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# Application of Computers to Learning in the Command and General Staff College: Army Command and Control Concepts Study

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<p>This research note reports on a front end analysis conducted on the expansion of computer use in instruction at the Army Command and General Staff College (CGSC). As a portion of the analysis, a conference was held to canvass informed, experienced Army leaders on anticipated changes in doctrine, organization, or technology that might cause modifications in commander-staff relations, or in staff operations, which might then have to be reflected in future CGSC instruction, or in combat developments. This report discusses that conference, and presents the findings and recommendations of Task E of the front end analysis, and is part of a series of ten reports called "Application of Computers to Learning in the Command and General Staff College:".</p> <p>18. Subject Terms (continued)</p> <p>Staff Officer Doctrine Development</p>					
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APPLICATION OF COMPUTERS TO LEARNING IN THE COMMAND AND GENERAL STAFF COLLEGE:  
ARMY COMMAND AND CONTROL CONCEPTS STUDY

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## INTRODUCTION

Anticipating future requirements is the essence of the study. The purpose of convening this particular group was to obtain informed views of the professional qualifications likely to be required of future commanders and staff officers. While focusing on the knowledge, skills, and abilities (KSA) that will be required of future staff officers, the goal was to identify not only what will be required but also the resources available and the constraints under which the officers must operate. Predictably, discussion of future changes on the battlefield led to more wide ranging interchange about the manner in which the Army educates its officer corps at the Command and General Staff College (CGSC), in the Army school system in general, and through its assignment policies.

The Army's current and projected use of computers drew extensive comment from the participants, primarily concerning the mechanisms of the command and control system with respect to the command and control process whereby a commander, in consonance with the staff, arrives at a decision and supervises execution. The major findings of the group project that the decision making process and fundamental staff operations will not change appreciably, but that time for these functions will be compressed.

Changes in doctrine and technology may lead to changes in staff composition and organization to accommodate the faster pace of battle. New technology will provide increasing amounts of data, which will require processing into necessary and usable information. Increased use of automation at field headquarters and projected use of standardized combat simulations and games for training throughout the Army will lead to greater use of computers in CGSC instruction, both resident and nonresident. The conference outline and list of retired military attendees are at Appendices A and B, respectively.

## TASK DESCRIPTION

### Goals

Describe the future operational environment of the U.S. Army so that inferences can be made regarding command and staff training and education requirements with emphasis on the command and control process.

With respect to CGSC instruction, identify the effects of predictable changes in command and staff functions or in the ways they will be performed that will follow innovations in doctrine, organization, and technology.

### Relationship to the Total Project

Accomplishment of this task permitted anticipation of probable changes in teaching requirements at CGSC that will affect the kinds of applications of computers that can be expected at CGSC 5 or 10 years from the present.

### Assumptions

Expected evolutionary changes in doctrine, technology, and threat will continually affect the organization and staff operations of Army tactical and operational commands.

Soliciting the opinions of retired senior Army leaders provides a feasible method of obtaining an authoritative view of the foreseeable future battlefield, the effects of changes on command and staff functions, and the resultant effects on CGSC instruction.

## METHODOLOGY

Nine retired Army general officers were consulted on a range of matters dealing with the question of change to be expected on future battlefields and the concern of how that change will be reflected in the requirement to prepare Army officers to perform effectively on those battlefields.

To generate a wider variety of responses to a range of primary questions, the conference was periodically divided into different types of sessions:

- o Discussion sessions led by a facilitator, where all the participants addressed specific issues and questions outlined in a session guide.
- o Team sessions, in which the entire group was split into two separate teams to consider questions provided prior to the conference.
- o Team briefing sessions attended by all participants where a recorder for the separate sessions provided a summary of the team's findings.

The Separate Sessions which were held included:

The future battlefield  
The faster pace of battle  
Staff organization  
Command and staff training  
Perceived truth vs. ground truth  
Army as reflection of society  
Future requirements of CGSC  
Determine and agree on findings

At a final plenary session, the findings of the conference were summarized, refined and assigned an agreed upon priority for reporting purposes.

## RESULTS AND DISCUSSION

The results of the Pecos Conference are presented as a set of consensus findings with respect to future demands on command and staff education and second, for the Army in general.

