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Future Leader Development of Army Noncommissioned Officers

Workshop Results

Conference Proceedings

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PREFACE

This document reports recent efforts by RAND's Arroyo Center and the U.S. Army Noncommissioned Officer corps to examine ways of strengthening NCO professional development. It presents proceedings and results of two workshops held to assess the current NCO leader development system and develop a "vision" of where the NCO corps wishes to head. In addition, it identifies policy issues that emerged from these workshops.

This project is sponsored by the Sergeant Major of the Army and the Command Sergeant Major of the U.S. Army Training and Doctrine Command. It was carried out in the Arroyo Center's Manpower and Training Program. The Arroyo Center is a federally funded research and development center sponsored by the United States Army.

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SUMMARY

BACKGROUND AND PURPOSE

The Sergeant Major of the Army and the Command Sergeant Major of the U.S. Army Training and Doctrine Command asked RAND's Arroyo Center to undertake a research project entitled "Future Leader Development of Noncommissioned Officers," with the goal of identifying ways to strengthen and modernize the professional development of noncommissioned officers to meet future demands. As part of this effort, the Arroyo Center helped to organize and facilitate two workshops, attended by senior Army NCOs. One workshop focused on the current noncommissioned officer professional development system, identifying its strengths, weaknesses, and vulnerabilities. Subsequently, a second workshop built upon the output of the first and crafted a vision for the noncommissioned officer corps, including policy initiatives to strengthen leader development and options needing detailed assessment. This document summarizes the results of both conferences. It also explores the implications of the vision and sketches out some possible research approaches to address them.

RESULTS OF NONCOMMISSIONED OFFICER PROFESSIONAL DEVELOPMENT WORKSHOP

This workshop involved a cross-section of senior noncommissioned officers from across the Army. Over 60 noncommissioned officers met for a week to examine the professional development system of the enlisted force. They focused on identifying its strengths, weak-

nesses, undergirding assumptions, and the future changes that might render some of those assumptions invalid.

The consensus of the conference was that the professional development system is fundamentally sound. It was viewed as the primary contributor to the professional and dedicated noncommissioned officer corps that exists today. Key to this success is the three-pillar structure of the noncommissioned officer education system (NCOES), that is, institutional training, unit experience, and self-development. Also key is the early and frequent training that noncommissioned officers receive.

Although the NCO leader development system is regarded as sound and successful, some aspects of it require improvement, specifically the self-development pillar of NCOES, the incentives for NCO education, and the timing and rigor of institutional instruction.

Self-development suffers from the absence of a clear definition, a lack of incentives, and a failure to integrate coherently with an individual career development program. Ideally, each soldier would have a program that spells out exactly the types of self-development necessary for his or her skill and grade. Also, the incentives to pursue self-development need to be more direct, i.e., rewarding the soldier directly for participating in the program. Current incentives tend to be indirect (e.g., promotion boards take participation as a sign of motivation) or personal. Finally, self-development needs to be linked with overall professional development to ensure that one complements the other.

Incentives also do not align well from a broader perspective. Important but short-term considerations about such things as unit readiness can impede professional development. Commanders, whose evaluations hinge on unit performance to include readiness, may be reluctant to release noncommissioned officers for institutional training, particularly if a critical event such as an NTC rotation is on the horizon.

Finally, conference participants believed that institutional training occurred too late and lacked sufficient rigor. Many noncommissioned officers serve in positions before receiving institutional training designed to prepare them for these positions. Thus, the timing robs the instruction of some of its effectiveness. Hence the

relationship between policies relating NCO education to assignments and promotion may need re-examination, particularly in light of possible changes to the Army. Furthermore, the standards imposed in the institutional training base were regarded as too lax, particularly in the use of open-book tests.

Although workshop attendees judged most facets of today's professional development system to be fundamentally sound, many were concerned about the viability of the system in light of future changes affecting the Army. These concerns included possible effects of changing missions, organization, resources, and battlefield technologies for NCO education. In addition, as indicated above, attendees were uncertain about the robustness of today's enlisted personnel management system for supporting professional development as the Army changes in the future.

RESULTS OF VISION WORKSHOP

Subsequently, a second workshop was held that concentrated on defining a vision for the noncommissioned officer corps. This vision can serve as a general construct for evaluating the current NCO leader development system and potential changes to it. The vision statement pictured in Figure S.1 resulted.

Vision of the Noncommissioned Officer Corps

A noncommissioned officer corps, grounded in heritage, values, and tradition, that embodies the warrior ethos; values perpetual learning; and is capable of leading, training, and motivating soldiers. We must always be a noncommissioned officer corps that:

- Leads by example
- Trains from experience
- Enforces and maintains standards
- Takes care of soldiers
- Adapts to a changing world

Figure S.1—Noncommissioned Officer Corps Vision

The intent behind the vision was to articulate enduring characteristics of Army NCOs and use them to guide decisions about which aspects of the current professional development system to retain while addressing its weaknesses. But the vision is not simply a problem-solving mechanism aimed at correcting deficiencies with the current system. It also looks to an uncertain future and attempts to provide principles for adapting to the unknown changes that surely will occur. In this vein, this vision reinforces the recommendation to retain the three-pillar structure and the sequential, progressive nature of NCO education (to maintain standards and adaptability and to encourage perpetual learning). The vision also suggests directions for strengthening and improving the system where change may be needed (e.g., training earlier and strengthening self-development to enhance experience and take care of soldiers). And it explicitly acknowledges and embraces the need to adapt to changing circumstances.

POLICY ALTERNATIVES

The results of the two workshops highlight some areas where policy may need to be altered, and where there is uncertainty about how to proceed and what the future may hold. Specifically, two areas need detailed analysis. The first would address the self-development pillar and identify ways to strengthen it and improve the overall balance among the three pillars of NCO education. The second would examine how to strengthen and improve the alignment between personnel management policy and enlisted professional development to meet future demands.

Three aspects of the self-development pillar merit consideration in greater depth: its incentives, its evaluation mechanisms, and its balance compared with the other two pillars. Incentives for both soldiers and commanders need to be defined and evaluated. On the one hand, soldiers need incentives that motivate them to engage in the self-development that the Army regards as most useful for their military professional careers. For example, tuition assistance could be scaled based on the relevance of the instruction to military needs. Thus, some instruction could be fully funded and less-relevant instruction would receive only partial funding. In addition, commanders may need incentives to motivate them to encourage participa-

tion in self-development activities. One approach might be to include the self-development of subordinates as a element in a commander's evaluation.

The Army needs stronger mechanisms to determine if self-development activities are yielding the desired results. If, for example, a self-development goal is to enhance a soldier's career prospects, the Army needs a way to determine how well the program achieves the goal. Such an evaluation tool would allow the Army to determine if the program is working and, if it is not, how to improve it.

Addressing the self-development pillar in these ways could alter the relationships among the three pillars. Thus, analysis should also consider the broader issue of the balance among the pillars and how to determine appropriate timing for different facets of the professional development process. A possible approach might include the creation of a decision-support tool that demonstrates the costs and benefits of different development approaches and timelines.

Enlisted personnel management is integrated closely with professional development. Personnel policies directly govern the experience and assignments that noncommissioned officers receive and thus are fundamental to NCO development. They are also important as the enlisted force adapts to future change. Policies in effect today may be less relevant tomorrow. For example, the Army is increasingly investing in technology, and it seems likely that the skills associated with this technology will require extensive development. Thus, the current policies for retention control points might require modification to retain highly skilled people who would be expensive to replace. Clearly, such a change would require careful consideration of the potential costs and benefits.

ABBREVIATIONS

ABP	Assumption-Based Planning
AC	Active Component
AI	Artifical Intelligence
ANCOC	Advanced NCO Course
ASI	Additional Skill Identifier
BNCOC	Basic NCO Course
CAI	Computer Assisted Instruction
CG	Commanding General
CINCOS	Change in NCO Structure
CS	Combat Support
CSA	Chief of Staff of the Army
CSCW	Computer-Supported Cooperative Work
CSM	Command Sergeant Major
CSS	Combat Service Support
DA	Department of the Army
DARPA	Defense Advanced Research Projects Agency
DCSOPS	Deputy Chief of Staff for Operations
DCSPER	Deputy Chief of Staff for Personnel

DCST	Deputy Chief of Staff for Training
DL	Distance Learning
EPMS	Enlisted Personnel Management System
FM	Field Manual
FMC	Fully Mission Capable
FSP	Force Support Package
HTML	Hyper Text Mark-up Language
IET	Initial Entry Training
LD	Leader Development
MACOM	Major Command
MOS	Military Occupational Specialty
MSG	Master Sergeant
MST	Maintenance Support Team
NCO	Noncommissioned Officer
NCOA	NCO Academy
NCOER	NCO Evaluation Report
NCOES	NCO Education System
NCOPD	NCO Professional Development
NGB	National Guard Bureau
NMC	Non-Mission Capable
NTC	National Training Center
OCAR	Officer of the Chief of the Army Reserve
OJT	On-the-Job Training
OPTEMPO	Operational Tempo
PERSTEMPO	Personnel Tempo
PLDC	Primary Leadership Development Course
POC	Point of Contact

POI	Program of Instruction
PT	Physical Training
PVT	Private
RC	Reserve Components
RCP	Retention Control Point
SDT	Skill Development Test
SFC	Sergeant First Class
SGM	Sergeant Major
SGT	Sergeant
SIMITAR	Simulation in Training for Advanced Readiness
SMA	Sergeant Major of the Army
SMC	Sergeant Major Course
SQT	Skill Qualification Test
SSG	Staff Sergeant
STAMIS	Standard Army Mangement Information System
TASS	Total Army School System
TRADOC	U.S. Army Training and Doctrine Command
USASMA	U.S. Army Sergeants Major Academy
WWW	World Wide Web
1SG	First Sergeant

Chapter One

INTRODUCTION

BACKGROUND

At the request of the Sergeant Major of the Army and the Command Sergeant Major of TRADOC, RAND's Arroyo Center undertook a research project on ways to strengthen the professional development of Army noncommissioned officers. The overall objectives of the research project, entitled "Future Leader Development of Noncommissioned Officers," are to examine the system for developing noncommissioned leaders and assess its ability to meet the demands of the future, taking into account potential changes in job demands, requirements for NCOs, personnel policies, and resource limitations.

