses primarily on generic problems, not necessarily those most likely to be faced by the learner.	3
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training method assumes the learner's competence in skills and knowledge contained in lower developmental levels. • The training methods focuses exclusively on skills and knowledge appropriate to company commanders and battalion and brigade staff officers.	5
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method makes no open attempt to connect the training to a particular set of values. • The training method does not employ grades or other forms of competition as a motivator. • The training method appears to have no established method of reinforcing adult motivation.	1

Table 14. Continued

Evaluation Criteria	Observations	Score
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• The training method includes a weekly verbal after action review in which an agent from outside the course leads the assembled class in a discussion of the strengths and weaknesses of that week's instruction. • Learners are issued written feedback forms which they may submit at any time in the course.	4
6.c. Does the training method require the learner to conduct a self-assessment?	• The training method provides no feedback to the learner, not does it require him to comment on his own performance.	1

Table 15. Syndicate Discussion, Combat Officers Advanced Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The instructor leads the learner through a demonstration at a level of proficiency well above that of the learner. • The learner is aware of the requirement to use the skills and knowledge in subsequent practical exercises and TEWTs.	3
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The instructor discusses the value of the skill or knowledge to be gained, typically by connecting the skill or knowledge to a short-term requirement or future duty position. • Instructors often use historical quotes or examples to demonstrate the value of the skill or knowledge.	3
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The learner is not formally involved in making decisions about training technique. • The instructor has considerable latitude in selecting and adjusting the learning technique within this method. The instructor may, for example, employ terrain models, slide presentations, videos, dry erase boards, or other training aids in this training method.	3
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The learner applies the skills and knowledge in a classroom environment. • The training environment bears little resemblance to the anticipated future environment.	1
4.a. Does the training method account for the learner's personal experience level?	• In theory, learners may apply for and receive Recognition of Current Competency, allowing them to forego training their prior experience makes needless. • In reality, the instructor has the latitude to make minor adjustments to the training technique based on his informal assessment of learner experience.	3
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with a group discussion and demonstration. • The small size of the syndicate makes it likely that all members are actively involved in the demonstration and discussion.	3

Table 15. Continued

Evaluation Criteria	Observations	Score
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• During the demonstration, the instructor provides feedback to those learner's taking part in the demonstration. • During the staff work following the demonstration, the instructor provides both group and individual feedback to the learners.	3
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• All instructor feedback is based on the conceptual framework of doctrine. • The instructor uses the conceptual framework to explain the learner's experience as the learner works through the demonstration and the staff problem that follows. • The instructor is the primary source of feedback on the learner's experience.	3
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The learner must apply the skills and knowledge gained during the central presentation and the demonstration in syndicate discussion to complete a staff problem as the conclusion of the syndicate discussion.	5
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training method focuses on skills and knowledge the learner will need later in the course and in future assignments. • The training method focuses on problems the learner will face in the following modules and in future assignments. • The problems are limited to the terrain in and around the training location, and do not necessarily reflect the types of terrain the learner will face in future assignments.	4
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training method assumes the learner's competence in skills and knowledge contained in lower developmental levels. • The training methods focuses exclusively on skills and knowledge appropriate to company commanders and battalion and brigade staff officers.	5
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method makes no open attempt to connect the training to a particular set of values. • The training method employs competition and the fear of failure before one's peers as the primary reinforcement to adult motivation.	2

Table 15. Continued

Evaluation Criteria	Observations	Score
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• The training method includes a weekly verbal after action review in which an agent from outside the course leads the assembled class in a discussion of the strengths and weaknesses of that week's instruction. • Learners are issued written feedback forms which they may submit at any time in the course.	4
6.c. Does the training method require the learner to conduct a self-assessment?	• The training method allows the learner to assess his own performance during his briefings and while listening to the briefings of others. • The training method does not require the learner to comment on his own performance.	3

Table 16. Practical Exercise, Combat Officers Advanced Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The training method makes no explicit effort to establish the learner's need to know. • Learners may perceive a need to know based on the requirement to use the skills and knowledge in subsequent graded TEWTs.	2
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The instructor discusses the value of the skill or knowledge to be gained, typically by connecting the skill or knowledge to a short-term requirement (graded TEWTs) or future duty position. • To a limited degree, the learning environment resembles the environment the learner expects to encounter in his future assignments (actual terrain, guidance from higher, etc.).	3
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The learner is not formally involved in making decisions about training technique. • The training event is largely scripted for the instructor in advance. • The instructor has some flexibility in establishing the standards for learner briefings and products.	3
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The learner applies the skills and knowledge in a field environment. • The training environment resembles the anticipated future environment in several ways: the learner receives guidance from his higher headquarters, the learner has limited time, the learner must apply his skills and knowledge in a field environment. • The exercise misses the true environment on several counts. The learner does not have his own vehicle, as he would in an actual operation. His reconnaissance is limited to the pre-established vantage points. He does not have the assistance of his subordinates.	3
4.a. Does the training method account for the learner's personal experience level?	• In theory, learners may apply for and receive Recognition of Current Competency, allowing them to forego training their prior experience makes needless. • In reality, the instructor has the latitude to make minor adjustments to the training technique based on his informal assessment of learner experience.	3
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• For those learners selected to brief at the first vantage point, the training method begins with a requirement for the learner to apply his pervious learning to a new environment. • For those learners not selected to brief at the first vantage point, the training method begins with a group discussion.	4