### Future Demands on Command and Staff Education

The military decision making process and fundamental staff operations will not change substantially in the foreseeable future; the time available to commanders and staffs for performing their functions in combat, however, will be shorter as the pace of battle is likely to increase. Increased mobility of maneuver forces, more lethal weaponry, and new electronics capabilities will contribute to an acceleration of battle dynamics that will be reflected in the need to speed up the process through which command and control of forces is exercised. Staff members will have to make estimates and be prepared to make recommendations more quickly to keep up with this accelerated pace.

Introduction of new technology for surveillance, target acquisition, and information collection and management systems will add greatly to the amount of data available to commanders and staffs in future conflicts and therefore, to the requirement for processing those data to use them most effectively. Along with having less time for contributing to the commander's decision making, staffs will be subjected to vastly increased amounts of data that will have to be evaluated to extract the information needed for making those decisions. Staffs will have new technological aids for this task as well as for acquiring data; however, the need for sound judgment and thorough understanding of the commander's intent will continue to be fundamental.

Doctrinal and technological change may lead to modifications of the composition and organization of future staffs to accommodate accelerated battle dynamics and a greatly increased flow of data. It is possible that new methods will be required for coordinating operational, logistic, and administrative functions on the faster moving and more lethal battlefield of the future. Commanders may choose to disperse their staffs by physically separating planners from those involved in current operations. Some staff functions may require greater effort through a new alignment of staff responsibilities or through the more explicit focus provided by assigning the function to a specific staff officer added for the purpose.

For example, emphasis in AirLand Battle on deception operations may lead to incorporating a deception officer either on coordinating or special staffs; similarly, the anticipated volume of information flow may mean that a data management officer will be required in tactical commands down through brigades. Combat experience suggests that a formal means should also be adopted for applying lessons learned during operations, possibly by adding a member of the staff with the specific duty of preserving the lessons in the organizational memory and assisting in their application.

Increasing application of automation in field headquarters and projected use of standardized combat simulation models and games for training throughout the Army will lead to a greater use of computers in CGSC instruction. Combat simulation models and games for use with computers offer the promise of enabling students and staff officers alike to practice, more frequently than is now possible, the skills required to function in the military decision making process. Existing opportunities are limited because gathering all the resources required, including time, for conducting realistic command post and field exercises either in units or in the classroom is too expensive to be repeated often. Appropriate software will have to be written before the promise of cheaper, effective practice for commanders and battle staffs offered by computers can be realized. Other appropriate uses of computers at CGSC would involve them in imparting instruction at lower cognitive levels than those associated with the principal command and staff functions and in serving the administrative needs of the institution.

Widespread Army use of computers should lead to exporting instruction from CGSC to the Active and Reserve Components of the Army in a less expensive, more responsive, and effective form than is currently the case. It should also lead to other forms of closer contact and more direct interactions between CGSC and the Army in the field. Satellite communications and other improvements in the ability to transport data instantly over long distances will enable Army units deployed worldwide and individuals to use computers in networks through which Army schools will provide instruction or participate in training in the field. Computer-based instruction could replace all the nonresident courses offered by CGSC, and the use of computers could substantially reduce the associated administrative burden. In addition, instruction packages for use with computers could enhance training of units in the field with or without unit-school interaction during training periods.

At present, military decisions are typically reached through intuitive and heuristic reasoning; the development of an analytic structure, incorporating techniques of operations research and possibly being suitable for use of computers would permit more rapid evaluation of the greater amount of information about the enemy and the battle that will characterize future battlefields. The enhanced ease of applying operations research methods afforded by computers may enable both commanders and staffs to shorten the time needed for making decisions and to ensure that available information is used most appropriately. For example, it may become possible through having more information about the enemy that is in prospect to arrive at probabilistic assessments of enemy intentions as well as capabilities.

More extensive use of computers and better simulation and gaming models would permit exposing CGSC students to a greater number of more diversified conflict scenarios in which to improve their grasp of doctrine and their facility in performing command and staff functions. This capability would help especially to prepare officers for the increased demand for speed in command and staff operations on future battlefields and for unexpected or catastrophic situations. It would seem that simulations and games intended for classroom use in which training a particular staff to function as an integrated unit in particular prospective situations is not an objective and would not need to

have the same characteristics, including faithfulness in the details that add realism, as those simulations and games that do have that objective. At minimum, this question is worthy of further study.