In an initial task, Arroyo Center researchers helped to design and conduct a professional development workshop attended by senior noncommissioned officers from across the Army. The conference used assumption-based planning, a strategic planning methodology, to identify issues surrounding noncommissioned officer professional development, including strengths, weaknesses, and vulnerabilities to future changes affecting the Army. After this first workshop, a second, smaller conference used its results to help define a vision for the noncommissioned officer corps and spell out the policy implications of that vision for issues arising in the initial workshop. The vision and recommendations were then reviewed by senior NCOs from the Army's major commands and taken to the Army's senior leadership for approval and support.

PURPOSE AND ORGANIZATION OF THIS DOCUMENT

This document contains results and proceedings from the initial leader development workshop and the vision workshop. Section 2 summarizes the major results of the leadership development workshop. Section 3 describes results of the vision workshop and discusses the relationship between the vision and the results of the earlier leader development workshop. The final section identifies research needs identified in these workshops and suggests approaches to address them.

Supporting material from the workshops is contained in the appendices to this document. Appendix A contains RAND's orientation briefing describing the format and the strategic planning approach (assumption-based planning) used to guide the future NCO leader development workshop. Appendices B and C describe the conference agenda and attendees, respectively. Appendices D and E contain annotated slides of two "mini-lectures" given by RAND facilitators at the conference. Appendix F contains the final outbrief developed by the attendees of the conference, while Appendix G contains the written summary of the workshop prepared by the U.S. Army Sergeants Major Academy.

Additional appendices to this document address the workshop held to develop a vision of the future NCO Corps and the recommendations that emerged from the two workshops. Appendix H contains copies of the briefing used to guide the vision workshop. Appendix I contains a briefing given by the U.S. Army Sergeants Major Academy to the Commanding General of the U.S. Army Training and Doctrine Command, providing their recommendations based on the workshops.

Chapter Two

RESULTS OF THE FUTURE NCO LEADERSHIP DEVELOPMENT WORKSHOP

This section describes the results of the initial leader development workshop. The workshop participants represented a vertical segment of the noncommissioned officer corps, ranging from MACOM level to the unit level. Ranks ranged from Sergeant First Class to Command Sergeant Major, and representation included active and reserve, male and female, and members from branch proponent offices.

The conference was organized into six working groups, each of which addressed a different aspect of noncommissioned officer professional development, using a methodology called "assumption-based planning" (ABP).[1] These groups were organized around a set of journalistic questions (who, what, why, when, where, how) pertaining to the development of noncommissioned officers. The broad assignment for the groups was to answer the question posed (e.g., who is responsible for developing noncommissioned officers), identify key assumptions that underpin today's leader development program, and consider what might render those assumptions invalid. The goal was to identify what is working well, what is not or might not, and what might be done about it. This information was expected to be useful on its own; in addition, by focusing on key assumptions and the events that could render them invalid, the results were expected to help the NCOs articulate a "vision" for the future.

[1]See Appendix A for a discussion of how ABP was used to guide the workshop.

To summarize the results of the workshop, this section adopts the following structure:

- Noncommissioned officer professional development today
- Key assumptions underpinning the professional development program
- Strengths of the current program
- Weaknesses of the current program
- Conditions that could cause current practices to change

NONCOMMISSIONED OFFICER PROFESSIONAL DEVELOPMENT TODAY

Noncommissioned officer professional development (NCOPD) embraces more than the Noncommissioned Officer Education System (NCOES). Although the NCOES is perhaps the most visible and probably the most discussed component, professional development has two other components: job assigments and the enlisted personnel management system that structures and guides the experience and education that an NCO receives.

NCOES itself has three so-called pillars: the institutional, the operational assignment, and the individual. The first pillar provides the formal instruction that begins with initial entry training and extends through the command sergeant major course. The second provides an experiential context for the institutional instruction. It not only provides a venue in which to exercise skills learned in the institutional setting, it also hones, broadens, and deepens the learned skills and knowledge and helps translate them into increased ability. The third pillar, frequently referred to as self-development, affords an individual the opportunity to pursue professional development on additional military or civilian topics.

The conference participants identified four mechanisms that govern the development of NCOs in each of these pillars: methods, tools, evaluation and feedback, and incentives. Methods are the ways knowledge, understanding, skills, and experience are transmitted to soldiers. They include academic instruction, on-the-job practice, self-study, and supervisor instruction. Tools are what the system

employs to develop leadership. They include such things as course curriculums, materials, training technologies, and so forth. Evaluation and feedback enable the Army to monitor and improve development. This includes the formal enlisted evaluation report, informal counseling, peer feedback, institutional goals and standards, and academic evaluations. Incentives include promotions, benefits, formal and informal recognition, additional responsibilities and authority, and so forth.

KEY ASSUMPTIONS UNDERPINNING THE PROFESSIONAL DEVELOPMENT PROGRAM

A host of assumptions underpin the professional development system. Conference participants attempted to winnow the most significant from the many. Eight assumptions stood out as the most fundamental to developing noncommissioned officers. They are important in assessing the effects of potential changes. If changes can undercut any of these assumptions, the effect on noncommissioned officer professional development could be large. Thus, the Army might want to pursue some actions to hedge or guard against such changes.

Qualified NCO corps assumption: Current leadership development assumes that noncommissioned officers have the skills and experience they need to develop other (more junior) NCOs. In particular, operational assignments and self-development depend on experienced NCO supervisors and mentors to help young noncommissioned officers learn the ropes. Current leader development practices assume that more senior noncommissioned officers have such knowledge and experience, that they exist in sufficient numbers to train others, and they know how to train and mentor others.

Select-train-promote assumption: For cost-efficiency reasons, soldiers are supposed to be sent to NCOES only after they have been selected for promotion. Usually this occurs before the actual promotion, but occasionally it takes place afterward. Current leadership development assumes this policy targets relevant training to those who need it. However, this practice means that there is no reserve of not-yet-selected noncommissioned officers with the skills needed to fill more senior jobs when they are required to do so.

Training validation assumption: As pointed out by many conference participants, institutional leadership training tends to be "back-loaded," i.e., it usually happens *after* an NCO needs those skills in his assignment. The underlying assumption is that institutional leadership development validates (or allows adjustment of) leadership skills that the NCO had to develop on the job. Institutional training also provides the formal theoretical framework within which to place leader development skills learned during operational assignments. This framework helps the more senior noncommissioned officers teach these skills to the young sergeants under their supervision.

Up-or-out assumption: The existence of up-or-out and the way it is currently implemented suggests that the present structure of the noncommissioned officer corps suits (and will continue to suit) the Army's needs. In addition, it presumes that all NCOs should receive professional education and be considered for promotion as long as they are retained in the Army.

Self-development utility assumption: The existence of the self-development pillar assumes that it advances the Army's (versus the individual's) interests. The conference participants emphatically regarded self-development as important but questioned whether it serves the Army's need to an adequate extent. Interestingly, a primary rationale advanced for self-development was that promotion boards find it a useful proxy for assessing a soldier's ability and motivation.

Caring commander assumption: For self-development to be a viable pillar of formal education, the unit commander must be motivated to encourage his noncommissioned officers to pursue self-development and other educational activities. However, as conference attendees pointed out, this assumption is already questionable, insofar as some commanders will sacrifice noncommissioned officers' self-development activities to promote unit readiness, e.g., cancel or delay professional development such as schooling to prepare for an important upcoming event. While a focus on unit readiness is appropriate, it promotes the unit's short-term gain at the expense of the NCO's long-term benefits.