Table 16. Continued

Evaluation Criteria	Observations	Score
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• The instructor provides individual feedback to each learner who briefs at a vantage point. • All learners listen to the feedback to every learner.	3
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The instructor provides feedback based on the conceptual framework of doctrine. • The instructor is the primary source of feedback on the learner's experience.	3
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The training method requires the learner to apply the skills and knowledge gained in central presentation and syndicate discussion to an actual terrain problem. • All learners must solve the problem individually, although group discussions and instructor feedback undoubtedly offer some guidance.	5
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training method focuses on skills and knowledge the learner will need later in the course and in future assignments. • The training method focuses on problems the learner will face in the following modules and in future assignments. • The problems are limited to the terrain in and around the training location, and do not necessarily reflect the types of terrain the learner will face in future assignments.	4
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training method assumes the learner's competence in skills and knowledge contained in lower developmental levels. • The training methods focuses exclusively on skills and knowledge appropriate to company commanders and battalion and brigade staff officers.	5
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method makes no open attempt to connect the training to a particular set of values. • The training method employs competition and the fear of failure before one's peers as the primary reinforcement to adult motivation.	2

Table 16. Continued

Evaluation Criteria	Observations	Score
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• The training method includes a weekly verbal after action review in which an agent from outside the course leads the assembled class in a discussion of the strengths and weaknesses of that week's instruction. • Learners are issued written feedback forms which they may submit at any time in the course.	4
6.c. Does the training method require the learner to conduct a self-assessment?	• The training method allows the learner to assess his own performance during his briefings and while listening to the briefings of others. • The training method does not require the learner to comment on his own performance.	3

Table 17. Tactical Exercise Without Troops, Combat Officers Advanced Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The training method makes no explicit effort to establish the learner's need to know. • The graded nature of the training method, and the affect of the learner's grade on his subsequent assignment, may be inferred to impart some perception of a need to know to the learner.	2

1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The learning environment directly links the training to the environment the learner expects to encounter in the future.
	  • The instructor role plays as the battalion commander.
	  • The instructor issues guidance on the actual terrain of the operation.
	  • The learner has a limited time to prepare his plan.
	  • The learner is required to backbrief his plan to the notional battalion commander.
		4

2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The learner is not formally involved in making decisions about training technique. • The training event is largely scripted for the instructor in advance. • The instructor has some flexibility in establishing the standards for learner briefings and products.	3
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The learner applies the skills and knowledge in a field environment. • The environment closely reflects the anticipated future environment of the learner. The learner's presence on actual terrain, his freedom to conduct his own reconnaissance, the instructor role-playing as the battalion commander, and the limited time contribute to the realism of the exercise. • The exercise misses the true environment on several counts. The learner does not have his own vehicle, as he would in an actual operation. He does not have the assistance of his subordinates.	4
4.a. Does the training method account for the learner's personal experience level?	• In theory, learners may apply for and receive Recognition of Current Competency, allowing them to forego training their prior experience makes needless. • In reality, the instructor has the latitude to make significant adjustments to the learner's requirements based on his informal assessment of learner experience.	3
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with a requirement to conduct individual mission analysis and IPB based on written guidance and a map reconnaissance.	5

Table 17. Continued

Evaluation Criteria	Observations	Score
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• The instructor provides verbal feedback to learners who brief in the field, and individual, written feedback to all learners based on their written submissions. • Learners provide feedback to each other in the form of informal critiques following each learner briefing.	4
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• The instructor provides feedback based on the conceptual framework of doctrine. • The instructor is the primary source of feedback on the learner's experience.	3
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The training method requires the learner to apply the skills and knowledge gained in central presentation and syndicate discussion to an actual terrain problem. • All learners must solve the problem individually. • Feedback from the instructor comes after the requirement to solve the problem.	4
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training method focuses on skills and knowledge the learner will need later in the course and in future assignments. • The AA uses the TEWT as a unit training tool extensively. The learner will without doubt participate in this training environment in his subsequent assignments.	5
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training method assumes the learner's competence in skills and knowledge contained in lower developmental levels. • The training methods focuses exclusively on skills and knowledge appropriate to company commanders and battalion and brigade staff officers.	5
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method makes no open attempt to connect the training to a particular set of values. • The training method uses grades, and the impact of those grades on future assignments, as the primary reinforcement to adult motivation. • The training method employs competition and the fear of failure before one's peers as a secondary reinforcement to adult motivation.	2