Current phasing of attendance at CGSC in officer career patterns often results in a long gap between CGSOC (Command and General Staff Officers Course) and an assignment in which the bulk of the instruction can be applied. Using computer-based educational packages exported from CGSC for individual or group refresher courses could ameliorate the time/information lag. A partial improvement will be realized when the new Battle Command Training Program (BCTP) is fully implemented. A new family of simulations and games will then be available for general use, including providing refresher training. Of course, these programs will also provide a means of disseminating new doctrine and information regarding new technology adopted by the Army.

Current instructional methods at CGSC evidently do not permit emphasizing commanders' relationships with their staffs; one result is that many officers attending the Army War College are not adept at giving appropriate command guidance and describing concepts of operations. In addition to having relevance for CGSC curricula, improving this situation may provide another example of an appropriate use of instructional material exported from CGSC. Computer-aided gaming and simulation as envisioned for BCTP could help in this regard, both in the classroom and in the field. Again, it appears that the new family of games and simulations should include both those suitable for use in the field and others designed explicitly for the classroom.

Opportunities for improving CGSC instruction through the use of computers are not limited to those involving games and simulations. In addition to other applications in the classroom they could be used, for example, for simply conveying knowledge and evaluating its retention by students. Computers could make instructors more productive by making administration easier and much less time consuming. Providing faculty access to computers for use in maintaining student records could be one of the initial steps in overcoming faculty resistance to the use of computers in the classroom to the extent that it exists.

A principal benefit of attendance at CGSC is that students have the opportunity to observe their contemporaries for months and to form interpersonal relationships that will serve them professionally throughout their careers. Interactions among the students would, therefore, need to be part of computer-based education, perhaps especially in simulations and games. Computer-based instruction should not be conceived as interaction exclusively among the student, the instructor, and a computer. Learning to participate in the closely knit entity, which an effective staff must be, can be achieved with the use of computers to accomplish the routine tasks that normally take a disproportionate share of staff effort. This kind of teamwork can also be taught in the classroom.

Instruction in enabling skills, such as effective written and oral uses of English, methods of instruction, and basic uses of computers, will continue to be required at CGSC as long as students without those skills continue to form a significant fraction of entering classes. Teaching enabling skills constitutes a present opportunity for CGSC to begin computer-based instruction without waiting for the development of the simulations and games that will be required

for teaching higher level staff skills associated with the decision making process. Writing the necessary software would be a simple matter compared with what will be necessary for the simulations and games.

Faculty and students at CGSC will become increasingly computer literate as time passes and as the use of computers continues to expand in society in general. At present, American universities are producing proportionately fewer graduates with scientific and engineering backgrounds than has been the case in the past. If this situation continues, it may delay the day when familiarity with the more common uses of computers on the part of all Army officers can be assumed. It may also serve to limit the degree to which the more specialized uses of computers can be expected from CGSC faculty and students. Nevertheless, current constraints on the use of computers in CGSC instruction, and principally that which consists of faculty unfamiliarity with computers, will gradually be lifted as their use becomes more general.

CGSC curricula might be made more responsive to changing needs if they were periodically reviewed by a board of regents comprising both military experience and civilian representation. An external board of regents would provide a wider perspective from which to review CGSC curricula than what is locally available. Appropriately chosen civilians on the board could advise and help with political sensitivities that might be associated with some curriculum subjects or with mobilizing political and other support for needed changes.

#### Future Demands for the Army in General

A significant number of CGSC graduates are assigned to subsequent duty in which they are involved, especially at Department of the Army (DA) and Major Command (MACOM) level, in the complex process through which the Army accommodates doctrinal, organizational, and technological change. Two observations are relevant. One is that the process to which the term "force integration" has been applied is not directly managed by any central authority and, possibly for that reason, is not generally understood. The second is that the Army does not conduct formal schooling in the process as a whole, although some aspects are taught in some courses at CGSC and at the Army War College.

The Army's system for managing change is complicated and diffuse. It is not centrally managed which makes it difficult to comprehend the workings of the entire system. Those officers whose duties involve them with some part of the system must learn that part of it on the job and rarely have the opportunity to learn the system as whole. This situation could be corrected by including appropriate instruction in the CGSOC curriculum. What is ultimately needed is rationalization of the system, possibly by focusing on how organizations are affected by the changes and probably by assigning specific responsibility for the system to a central authority at DA level.