Soldier awareness assumption: Further, if self-development is important, then clearly the soldier must be responsible for his or her

own self-development efforts. However, soldiers must know what is expected of them. This implies that they have a good picture of what the Army needs in the way of skills that they should work to acquire. Today they get this from supervisors, career counselors, and any mentors with whom they may have developed relationships, under the assumption that these individuals also have a good picture of what would be good for the Army and the individual. But there is no Army-wide guidance, and supervisors, counselors, and mentors may not have a valid picture of Army needs.

Standardization utility assumption: This assumption is the rationale for a centralized USASMA institution, an organization created to establish and enforce noncommissioned officer institutional education standards. It further underpins other beliefs about how NCOES ought to be conducted, e.g., in live-in environments.

STRENGTHS OF THE CURRENT SYSTEM

Without exception, conference participants voiced strong support for the current NCO professional development system. In their view, it has been responsible for developing a dedicated, professional, and capable noncommissioned officer corps. Many of its characteristics—e.g., development begins early and is sequential and progressive—are regarded as critical to developing noncommissioned officers. Such characteristics, identified by conference participants as fundamental to the success of the noncommissioned officer corps, must be retained, regardless of what other changes may occur. The participants called these "imperatives," and they can be summed up in two general recommendations:

- Retain the three-pillar structure of NCOES
- Provide early and frequent training

The Three-Pillar Structure

NCOES was regarded as key contributor to the professionalism and competence the noncommissioned officer corps now enjoys. Workshop participants expressed considerable concern that budget pressures and other influences might diminish—if not eliminate outright—the institutional component. This component was regarded

as critical for the instruction of performance and leadership tasks. Implicit in this is the notion that this instruction occurs in a resident setting. This setting minimizes distractions, facilitates standardization, and promotes the transmission of institutional standards and cultural values. The setting also allows the use of the small group process, which promises to promote trust building and cooperative problem solving. It also fosters the development of networks among noncommissioned officers, which can pay dividends after students depart the resident setting. Likewise, the self-development component was regarded as an important complement to the institutional, albeit one in need of some strengthening.

Early and Frequent Training

The continuous, sequential, and progressive nature of noncommissioned officer instruction was regarded as the keystone of NCOES. Interspersed with operational assignments, periodic training both builds on previous experience and prepares the noncommissioned officer for subsequent assignments of greater scope and responsibility. It also provides noncommissioned officers with the latest technical information along with the current doctrine. This enhances and reinforces both standards and standardization. Conference participants also felt that some training should occur sooner in the career.

WEAKNESSES OF THE CURRENT PROGRAM

The workgroups identified, with a surprising degree of consensus, several aspects of current NCO professional development that could be strengthened. The most significant of these were the self-development pillar of NCOES, the incentives for NCO education, and the timing and rigor of institutional instruction.

Self-Development

Although most regarded the self-development pillar as important, most also thought that it needs repair. In the view of conference participants, three areas need strengthening. First, there should be a better definition of what self-development should accomplish and what types of development the individual should pursue. At a mini-

mum, this information should be available by MOS and skill level. Ideally, each soldier would have an individual self-development program that spells out the specific types of development he or she should pursue. Second, it requires better incentives. From the individual's perspective, current incentives are either indirect (e.g., used by promotion boards as an indicator of motivation) or personal (e.g., self-satisfaction from gaining new knowledge). A more focused set of incentives, consistent Army-wide, would prompt better and more consistent participation in self-development activities. Third, the Army needs a way to determine the value added by self-development. One of the key assumptions identified was that self-development benefits the Army. While it might be true that any self-development benefits the Army, a clearer definition of the intended outcomes would seem to be necessary to ensure that the Army is getting what it wants from this component of NCOES.

The lack of an integrated career development plan was seen as contributing to the weakness of the self-development component. The belief was that the extant plan serves as a model only and is largely disregarded. To work, it needs to be linked to promotions, schooling and assignments. A clear and structured plan could serve to educate soldiers and supervisors alike about professional development needs.

Incentives

The conference consensus was that the incentives for NCO education do not align well from an institutional perspective. As indicated above, incentives for self-development could be strengthened to clearly indicate to the noncommissioned officer what self-development activities the Army deems important. But the problem of incentives goes beyond self-development, encompassing institutional training as well. Short-term considerations such as readiness, while important, conflict with the long-term needs of noncommissioned officer professional development. Commanders, whose evaluations pivot on the readiness of their units, may be reluctant to release noncommissioned officers for schooling, particularly if a key event, such as preparation for an NTC rotation, is in the offing. One approach would be to make the professional development of subordinates part of a commander's evaluation or otherwise reward them

for managing their human resources to meet the Army's development objectives.

Institutional Instruction

According to conference participants, institutional education tends to occur too late. Frequently, noncommissioned officers have held a position before they finally get the training designed to prepare them for it. In part, this problem stems from inflexibility in the Army's "select-train-promote" policy. An individual can be serving in a higher-grade position before being selected for promotion. Thus, he or she may not be eligible for training even though the job may demand more knowledge than the soldier possesses. The problem is also manifested in the quantity of institutional training provided at various career stages. Much more time is spent in school late in one's career (e.g., at the Sergeant Major course) than at earlier stages, where more might be needed (e.g., at ranks Staff Sergeant and Sergeant First Class).

Concern was also expressed about the rigor of the institutional training. Initial entry training was seen as lacking sufficient discipline, and subsequent courses were seen as needing higher standards. The subject of open-book testing drew particular comment. It was generally felt that even if this practice is retained, it should be supplemented by closed-book testing. While some tasks lend themselves to searching for the answers in regulations and doctrinal manuals (e.g., administrative issues), others do not. These should be a matter of learned behavior.

CONDITIONS THAT COULD CAUSE CURRENT PRACTICES TO CHANGE

The conference participants explored a number of alternative futures that could cause the Army to change the way it does business. The discussion was wide-ranging among the groups, but several common themes emerged. These appear in the left column of Table 1, along with the implications and policy issues that flow from them.

Table 1

Policy Issues Resulting from Possible Futures

Future	Implications	Policy Issue
Different missions	Different responsibilities	Content and method of training
Advancing technology	More specialization	Career fields, lengths
Change in size, organization	Different roles	Grades, assignments, education
Reduced resources	Fewer training opportunities	Reallocation among the pillars
Changes in recruit pool	More diversity in skills and values	Maintaining skills, values, professionalism

Different Missions

Since the end of the Cold War, the Army has confronted a range of missions that are contributing to units' current high operational tempo. While these missions are not new in the sense that the Army has long participated in similar operations, the pace of them has accelerated in recent years. Should this pace continue, the Army will have to come to grips with how to accommodate the demands of what are called the smaller-scale contingencies (e.g., peacekeeping, humanitarian assistance, disaster relief) while remaining prepared to fight major conflicts. Maintaining combat capability will remain the Army's primary focus, because it is central to most smaller-scale contingencies as well. However, these operations impose a different set of conditions and standards (e.g., patrolling in peacekeeping operations tends to be overt rather than covert), they require different ways of interacting with local populations, and they employ some different equipment (e.g., nonlethal weapons). An increased emphasis on joint and combined operations is also a departure from the past. In concert, these influences may require different content and methods of training.

Advancing Technology

As the Army's Advanced Warfighting Experiments illustrate, technology is proliferating throughout the Army. Furthermore, that technology is changing rapidly. Although the implications of this proliferation and change are not totally clear, they suggest that the Army of the future may need increased specialization in both the officer and enlisted ranks. This specialization in turn can imply new career fields, organizations, and training. It may also imply different roles. Endstrength is not likely to increase, nor is the balance between officers and enlisted. Historically, the Army has dealt with new technologies by increasing the number of officers associated with the new systems. So if officers become more technologically specialized, it may be necessary to reassess the roles of the noncommissioned officers, who may be called on more frequently to assume duties once performed by officers. Further, the incorporation of advanced technology may imply a need for different personnel policies. For example, given the cost of training people in these advanced technologies, it may make sense to revisit the "up or out" policy. Retaining a highly trained solider in grade while continuing longevity raises may be warranted.

Change in Size and Organization

Many influences could cause the Army's size or organization to change. Application of information technology coupled with advances in long-distance precision fires could call into being some new and very different organizations. Such organizations could require noncommissioned officers to assume totally new roles or, as mentioned above, those traditionally performed by officers. This situation would prompt a reexamination of the type of professional development needed and the relationship between education and assignments.

Resource Limitations

Most projections call for a level defense budget. But national priorities can change, and further budgetary cuts could occur. Even if they do not, resources can be redistributed internally to address problems, e.g., modernization. In the event of any future reductions,

training is likely to suffer, particularly the institutional component. Should this occur, the Army would need to seek less expensive but equally effective ways to develop its noncommissioned officers. Thus, more of the burden could shift to the unit or the individual.

Changes in the Recruit Pool

The pool of applicants the Army recruits from is changing constantly. In some cases, these changes are demographic and reflect the results of immigration and other influences. In other cases, the changes are social. Young people joining the Army in the future may bring a set of values different from those seen today. The Army has successfully met such challenges in the past, but it still needs to recognize any differences and be prepared to address them.