Table 17. Continued

Evaluation Criteria	Observations	Score
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• The training method includes a weekly verbal after action review in which an agent from outside the course leads the assembled class in a discussion of the strengths and weaknesses of that week's instruction. • Learners are issued written feedback forms which they may submit at any time in the course.	4
6.c. Does the training method require the learner to conduct a self-assessment?	• The training method allows the learner to assess his own performance during his briefings and while listening to the briefings of others. • The training method does not require the learner to comment on his own performance.	3

Table 18. Capstone Command Post Exercise, Combat Officers Advanced Course

Evaluation Criteria	Observations	Score
1.a. Does the training method establish the learner's need to know early in the process?	• The training method makes no explicit effort to establish the learner's need to know. • The graded nature of the training method, and the affect of the learner's grade on his subsequent assignment, may be inferred to impart some perception of a need to know to the learner.	2
1.b. Does the training method clearly demonstrate the value of the skill/knowledge to be gained?	• The training method does not explicitly address the value of the trained skill. • The training environment closely resembles one environment (CPX) which the learner is likely to encounter in his next assignment. • Learners fill roles as company commanders and battalion and brigade staff officers, both likely assignments in their near future.	4
2. Does the training method allow the learner a degree of flexibility in determining the specifics of the training techniques to be employed?	• The learner is not formally involved in making decisions about training technique. • The instructors have some collective ability to adjust the training event. Individual instructors have very limited latitude in adjusting the training event to meet the needs of their learners.	2
3. Does the training method accurately reflect the environment in which the learner expects to employ the skill/knowledge?	• The training environment closely resembles one environment (CPX) which the learner is likely to encounter in his next assignment. • Learners fill roles as company commanders and battalion and brigade staff officers, both likely assignments in their near future. • The environment lacks the supporting subordinates normally found in brigades, battalions, and companies.	4
4.a. Does the training method account for the learner's personal experience level?	• In theory, learners may apply for and receive Recognition of Current Competency, allowing them to forego training their prior experience makes needless. • In reality, the instructor's latitude is largely limited to the duty assignments for each learner. Instructors assign learners to duty positions based on their assessment of prior experience and performance in the first two modules.	3
4.b.1. Does the training method begin with a concrete experience (a new experience that involves the learner fully, openly, and without bias)?	• The training method begins with receipt of a higher headquarters operations order and a requirement to being staff planning in a time-constrained environment.	5

Table 18. Continued

Evaluation Criteria	Observations	Score
4.b.2. Does the training method allow the learner to reflect on his experience by providing multiple perspectives?	• Daily formal after action reviews provide feedback from instructors serving in the role of observer/controller. • Learners provide feedback to each other during the formal daily after action reviews.	5
4.b.3. Does the training method provide a conceptual framework to allow the learner to understand his experience?	• Instructors use the after action review to tie the learner's experience to the conceptual framework. • During the after action review, the instructor uses group feedback to guide the learner to the conceptual framework. • Both peers and the instructors provide feedback to the learner.	5
4.b.4. Does the training method require the learner, as the final step in the learning process, to apply his experience and conceptual framework to solve a problem?	• The training method requires the learner to apply the skills and knowledge gained in the first two modules. • The repetitious nature of the training method allows the learner to reflect after each battle, then apply what he has learned to the subsequent battle.	5
5.a. Does the training method focus directly on life problems the learner is likely to face?	• The training method focuses on skills and knowledge the learner will need later in the course and in future assignments. • The AA uses the CPX as a unit training tool. The learner will without doubt participate in this training environment in his subsequent assignments.	5
5.b. Does the training method focus on skills/knowledge appropriate to the developmental level of the learner?	• The training method assumes the learner's competence in skills and knowledge contained in lower developmental levels. • The training methods focuses exclusively on skills and knowledge appropriate to company commanders and battalion and brigade staff officers.	5
6.a. Does the training method reinforce the learner's internal desire to learn?	• The training method makes no open attempt to connect the training to a particular set of values. • The training method uses grades, and the impact of those grades on future assignments, as the primary reinforcement to adult motivation. • The training method employs competition and the fear of failure before one's peers as a secondary reinforcement to adult motivation.	2

Table 18. Continued

Evaluation Criteria	Observations	Score
6.b. Does the training method provide an opportunity for learner feedback on the learning process?	• The training method includes a weekly verbal after action review in which an agent from outside the course leads the assembled class in a discussion of the strengths and weaknesses of that week's instruction. • Learners are issued written feedback forms which they may submit at any time in the course.	4
6.c. Does the training method require the learner to conduct a self-assessment?	• The training method requires the learner to comment on his own performance during the formal after action reviews.	5

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