There is not enough time available in Army careers to teach those who will serve in key positions all they should know through formal schooling. The necessary education has to be acquired through a combination of attendance at schools, individual study, service in preparatory assignments, and on-the-job training. There may be reason to doubt that time at Army schools is ample to

include elective courses at the expense of instruction in vital peacetime functions that will, in any case, consume the major part of all officers' careers. This situation will worsen in coming years because of recently enacted legislative requirements relating to experience in joint assignments. Doctrine and tactics have to be taught at the combined arms level at CGSC, which has the mission of preparing its graduates for combat service at tactical and operational echelons. This situation leaves much for the individual officer to learn on his own, at a cost that could be avoided by giving him formal instruction in duties not directly involving combat functions but affecting the kind of Army units that will enter future combat.

In the past, the Army has not devoted great effort toward training senior commanders and staff officers of tactical and operational commands in their own functions. They are usually too busy training subordinates to address practicing the skills they would themselves need to exercise in combat. Computer-based instruction exported from Army schools could be of great assistance here. The BCTP will obviously help through development of suitable simulations for use in training and in affording opportunities for the appropriate headquarters to engage training simulations. The number of these opportunities is likely to remain relatively small, however, leaving room for computer training packages exported from Army schools.

There are potential dangers to be avoided in expanding the use of automation in Army command and control and in relying on computers in the formal education of Army officers in command and staff operations. One is that basic requirements of performing staff functions may become obscured by reliance on automated systems, leaving field headquarters less capable of operating effectively if those systems should fail in combat. Another possible result would be harmful in the long run. Important interpersonal relationships, both among students at Army schools and among members of field command staffs, might fail to develop in an environment in which a high degree of automation dominates.

Another of those potential dangers is that individual initiative may be suppressed in the trend to increasing centralization of all command and control functions that appears to follow from introducing technological improvements in data management capabilities. There has been a continuing, if not accelerating, trend toward centralization at both political and military levels of supervision of force employment. If the hardware that makes this possible fails to survive active conflict, there will be an imperative need for lower and intermediate commanders and staffs who are capable of acting appropriately with broad mission type orders and with minimum supervision. The necessary skills may decline in peacetime where both planning and detailed supervision of execution are dominated by increasingly higher central authority.

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APPENDIX A

ARMY COMMAND AND CONTROL CONCEPTS STUDY OUTLINE

DATES: April 9-12, 1987

INTRODUCTION: The purpose of convening this group is to obtain informed views of the professional qualifications likely to be required of future commanders and staff officers. These views will assist in an ongoing Los Alamos National Laboratory project to advise the Command and General Staff College on how best to incorporate computer technology in instruction by its various schools.

The College at present comprises five major divisions:

- o Combined Arms and Services Staff School (CAS<sup>3</sup>)
- o Command and General Staff Officers Course (CGSOC)
- o School of Advanced Military Studies (SAMS)
- o School of Professional Development (SPD)
- o School of Corresponding Studies (SOCS)

Anticipating future requirements is the essence of the present study. We will be focusing on the KSA that will be required of future staff officers. We must identify not only what the staff officer will be required to do but also the resources he will have available and the constraints under which he will operate. The command control system provides the mechanisms by which the commander can function; however, it is through the command and control process that he will arrive at the decisive course of action--win or lose. This process involves the human faculties of commanders and the assistance of staff officers in making decisions and supervising execution.

APPENDIX B

RETIRED GENERAL OFFICER PARTICIPANTS

General Robert C. Kingston

Lieutenant General Donald M. Babers

Lieutenant General David K. Doyle

Lieutenant General Richard D. Lawrence

Lieutenant General Gordon Sumner, Jr.

Lieutenant General Richard G. Trefry

Major General Niles J. Fulwyler

Major General Vernon Lewis

Major General James P. Maloney

## APPENDIX C

### SESSION GUIDES

#### The Future Battlefield

The Army's efforts to prepare itself for future conflicts are currently and collectively known as AirLand Battle. It is expected that strategy, doctrine, tactics, and weapons will change to shape the Army as those efforts continue. Current doctrine cites added complexity introduced into modern battle by improved electronic countermeasures, new concepts, and more lethal weapons. It seems fair to assume that still more complexity is in the offing as technological innovation continues to lead to new capabilities and new countermeasures. We need to know how these changes and probable accompanying developments in tactical doctrine will affect command and staff relationships and the KSA required of the commanders and staff officers who will be planning and executing future battlefield operations.