Chapter Three

RESULTS OF THE WORKSHOP ON THE FUTURE VISION OF THE ARMY NCO CORPS

As the preceding section demonstrates, results from the NCO leader development workshop point to strengths and weaknesses in current approaches that imply a need for some changes in how NCOs are developed. In addition, the results identify key assumptions underpinning NCO professional development, some of which could be vulnerable to changes in the future. The issue now is to determine what changes in NCO professional development to consider and what should guide decisions to change.

A VISION FOR THE NONCOMMISSIONED OFFICER CORPS

To address this issue, USASMA and RAND conducted a separate, two-day workshop with eleven senior NCO participants, seven of whom participated in the original workshop. This workshop's purpose was to take the specific outputs of the first workshop and develop a more general construct for considering proposed changes to noncommissioned officer leader development.[2] The stated goal was to develop a *vision* for the noncommissioned officer corps. This vision would articulate important and sustaining characteristics of Army NCOs in order to identify potential courses of action and resolve uncertainties as they may arise. The vision that emerged from this workshop appears in Figure 1.

[2]The introductory briefing used to structure and guide the vision workshop is contained in Appendix H of this document.

Vision of the Noncommissioned Officer Corps

A noncommissioned officer corps, grounded in heritage, values, and tradition, that embodies the warrior ethos; values perpetual learning; and is capable of leading, training, and motivating soldiers. We must always be a noncommissioned officer corps that:

- Leads by example
- Trains from experience
- Enforces and maintains standards
- Takes care of soldiers
- Adapts to a changing world

Figure 1—Noncommissioned Officer Corps Vision

The remainder of this section examines this vision from the following perspectives:

1. What criteria must a vision satisfy for it to be considered a *good* vision?
2. How does the noncommissioned officer corps vision measure up against these criteria?
3. How does the noncommissioned officer corps vision relate to the results of the NCO leader development workshop?

CRITERIA FOR A GOOD VISION[3]

An organization's *vision* should provide its members with a clear, succinct, and unambiguous understanding of the organization's identity and purpose. The vision should be able to guide the organization's members as they pursue their day-to-day responsibilities. It should serve as a template with which the organization's members

[3]The vision discussion in this subsection is motivated by John K. Setear, Carl H. Builder, M. D. Baccus, and Wayne Madewell, *The Army in a Changing World: The Role of Organizational Vision*, Santa Monica, CA: RAND, R-3882-A, June 1990.

can evaluate the appropriateness of specific courses of action. We consider a vision that does this to be an effective or *good* vision.

Setear et al. (1990) examine both private and public sector organizational visions to identify characteristics of a good vision.[4] According to their research, a good organizational vision

> allows coordination without excessive centralization. If shared, a sense of identity and purpose can reliably guide members of an organization without the need to consult higher levels of authority. A far-flung organization can rely upon the initiative and fresh information of personnel in the lower ranks if it can instill them with a unified sense of identity and purpose . . . [5]

The authors further suggest that a good vision must satisfy four criteria. A good vision must be

- enduring and pervasive
- inspirational and motivating
- clear and differentiating
- relevant and realistic

Enduring and Pervasive

This criterion calls for a vision to be stable over a long period. An organizational vision that is constantly in flux cannot provide consistent guidance to the organization's members. Because of the far-reaching and long-lasting effects of decisions that noncommissioned officers may be called upon to make, a vision for the noncommissioned officer corps should be stable for at least five years and preferably longer. Were such a vision being changed, for example, on a yearly basis, there would be insufficient time for the noncommissioned officer corps to internalize and be guided by it. Further, some noncommissioned officer decisions informed by last year's vision may prove inconsistent with this year's. Such inconsistency can cause confusion.

[4]Ibid., pp. 19-21.

[5]Ibid., p. 19.

Inspirational and Motivating

The sense of identity and purpose conveyed in a vision must appeal to the organization's members if it is to guide their behavior. A vision that does not appeal to the organization's members will simply be ignored. A vision that the members can use as a reference point can motivate their actions and help them shape those actions in ways that are consistent with the organization's essential identity and purpose.

Further, an inspirational and motivating vision can present a positive image of the organization to the outside world. If a vision conveys a negative image, it can adversely affect the outside world's perceptions of the organization's worth. For the Army, that outside world includes the American people and Congress as well as the other military branches.

Clear and Differentiating

A good vision should provide a sense of the organization's uniqueness. It should help the members and the outside world understand how this organization differs from others.

Relevant and Realistic

A good vision should realistically and relevantly apply to the challenges and opportunities confronting an organization. It should help the members solve the problems that the organization confronts. An unrealistic, unattainable vision can lead to frustration. A irrelevant vision will not provide the problem-solving guidance and the unifying sense of purpose and identity that the organization's members need.

DETERMINING THE "GOODNESS" OF THE VISION

How does the noncommissioned officer corps vision measure up to the four criteria? Is it enduring and pervasive? Motivating and inspirational? Clear and differentiating? Relevant and realistic?

Enduring and Pervasive

The phrase "grounded in heritage, values, and tradition" conveys the sense that the noncommissioned officer corps has an important legacy to preserve. The phrases "values perpetual learning" and "adapts to a changing world" temper this historical perspective by stating that it is important for the noncommissioned officer corps to change with the times, as factors both inside and outside the Army change. This sense of the past tempered by the realities of the present and future satisfies this criterion in an important way. It places a high value on the noncommissioned officer corps' heritage while recognizing the importance of adapting to the realities of today's Army. However, none of the characteristics mentioned in the vision are limited by time or level. They apply universally and perennially. The unifying sense of identify and purpose that the vision provides can guide noncommissioned officers, no matter what their MOS or level, now and in the future.

Motivating and Inspirational

Does the vision give the noncommissioned officer corps a sense of identity and pride? Does it portray the noncommissioned officer corps in a positive light? The vision can motivate noncommissioned officers by giving them important responsibilities to carry and high standards to achieve. The vision embodies high but realistic standards. A noncommissioned officer who is guided by these standards and who applies them daily is likely to feel a sense of accomplishment, identity, and pride.

Clear and Differentiating

This criterion addresses two related characteristics. The vision's guidance to the noncommissioned officer must be sufficiently *clear* to influence the noncommissioned officer's actions. The vision must also be sufficiently *differentiating* to set the noncommissioned officer corps apart from other organizations.

Is the vision sufficiently *clear*? The phrases "values perpetual learning" and "is capable of leading, training, and motivating soldiers," coupled with the five specific attributes, give the noncommissioned

officer an important set of guidelines to shape daily activities. They convey a sense of what it means to be a noncommissioned officer. The vision does not tell noncommissioned officers *how* to do their job, but it provides them with a template to evaluate their actions.

The phrase "values perpetual learning" stresses the importance of the self-development pillar and the noncommissioned officers' need to improve themselves constantly. They must be prepared to develop expertise in areas that are emerging as important to the Army.

The phrase "is capable of leading, training, and motivating soldiers" conveys the sense that the noncommissioned officers' primary responsibility is to the soldiers. The phrase further states that noncommissioned officers are leaders, not simply supervisors. Additionally, the phrase implies that training soldiers is an important element of noncommissioned officer responsibilities. Finally, the phrase states that noncommissioned officers must do more than give soldiers orders. They must also inspire and motivate them.

The five specific attributes provide distinct operational guidelines that noncommissioned officers can follow. The attribute "leads by example" tells them that they must present a high moral, ethical, and professional example to their soldiers. "Trains from experience" implies that they must know their soldiers' jobs well enough to train them in the job requirements in a doctrinally correct fashion. The characteristic "enforces and maintains standards" places the burden squarely on noncommissioned officers to ensure that the Army's training standards are met. The attribute "takes care of soldiers" bestows responsibility for soldiers' well-being. And the phrase "adapts to a changing world" tells noncommissioned officers that they must be ready and willing to adapt to changes in external and Army conditions.

Therefore, we argue, the vision provides noncommissioned officers with *clear*, operational guidance on how they should fulfill their responsibilities. What about the *differentiating*? The phrase "embodies the warrior ethos" certainly differentiates between the noncommissioned officer corps and nonmilitary organizations. Further, the attributes "trains from experience" and "enforces and maintains standards" distinguishes importantly between the noncommis-

sioned officers and the officer corps by highlighting the front-line supervisory nature of noncommissioned officer responsibilities.

Relevant and Realistic

Does the Army noncommissioned officer corps vision set realistic and relevant standards to guide an NCO's actions? The *clear* part of the *clear and differentiating* discussion above demonstrates this. While the vision does not tell noncommissioned officers the specifics of their responsibilities, it provides them with operational guidelines. The vision clearly satisfies this criterion.

NCO CORPS VISION VIS-À-VIS LEADER DEVELOPMENT WORKSHOP RESULTS

Assuming that the first workshop results represent an accurate assessment of the state of NCO professional development, it would seem that an important test for the vision would be to determine how well it preserves the strengths identified while addressing the weaknesses pointed out by conference participants.

Preserving Strengths

Recall that conference participants identified two primary strengths of the professional development system that must be preserved: the three-pillar educational structure and the principle of early and frequent training. The vision supports both. It implicitly endorses the need for the three pillars of operational assignment, institutional training and self-development as ways to maintain standards and enhance adaptability. It also explicitly acknowledges the need for continuous training.