Experience in recent wars has led to tactical doctrine that currently emphasizes the primacy of maneuver over the various forms of combat support. In view of the increasing lethality of direct and indirect fires, will maneuver continue to be considered the prime element of tactical success, will it assume even greater importance, or will it decline in importance?

It appears that surveillance and target acquisition capabilities under development promise to make it easier to locate military elements on the move than those that are static in concealment or cover. If tactical agility is seen as the remedy for this problem, what additional difficulties are thereby introduced in staff operations?

If technology or some other force induces a change in the relationship between maneuver and firepower, how will staff operations be affected?

For the foreseeable future, strategic nuclear forces will pose a danger to be avoided if possible while achieving national objectives. This requirement would appear to imply that the Army will be fighting for limited political objectives in future combat, in contrast to the unconditional surrender to which World War II was fought. How will commander and staff interactions change to allow for aligning consonant military objectives with limited political objectives in each of low-, mid-, and high-intensity conflict?

How should the changes projected in this discussion of the future battlefield be arranged in order of their associated probabilities or in order of the severity of their consequences for commanders and staffs who will be facing them?

## The Faster Pace of Battle

It seems to be commonly accepted that the pace of future mid-intensity conflict will be considerably increased over that experienced in World War II and Korea. We need to know what specific demands the accelerated pace of battle will make on commanders and staffs applying AirLand Battle concepts.

How will commander and staff interactions be compressed in time to speed up the decisionmaking process that is currently prescribed by doctrine, or will that process have to be changed? How?

Current doctrine identifies principal staff functions of providing information, making estimates, making recommendations, preparing plans and orders, and supervising execution. How will each of these principal staff functions, through which the staff assists the commander in making decisions, have to change to accommodate a need to accelerate the process?

The need to make quicker decisions may mean that they will have to be made with less information on which to base them. How can this kind of change be accommodated in command and staff training to ensure that the right course of action is nevertheless selected?

Will fragmentary orders be the rule on the future battlefield? If so, what will take the place of the extensive inter- and intra-staff coordination that marks the issuance of operations plans and orders under current doctrine?

Will changes in the way decisions will have to be made dictate changes in staffing levels or in the apportionment of staff responsibilities?

How should the projected changes be arranged in order of their associated probabilities or in order of the severity of their consequences for command and staff relationships?

## Staff Organization

Staffing levels in field commands are based on historically derived principles that have proved valid in previous wars. One of those principles is that the commander must have the assistance of a principal staff officer in each of the broad fields of interest with which he must concern himself. We need to know whether those broad fields of interest and their relative importance will continue to be those currently recognized by doctrine, that is, personnel, intelligence, operations and training, communications-electronics, logistics, and civil-military operations.

Technological improvements in various means of exercising and disrupting command and control have raised the field of communications-electronics to unprecedented prominence. What further changes can be expected in this area, and how will they affect staff operations?

Are other broad fields of interest likely to arise from technological innovation or in other ways either to replace or augment those currently recognized, for example, nuclear operations?

Is the size of the coordinating staff due to change because of the increasing complexity of operations? Will the current relationships among the commander, the coordinating staff, and the special staff change in any significant way?

Current doctrine emphasizes the need to conduct operations on an expanded battlefield involving enemy and friendly rear areas to a greater extent than has been the case in recent experience. If this trend continues as AirLand Battle concepts develop further, what will be the effect on staff operations and on the necessary qualifications of staff officers?

How should the projected changes in staff organization be arranged in order of their associated probabilities, in order of the severity of their consequences for staff operations, and in order of their importance for mission accomplishment?

#### Command and Staff Training

Possible changes in doctrine, organization, weaponry and other equipment will establish new training requirements for the Army. These changes may also lead to new training approaches, including a redefinition of the roles and mode of functioning of Army schools. We need to know how requirements for training commanders and staff officers will change as those other changes are made.

Are the currently existing educational opportunities for Army officers adequate to produce competent incumbents in command and staff positions in field commands? What additional opportunities would be desirable to create?

Does it make sense to think about increasing the contact between the Army school system and the Army in the field, especially in view of the potential of computers for making this feasible? For example, letting the resident CGSOC class engage the VII Corps staff in wargame may benefit officers in both organizations.

Will the concept of force integration training and current schemes for implementing it in the field serve to satisfy the future demands of the Army?

How should projected changes identified in this discussion regarding command and staff training be arranged in order of the likelihood of their taking place, in order of the severity of their consequences for the Army school system, and in order of importance to future command and control requirements?

### Perceived Truth vs Ground Truth

It would appear that managing the huge volume of information flowing into field command headquarters will become increasingly important in combat in spite of whatever other changes take place. Emerging computer technologies could bring substantial improvement in capability to extract from that volume the information required to form a true picture of dynamic situations. We need to know what changes the adoption of the new technologies would bring in staff procedures and in the decision making process.

Is the Army heading toward information overload? At what point does the quest for clarity through additional information in face obfuscate ground truth? What does a commander really need to know?

What effect on information management requirements is the further development of AirLand Battle concepts likely to have?

Current doctrine already acknowledges difficulties in exercising command and control on the modern battlefield and emphasizes at the same time that command and control success will be crucial. Will developments in this area continue to bring increasing centralization of command and control functions?

Centralized planning and decentralized execution are cited as principal features of current doctrine. Is this situation likely to change along with changes in doctrine and weapons or other technologies?

Would a significant expansion of information processing capability lead to substantial changes in staff interactions among themselves and with the commander? With higher, lower, and adjacent headquarters?

How should projected improvements in the ability to form accurate perceptions of battlefield situations be arranged in order of their associated probabilities, in order of the severity of their consequences for staff operations, and in order of the significance of their contribution?

### The Army as Reflection of Society

Change will occur but will be opposed by the members of the organization, at least according to almost any basic management text one may review. Hence, American society and the American military as a microcosm of it will change as it is affected by technology and other external influences and by the internal dynamics that have brought past changes. The results of these changes will be reflected in the people that will make up the commanders and staffs of the future. We need to know the demographic and cultural changes occurring in the United States and the Army that will/could influence how staff officers function. For example, during the Vietnam era, a staff officer might write a message, get it approved, and pass it on to a soldier for transmission. In the future, the staff officer could compose the message on his own computer, have it approved electronically, and transmit it himself. Will he? Or will he still use a pencil, relying on the soldier to use the hardware?

How will the rank versus task structure change with the influx of technology into the workplace? How will the introduction of technology be opposed in the workplace? Can traditional attitudes be overcome? Should they?

How will the age and education of the future staff officer differ from that of today? Will computer literacy be required? What will be his level of maturity?

Will the ethical base change? Will electronic "signatures" carry the weight of an officer's signature today? Or, with electronics, can his signature be too easily forged?

Morris Janowitz (1960) was a professor of sociology at the University of Chicago. One of his most notable achievements was describing the attributes of a profession, which include, inter alia, a knowledge base administered and passed on by the profession, standards of conduct, and self-policing. His work established credibility for the claim that an officer is a member of the Profession of Arms. Is that profession changing? If so, how?

Identify and prioritize those causative factors that will initiate/continue significant change in the Army. For each factor, estimate the probability of significant impact during the period addressed in this study.

#### Future Requirements of CGSC

Attendance at CGSC has long been considered an essential part of the background of Army officers eligible for assignment in field-grade command and staff positions. We need to know how the demands imposed by the faster pace and increasing complexity of battle at all the levels of intensity at which the Army may have to fight will affect what will be expected of the College in the future.

Of all of the future requirements of command and staff training identified in these sessions, which will need to be imparted to or developed in students of CGSC, and which will be satisfied during other tours of duty?

Will the College need new methods of teaching combined arms doctrine as it develops in the future? If those methods will involve a wider use of computers in the classroom and in the field, will their adoption be viewed as revolutionary or evolutionary?

What kinds of combat simulations (physical, procedural, situational, or process) or games will be needed by the College to provide practice in applying doctrine? Will it be those simulating operations in the fullest possible detail or those simulating only those parts of operations focusing on specific skills that will be needed?

What are the education/training alternatives available for command and staff training? Upon additional reflection, should closer relationships between Army schools and the Army in the field be encouraged?

### Determine and Agree on Findings

During this study, several interdependent elements have been examined in separate sessions. While the sessions were conducted somewhat sequentially, they were not examined collectively to this point. This session has two questions to be answered.

Do the findings of the individual sessions follow logically from one another? If gaps exist, provide the logic or revise the findings.

Having examined the entire study, are there any additional, pertinent findings that emerge? If so, they should be identified, discussed, agreed upon, and documented in concise form.