The Three Pillars

Institutional training. The vision extols perpetual learning, emphasizes leading by example, and gives noncommissioned officers the responsibility to enforce and maintain standards. This combination highlights the need for a strong institutional training component. In theory, perpetual learning could refer to the type of self-improvement that many pursue. However, the emphasis on leading by ex-

ample and enforcing standards clearly refers to institutional values—or else *standards* have no meaning. The institutional component teaches the noncommissioned officer what the standards are that he or she must emulate and enforce. They then form the basis of the example that the noncommissioned officer corps sets.

Less clear is whether this vision requires resident training for institutional instruction. Clearly, standards have to be developed and imparted at an institutional level. Institutional standards can be imparted a number of ways. However, since standards are the focus, centralized instruction ensures consistency in transmitting them, and a resident setting, while expensive, ensures both consistency and focus.

Self-development. The vision addresses and reinforces the importance of self-development in the value it places on perpetual learning and the importance of adapting to a changing world and leading by example. Individual self-development is an important way of keeping one's skills current in response to changes in doctrine and technology. In addition, self-development is a way to lead by example, as NCOs demonstrate the importance of this activity through commitment and accomplishment. Noncommissioned officers can also influence soldiers and affect their skill mix by counseling soldiers on the value of self-development and by steering them toward the more useful self-development activities. By demonstrating to his unit commander the value of self-development, a noncommissioned officer can ensure that soldiers and NCOs have fenced time for this.

Operational assignment. It is through the operational assignment that noncommissioned officers exert the most influence on soldiers. They train them, mentor them, counsel them, and set the example for them to emulate. The vision stresses the operational assignment. It speaks to "leading, training, and motivating soldiers," "leading by example," "training from experience," "enforcing and maintaining standards," and "taking care of soldiers."

Continuous Training

The vision acknowledges the value of early and frequent training in the phrase "perpetual learning." It implies two things: that there is always more to know and that the process of learning it never ceases,

even though it may occur in different settings. Obviously, if learning is perpetual, it occurs continuously throughout a career.

Addressing Weaknesses

The vision helps to point out the weaknesses, though in some cases indirectly. The three key areas of weakness identified were the self-development component of NCOES, the incentives for enlisted education, and the timing and rigor of institutional instruction.

Self-development. The characteristics "values perpetual learning" and "is capable of leading, training, and motivating soldiers," along with the bullet "takes care of soldiers" address some of the key problems with the self-development pillar. The most important problem is that rhetoric does not match practice with respect to self-development. As pointed out in the initial workshop, self-development does not align well with the other educational pillars or with Army needs in providing continuous learning. Hence this pillar needs to be strengthened, given the value placed on perpetual learning. In addition, self-development (if not education more generally) can come off second-best when faced with competing demands for NCOs' time. The vision's guideline that the noncommissioned leader takes care of soldiers should encourage noncommissioned leaders to ensure that, even in the face of high OPTEMPO and PERSTEMPO, their soldiers will have opportunities to pursue self-development activities.

Incentives. The issue of incentives is one of conflicting priorities. Training takes time but can conflict with important but short-term priorities. The commander must balance unit priorities against those of the individual and the institution. The individual needs the training for long-term professional development reasons, to include promotion. The institution needs well-trained noncommissioned officers, but it also needs ready units. Again, the attribute "takes care of soldiers" highlights the belief that noncommissioned officers have as a primary focus the long-term well-being of their soldiers, and this includes their professional development. Further, the charge to "enforce and maintain standards" plays a role here. One of the standards to enforce is that of technical and tactical competence, and one way this standard gets enforced is by ensuring that soldiers receive training in a timely manner.

Timing and rigor of institutional training. The vision does not directly address the issue of timing of training other than to stress its continuous nature. The timing issue—giving training later than it is needed—relates more to personnel policy than to long-term vision. As such, it is not an appropriate element for a long-term vision to address.

The issue of rigor poses a different problem. The vision explicitly charges noncommissioned officers with responsibility for setting and enforcing standards, which could include the quality of the training in enlisted courses. Of course, the noncommissioned officer corps has influence over this problem, since the academies that teach the key professional development courses are largely run by NCOs.

In sum, the vision is consistent with the strengths of the professional development program and can be interpreted to highlight some of the weaknesses identified by the workshop.

Chapter Four

POLICY ISSUES

This section describes major policy issues we see as emerging from the results of the NCO professional development and future NCO vision workshops—the areas where change is needed but where there is also uncertainty about how to proceed and what the future may hold. Two areas stand out as potentially in need of more detailed analysis. The first pertains to self-development and the balance among the pillars of NCO education. The second relates to the relationship between personnel management policies and NCO professional development.

STRENGTHENING SELF-DEVELOPMENT AND IMPROVING BALANCE AMONG THE PILLARS

As discussed earlier, a key issue for strengthening today's NCO professional development system is not only improving self-development but also ensuring that these changes are effective. This issue has two dimensions: incentives and evaluation mechanisms.

Incentives

If one accepts the premise that the current incentives for self-development need improvement, an initial issue concerns the ways to structure those incentives. As a starting point, one could take the position that incentives should better signal to the NCO which career development activities are important to the Army. The issue then is how this might be done, e.g., as a career plan indicating skills needed to advance within a given career management field, accompanied by

differential incentives for various self-development activities. For example, the Army might adopt a uniform graduated scale for tuition reimbursement. It could provide 100 percent tuition assistance for more desirable self-development activities, 50 percent tuition assistance for less desirable activities, and none for activities seen as peripheral to self-development.[6] Similar logic could apply to promotion points offered to junior NCOs.

A restructured incentives system might also address unit commanders, who may face conflicting priorities (unit readiness versus NCO education). For example, some additional impetus could be considered to encourage the self-development activities of soldiers in the unit, consistent with Army needs as a criterion on which commanders could be rated or otherwise recognized. With this inclusion, and with the recognition that the primary responsibility is to unit readiness, the unit commander will have some incentive to promote soldier self-development.

Evaluation Mechanisms

Conference results also point to the need for better mechanisms for evaluating the effectiveness of self-development in supporting Army needs and NCO professional development. How, for example, do a unit's enhanced self-development activities affect the unit's readiness? As another example, how do an NCO's self-development activities affect future career prospects?

Strengthening self-development might alter the balance among the pillars of NCO education. Hence an analysis that seeks to strengthen and assess self-development should also address the broader question of how to assess balance among the pillars and how to determine appropriate timelines for various educational events. As discussed earlier, many NCOs feel that much of today's institutional training is "back-loaded," i.e., coming after OJT learning has already occurred or too late in one's career. Moving institutional training earlier raises some interesting issues, particularly if self-development is strengthened. If training is shifted earlier in one's career, does this

[6]Today some commands provide 75 percent tuition assistance (unstructured), while other commands do not.

imply that this training should be provided by the institution? Or could it be usefully provided through OJT or self-development? If unit-based and self-development training are strengthened, does this provide an opportunity to offer training to soldiers who may need it by virtue of their position? These questions are interesting in their own right, but they also represent a broader class of questions addressing whether the Army has the right mix of institutional, operational assignment, and self-development activities, now and as it moves forward.

Hence, the Army might wish to consider how to strengthen its self-development system, how to measure its effectiveness, and how to assess its contribution within the overall balance among the three pillars of NCO education. It might be useful to have a decision-support tool that demonstrates the dynamics of different professional development timelines and their costs and benefits. For example, such a tool could illustrate graphically what happens when major institutional events occur earlier in a career, or if self-development is expanded, and assess its impact relative to a different way of providing professional development. This could clarify the effects of choices about professional development and help to illustrate more clearly how unit, institutional, and self-development activities interact. It would also be useful to examine the positive and negative aspects of selected self-development effectiveness measures, with an eye toward the Army selecting one or more for implementation. Related issues include how a unit's self-development activities affect its readiness and how an NCO's self-development activities affect promotion prospects.

ENLISTED PERSONNEL MANAGEMENT VIS-À-VIS NCO LEADER DEVELOPMENT

As indicated above, enlisted personnel management policies are an important element of NCO professional development. These policies directly govern the experience and assignments NCOs receive that are fundamental to their development, and they provide important constraints on the shape, structure, and size of the NCO corps.

Enlisted personnel management policies were often raised in the NCO leader development workshop when considering potential vul-

nerabilities of current NCO leadership development to changes in the future. For example, when discussing the effects of rapidly advancing technology, participants at the NCO workshop questioned whether the structure of enlisted career fields affected by rapidly advancing technology might need to change in the future (e.g., become more specialized, require more experience, etc.). If so, this may require a fresh look at the relationship among policies governing education, promotion, and retention on NCO experience levels.

Another issue is whether specific current career management policies will remain viable. As discussed earlier, participants pointed to two areas that warrant systematic analysis: up-or-out and select-train-promote. Concerns were expressed about both the current inefficiencies and the future viability of these practices. For example, if the Army has an increased need for certain specialists, it might prove advantageous to extend retention control points (thereby relaxing up-or-out) in certain high-tech occupational specialties. Similarly, there may be circumstances under which it may prove beneficial to modify select-train-promote, e.g., by ensuring that education occurs prior to assignment to a new duty MOS, or by offering education to some NCOs who have not yet been selected for promotion (e.g., when seniority levels are being reduced).

Decisions about such changes might rest upon cost-benefit considerations for differing subgroups of the enlisted force (e.g., differentiated by grade, years of service, and specialty dimensions). For example, where up-or-out may be appropriate for warfighting career fields, a relaxation of up-or-out may be warranted for other specialties. Further, it may be useful to examine how personnel policies might affect the flows among career fields, the resulting accession effects, and different training scenarios.

Appendix A

ORIENTATION TO FUTURE NCO LEADER DEVELOPMENT WORKSHOP

Future Leader Development of Army Noncommissioned Officers: Workshop Introduction

Apr. 28 - May 3, 1997

Jim Dewar

Arroyo Center ## RAND

This appendix contains the briefing given at the outset of the "Future Leader Development of Army Noncommissioned Officers" workshop, hosted by the U.S. Army Sergeants Major Academy and held in El Paso, Texas on April 28 to May 3, 1997.

The briefing describes the strategic planning methodology used to structure the workshop and the format for the workshop.

Bottom Line

This workshop is about *strategic planning* for Army NCO leader development

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The focus of this workshop is on strategic planning, using a methodology entitled "assumption-based planning" (ABP), to identify strengths and weaknesses of the current NCO leader development system. In addition, ABP aims to identify where the system could be vulnerable in the future, even where things are working well now. In this way, this exercise can lay the groundwork for new initiatives to strengthen the Army's leader development system for NCOs, by anticipating potential problems that may arise in the future and identifying strategies in the present for preparing and dealing with future vulnerabilities.

Assumption-based planning is particularly appropriate when the shape of the future is uncertain. The approach focuses on understanding the assumptions underlying today's policies and procedures to understand in sufficient depth how those assumptions become vulnerable to future changes.

How Should One Do Strategic Planning for Army NCO Leader Development?

- Could solve today's problems
  - This will lead to improvements
  - But is shortsighted
  - Particularly in today's dramatically changed world
- Could figure out what is needed for Army After Next
  - From there, compute Δs and draw a roadmap
  - But what if you can't figure out what is needed?
    - ◊Should you "guess and go"?
    - ◊Are there better ways?

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Now let us explain the approach we are using at this workshop.

There are two obvious approaches to thinking about improving the NCO leader development system. The first is to concentrate on today's problems. This is likely to lead to improvements, and in relatively stable times is probably the best approach. In times such as these, however, when dramatic changes are afoot in the military, concentrating on today's problems would be shortsighted and likely to lead in directions that don't try consider how the future might change.

Clearly, a longer focus is more appropriate, but exactly what focus? In the past, the Army has tended to approach such problems by projecting a world in the future, deriving the changes needed to get from here to there, and developing a road map for instituting those changes over time. This method, too, is best in relatively stable times, because projections into the future are more likely to be accurate.

What other ways are there to approach this kind of problem?

Methods For Dealing With the Future

Three popular ones were artifacts of the Cold War

- **Worst-case scenario analysis**
- **Trend extrapolation (most likely world)**
- **Parallel programming**

Two others are relevant for the increased uncertainties of the post-Cold War world

- ***Refocusing (vision)***
- **Multiple scenario analysis**
  - ***Assumption-Based Planning (ABP)***

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There are several recognizable techniques for dealing with the future, which can be broken down by how they handle uncertainty. Some of them are better suited to relatively stable times, others to more uncertain times. We have identified at least three methodologies (including the trend extrapolation or most likely world approach) that were better suited to the particular characteristics of the relatively stable Cold War era.

Worst-case planning encapsulates uncertainty by making all other situations lesser-included cases. Strategic Cold War planning had, as its worst-case scenario, a war in Central Europe that would escalate to a homeland exchange of nuclear weapons between the superpowers. All other conflicts were presumed to be handled if we could handle the worst-case one. While this turned out to have questionable validity even during the Cold War, it is much harder to argue that there is any threat today that is so all encompassing.

Trend extrapolation handles uncertainties by projecting a single likely world. In the relative stability of the Cold War, this was a reasonable technique out to relatively long planning horizons. How-

ever, in very uncertain times, the only thing certain about a most likely world is that it most likely to be wrong.

The parallel programming approach deals with uncertainties by programming for all alternatives. During World War II, the country employed three different approaches to making an atomic bomb—one with plutonium, the other two with uranium. In the presence of great urgency and uncertainty, all three became completely funded programs. The strategic triad and the development of ballistic missiles are other examples of parallel programming. In times of severely reduced budgets and urgency, this approach has only limited application.

Put more strongly, these three methods for dealing with the future are inappropriate today. We have argued that a new planning mindset is necessary in today's more uncertain geopolitical situation. Two planning methods from the Cold War era still appear to have utility in the new planning environment.

The goal of refocusing (or vision) is to change the way a problem is approached so that its major uncertainties are ameliorated. George Kennan's approach to countering the expansionist Soviet Union was not to tackle the uncertainties of how to carry the fight to the USSR, if necessary, but to refocus strategic planning on containment, which made those attack uncertainties irrelevant. "Fortress America" is another example. It refocuses our attention on the current environment in such a way that many of the uncertainties about readiness and logistics are irrelevant. But not all refocusing or visions are good or worthwhile; while visions are easy to create, quality visions—although very powerful—are difficult to develop.

Assumption-based planning is a specific method from the broader class of multiple-scenario analysis. This class deliberately programs against uncertainty through warning and hedging actions. Strategic bomber survivability depended on potential emerging threats that could be monitored, shaped, and hedged against. Multiple-scenario analysis can be thought of as what to do in uncertain times if a quality vision is absent.

Of these two approaches, the development of a vision is preferable in the sense that nothing beats a good vision. Business literature is replete with examples of visions that have been used to focus and

motivate employees to high achievement. The problem is that good visions are hard to come by. Coming up with a good vision is invariably a very creative enterprise and one without assurances of success. An example of a bad vision is "the best product at the lowest price." It says what is to be done, but it hardly provides the kind of differentiation from others that characterizes a good vision, it has patently conflicting ideals—high quality and low price—and it is only vaguely inspiring to any but the most impressionable employee. On the other hand, IBM's early computer vision of "we will make the best hardware and provide the best service" was a good vision. Nobody else could match IBM's hardware or service (though IBM was more expensive because of it), it was a doable set of changes, and it helped attract the kind of people (hardware and service-oriented) that it needed.

Given that visions are not easy to come up with, multiple scenario analysis methods can be used as a stopgap measure. It is always possible to come up with temporizing measures that work. In addition, as we will see, parts of ABP can be used to generate the kind of information that is most useful in trying to come up with a vision. ABP, then, does double duty in assisting the search for visions and in helping form a backstop for a failed vision search.

Assumption-Based Planning Has Five Elements

- Find the important (load-bearing) *assumptions* that underlie current plans, programs or concepts
- Determine the *vulnerability of the assumptions* to being altered or overthrown out to some time horizon
- Identify *signposts* that will warn of changes in vulnerability of important assumptions
- Develop plans and programs for *shaping actions* that will prevent impending vulnerabilities
- Develop plans and programs for *hedging actions* that will compensate for impending vulnerabilities

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This chart provides an overview of the assumption-based planning methodology that will guide the workshop. The basic idea of ABP starts with what can be known—the important assumptions upon which *current* concepts, plans, and operations are based. An assumption is an assertion about some characteristic of the world (today and for some time in the future) that underlies the current concepts of an organization. An assumption is important if its negation would lead to significant changes in those concepts.

One can then identify which of these assumptions could become vulnerable. To do this requires a planning time horizon that is the farthest point out that a given planning effort will consider. This horizon is important because it sets the limits on the vulnerability of an assumption. Events that could plausibly take place within the planning horizon and that could overturn the assumption or cause it to be false establish the vulnerability of that assumption.

From these vulnerable assumptions one can develop signposts indicating changes in the vulnerability of an assumption. Signposts are critical to ABP, which is driven by the notion that the best approach

in an uncertain planning environment is to do what needs doing now and to watch for changes that will resolve the uncertainties. Signposts are the mechanism for monitoring the uncertainties in the organization's future.

The NCO workshop will concentrate primarily on the first two steps in ABP. We will spend a great deal of time reviewing current practices for conducting NCO leadership development. Then we will explore the reasons for these practices and their vulnerability to future change.

Characteristics of ABP

- Good in uncertain times
- Systematic way of generating alternative worlds
- Ties programs to specific assumptions
- Starts with the known world of today
- Requires initial plan or concept
- Hard to determine if all of the important assumptions have been identified
- Produces plan fragments, not complete plans
- *Can be used in the search for visions*

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ABP was designed for very uncertain times. It was originally created to aid in a Cold War plan that was looking 30 years into the future. Its multiple-scenario approach is generally accepted in private industry as one of the most effective ways of looking far enough into a future whose characteristics are difficult to accurately forecast.

The one thing ABP ignores is a plan for the world in which none of one's assumptions is broken. That was deliberate because too often the "no surprises" world dominates any planning exercise. By specifically excluding it, ABP forces participants to concentrate on the "surprises" part of the future. This means that some initial plan or concept is needed to start the ABP process. The fallback position is always to use current operations as the starting point. We start with what we know best, namely today's world, identify the assumptions that underpin that world, and then look for things that would invalidate those assumptions. It is this feature that allows ABP to be used as a test for any plans.

By creating scenarios from the failure of the vulnerable important assumptions underlying current operations or plans, ABP generates

scenarios in a much more systematic way than other methods. Most other methods use ad hoc means for generating scenarios—typically relying on outside forecasters to develop scenarios.

Every strategic planning tool or methodology has its shortcomings. ABP's primary one is that it is only as good as the assumptions that can be identified in current operations or plans. One can never be sure that all the important assumptions have been identified.

One of the important advantages of ABP is that it ties actions to the failure of specific assumptions. In so doing, increases or decreases in the vulnerability of that assumption can then help dictate budgeting and emphasis on the actions taken on its behalf.

Format For a Workshop Aimed at Searching For a Vision

- Work to systematically understand NCO leader development now and why it operates that way
  - How? (and why?)
  - What? (and why?)
  - When? "
  - Where? "
  - Who? "
  - Why? "
- Ask what could change the way things are done now
- Identify "trigger points" of things that could change
- Lay all of that information out and stare at it
  - What common threads are there?
  - What global solutions suggest themselves?

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Here we'll apply ABP to assist in the search for a vision for guiding NCO leader development in the future.

The first step is to understand what is being done today to develop NCO leaders and why. One way to arrive at a comprehensive understanding of NCO leader development today is to ask the journalist's questions of "how?, when?, who?, what?, where?, why?" Facilitators will lead breakout groups for each question with the goal of having the information necessary to write a comprehensive newspaper article on that aspect of the system. But that's not all. It is important to simultaneously elicit not only how leader development is being done, buy why it is being done that way. (The "Why? (and why?)" question makes sense if the first why is thought of as a strategic question and the second as a tactical one.) It is the *whys* that speak to the rationale behind the current system and a deeper understanding of today's NCO leader development system. It is the *whys* that reveal the assumptions under which the current system was developed.

Understanding the system today is akin in strategic planning in private industry to "understanding the business." Another important

element in private strategic planning is to understand what changes to current practice might be in the offing. While an understanding of the NCO leader development system should be the primary goal of such a conference, the conference should also discuss those things that could conceivably change the current rationale for doing things. This requires the participants to look into the future, but from the safety of understanding about the system in place today. This look into the future is not trying to figure out what the future will be, only what it could be. In this way, we start with what we know best—today's NCO leader development system—and look for things that might create a need to change today's system.

For each change that could occur, it is useful to identify events or trends that provide clear indications that change is indeed occurring. These "trigger points" then become signposts for monitoring the future.

In ABP terms, at this point, you would have the assumptions underlying the current system, an understanding of which of those assumptions could "break" in the future (leading to the potential need for change in the system), and signposts or "trigger points" that would indicate an important increase (or decrease) in the vulnerability of those assumptions.

Together, these elements form a comprehensive understanding of both what the NCO leader development system is today and how it could change in the future. This is exactly the kind of understanding a visionary would want in order to develop a vision for the NCO Corps that best handles the uncertainties about what could happen. The process of creating visions is very idiosyncratic, but almost certainly involves looking for common threads in what could happen and trying to come up with a "global" solution for the various potential problems that face NCOs.

It is important to recognize that ABP is not a one-time exercise. Rather, it must be employed periodically as the NCO leader development system evolves and, just as important, as the changing world unfolds. This conference is the starting point. However, we need to revisit NCO leader development every few years to ensure that the changing world does not invalidate assumptions that we've made.

Example: Where to Educate and Train?

Where are key NCO skills trained today?

- **What sites are used? What facilities?**
- **What is the role of distance vs resident learning?**
- **What is the role of unit vs individual training?**

And why?

- **Why there? Why not somewhere else?**
- **What could change to cause us to do it differently?**
- **How can we see those changes coming?**
- ***What should we do about such changes?***

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As an example of the kinds of questions we might ask, consider the "where" question. There are two pieces to the question of "where does leader development take place" The first relates to those kinds of questions that might be asked by a journalist who was going to write a comprehensive article on where it takes place. Where are all the physical facilities associated with leader development located? Where are the educational facilities located? Where does evaluation get done? Where are records kept? Where do different kinds of training happen? And so forth. Anything associated with leader development that takes place at a specific location should be identified.

The second piece of the question is to ask for each of the "wheres," *why* it is done there. What is the reasoning behind doing it there? What alternatives were (or might have been) considered and why were they rejected? It is this second part that really starts to get at the original rationale for all of the "wheres" of NCO leader development. The intent is clear. There are almost certain to be "whys" that have to do with convenience or thinking that was rational then, but have now been (or could be) overtaken by events. It is through a thorough understanding of the rationale for all of the "wheres" that will lead to

a comprehensive rethinking of where the best places to do NCO leader development will be in the future.

Other Examples

- ***Why*** **do we develop NCOs – for what purpose?**
- ***What*** **do NCOs do – for officers, for soldiers, for units, for the Army?**
- ***When*** **do we develop NCOs – at which career points?**
- ***Who*** **develops NCOs – officers, civilians, other NCOs?**
- ***How*** **do we develop NCOs – what techniques do we use? What technologies?**

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Here are some additional examples, stated at a general level, of how we will approach the other questions of what, when, who, and how the Army develops NCOs as it does today. We want to examine the major activities and tasks they perform, determine when development activities occur and who is responsible for developing NCOs, and identify the major approaches and methods used to do this. Of course, in all cases, we are equally interested in the reasons and the potential vulnerabilities that underpin these features of the NCO leader development system.

Workshop Process

- Introductory remarks
- Break into small groups with facilitators
  - One Army, one RAND co-facilitator
  - Facilitators ask "naive" questions
  - Participants answer
- Regather and "show and tell"
- Think hard, think big, discuss
- Repeat
- Listen to two mini-lectures
  - New educational technologies
  - A private sector perspective on leader development
- Summarize and report out

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Here is the format that we will use this week. Once we've completed the opening remarks, we'll break out into small groups. Each group will contain two facilitators—one from USASMA and one from RAND. The facilitators will guide you through a discussion exploring each facet of NCO leader development. They will ask you a lot of naive-sounding questions, intended to ferret out the reasons for doing business the way you do. Your role is to carry the burden of the discussion by responding to the questions and plumbing the topic. Periodically, we'll gather together as a large group and compare notes on what each group is finding.

In addition, to facilitate "out of the box" thinking and provide an opportunity for refocusing, we will offer some "mini-lectures" on related topics, including insights from RAND research. At the end of the conference, each group will prepare an out briefing, all of which will be presented together to summarize the insights you've gained and your recommendations for the future.

Conference Outputs

- Comprehensive list of current issues and problems
  - Shared understanding among participants
  - Current rationales
- Aspects of leader development that should be preserved (core values)
- Aspects of leader development that could change
  - Most important potential changes
  - Changes most upsetting to current system
  - "Signposts" of potential changes
- *Elements of a vision for the future*

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To be more specific, the workshop will have several useful outcomes.

The primary reason for being so systematic and exhaustive in asking questions about today's NCOES is to be able to say with greater certainty that a list of NCOES issues generated in this way is comprehensive. That, in itself, should be a useful outcome. In addition, however, the workshop serves two additional purposes along those lines: (1) forging a shared understanding of the issues among the participants; and (2) developing a clear understanding of why they are issues—what was the original thinking about these issues and how events might overturn (or might already be overturning) that thinking.

Ancillary outcomes include an understanding both of the things about NCOES that are unlikely to need change and a list of those that could. The latter list can then be ordered by importance, scanned for difficulty, identified with "signposts" or "trigger points" that would indicate increasing or decreasing likelihood of change, and so forth.

The overall goal has to do with vision. A comprehensive understanding of the issues facing NCOES should naturally invite the kind of broad, bold thinking that could lead to an important insight on which a vision for the NCO leader development system of the future could be based. This outcome is, by no means, assured, since good visions are very hard to come by). It should, however, provide the kind of global understanding of the problem that would best facilitate that kind of comprehensive insight.

Appendix B

AGENDA

FUTURE LEADER DEVELOPMENT OF ARMY NONCOMMISSIONED OFFICERS WORKSHOP

28 April–3 May 1997

Monday	1000–1400	Registration
	1415–1450	Opening Remarks CSM Bone and CSM McKinney
	1500–1600	Army XXI—Our Future Army Lieutenant General John E. Miller Deputy Commanding General Training and Doctrine Command
	1600–1700	Conference Overview and Assumption Based Planning Introduction
Tuesday	0600–0730	Physical Training (PT)
	0730–0845	Breakfast
	0845–1000	Break Out Groups
	1000–1020	Break
	1020–1130	Mini Lecture: "New Teaching Technologies" by Matt Lewis (RAND)
	1130–1300	Lunch
	1300–1430	Break Out Groups
	1430–1450	Break
	1450–1520	Recap by Break Out Groups
	1530–1700	Large Group Out Brief

AGENDA (cont.)

Wednesday	0600–0730	PT
	0730–0845	Breakfast
	0845–1045	Break Out Groups
	1100–1700	Team Building
Thursday	0600–0730	PT
	0730–0845	Breakfast
	0845–1045	Break Out Groups
	1000–1020	Break
	1020–1130	Mini Lecture: "A Private Sector Perspective" by Beth Benjamin (RAND)
	1130–1300	Lunch
	1300–1430	Break Out Groups
	1430–1450	Break
	1450–1530	Break Out Groups
	1530–1700	Large Group Out Brief
	1900–	Dinner Hosted by NCOA
Friday	0600–0730	PT
	0730–0845	Breakfast
	0845–1000	Break Out Groups
	1000–1020	Break
	1020–1130	Break Out Groups: Put Together Outbrief
	1130–1300	Lunch
	1300–1430	Large Group Summary
	1430–1450	Break
	1450–1700	Break Out Groups: Put Together Outbrief
Saturday	0600–0730	PT
	0730–0845	Breakfast
	0900–0915	Travel to USASMA
	0930–1100	Formal Outbrief to CSM McKinney and CSM Bone
	1115–1130	Travel to Hotel

Appendix C

LIST OF ATTENDEES AT NCO LEADER DEVELOPMENT WORKSHOP

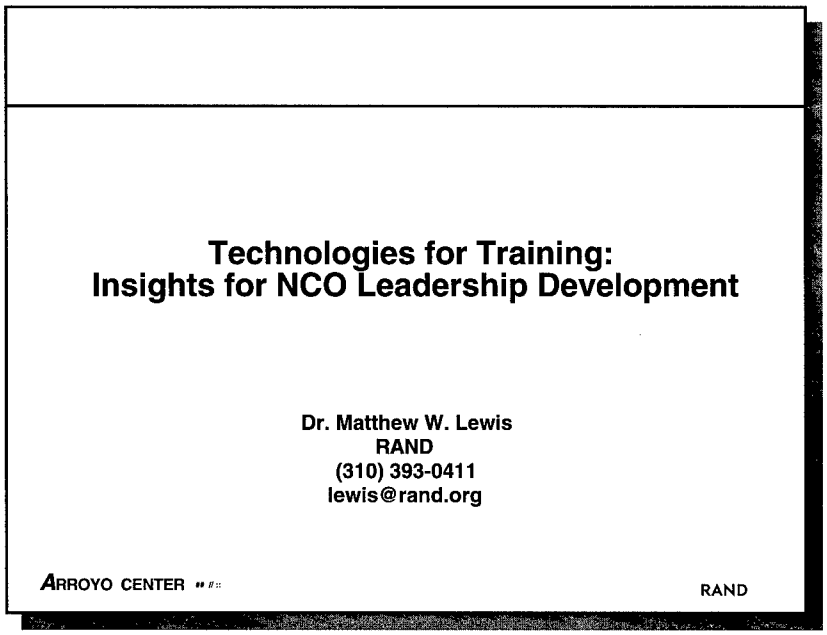
	Group #1	Group #2	Group #3
Group Subject	WHY	WHAT	HOW
Facilitators	Dr. Jim Dewar RAND	Dr. John Peters RAND	Dr. Matt Lewis RAND
	SGM Steve Kern USASMA Faculty	SGM Tommy Wong USASMA Faculty	MSG Judy Ackerman USASMA Faculty
Group Members	CSM Wayne Heinhold CID	CSM Carl Lopez USARPAC	CSM John Beck V Corp
	CSM Mack Verren Infantry Center	CSM Larry Gammon Quartermaster	CSM Robert Erkrich Aviation Center
	CSM Mark Ripka I Corps	CSM Steven England 82D ABN DIV	CSM Edward Naylor CAC
	CSM William Jeminson USASMA BN CDR	CSM Jack Tilley 1st ARMORED DIV	CSM Ruben Blackmon Ft Carson Garrison
	CSM Michael Sweeny CMDT Ft Polk NCOA	CSM Ricky Burts CO CDR	CSM Willie Wells CMDT Ft Benning NCOA
	SGM Ronald Tomek DA DCSOPS	SGM Michael Cox OPS SGM-Ft Riley	SGM Pat Crouse DCSPER
	CSM John Leonard NGB	SGM Thomas McNamara NGB Personnel	SGM Danny Golden NGB Operations
	SGM David Corey USARC DCSOPS	CSM John Rucynski USAR	CSM Nick Piacentini Jr. ARPERCEN
	SFC Richard Matuszczak MEDCOM	1SG Frederick Napper Ft Hood-4th ID	1SG Brian Carlson USARPAC
	SGM Patricia York Ft. Huachuca	CSM Joan Bridgens USAREUR-COSCOMSTB	SFC Paul Kaniss O/C Ft Irwin
	SFC Leroy Hinton FORSCOM-Ft Riley	SFC Edward Haili APG-NCOA	

LIST OF ATTENDEES AT NCO LEADER DEVELOPMENT WORKSHOP (Continued)

	Group #4	Group #5	Group #6
Group Subject	WHO	WHERE	WHEN
Facilitators	Mr. Herb Shukiar RAND	Dr. Beth Benjamin RAND	Dr. Harry Thie RAND
	SGM Norm Zlotorzynski USASMA Faculty	SGM Billy Roach USASMA Faculty	MSG Chris Record USASMA Faculty
Group Members	CSM Robert Steele I Corp	CSM Robert Hall 3rd Army	CSM Donald Thomas 8A/Korea
	CSM Michael Davis MP Chem Cneter	CSM John Holden Jr. Signal Center	CSM Randolph Holling-worth Intel Center
	CSM Richard Russell 3rd ID	CSM Howard V. Rathmann CASCOM	CSM Dennis Webster 1st Cav Div
	CSM Jerry Wood Ft Sill-NCOA CMDT	CSM Johnny Austin 24th ID	SGM Paul Martinez EPMD
	SGM George Jesson CAL-Ft Leavenworth	CSM Manuel Marrea CO CDR	CSM Harry Vogel SSI
	CSM Thomas Pendleton KY CSM	SGM Palya NCOES SGM PERSCOM	CSM Jewell White NCOA CMDT
	CSM Johnny Dwiggins CSM 108th TRGN Div	SGM Gary Robinson USASMA	MSG Jonathan Shaw OCAR DCSPER
	MSG Dan Elder USASMA Inbound Student	CSM Frank Spangler CSM 63rd RSC	1SG Tom Buchino JFK Ctr
	CSM Karen Wilson MEDCOM	1SG Charlie Harper Jr. MEDCOM	MSG Candy Zaffis USARPAC
	SFC Gerald Corbin BSNCO FORSCOM	CSM Paulette Dunlap Cmdt, AMEDD NCOA	
		SFC Carl Phillips BSNCO USAREUR	

Appendix D

RAND "MINI-LECTURE": NEW TEACHING TECHNOLOGIES



This appendix contains the annotated slides for a briefing presented on April 29th, 1997 to the "Future Leader Development of Army Non-commissioned Officers" workshop. It was intended to help attendees realistically understand the important features of existing and emergent technologies for training and their current and potential benefits. It was also intended to provide a stimulus for further

thinking on possible roles in NCO leadership training for which technology might—and might not—be appropriate. Many changes in use and new applications of educational technology lie ahead. It is the task of the NCO trainers to understand the new tools for training and leverage them appropriately to meet their needs. The more the NCO community understands of these tools, the better, more demanding consumers they can become.

Technology is often touted by the military, commercial, and vocational training communities as a provider of more cost-effective training. It is regularly put in the role of panacea for reducing training time and increasing the quality of training while also spanning distance, all at a lower cost. This briefing was developed for the NCO Leadership Development Visioning Workshop to help attendees realistically understand the important features of existing and emergent technologies for training and their current and potential benefits. It was also intended to provide a stimulus for further thinking on possible roles in NCO leadership training for which technology might, and might not, be appropriate.

My Goals for this Mini-Lecture...

Increase understanding of current and emerging technologies for training: Improve your "consumer skills"

Provide some hope/excitement about coming tools: Raise expectations and prepare to integrate them

Stimulate thought about possible applications of these technologies to your training needs

Warning: Not all examples we discuss will be directly related to leadership development; your job is to brainstorm how they might be applicable

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One way to improve the quality of the technologies being marketed to the training communities is to become more demanding and critical consumers. One of the key goals for this briefing is to give members of the NCO Corps a foundation for understanding the underlying structure of different families of educational technology; to help them learn to ask tough questions. Although the past has given us several waves of hype and unmet promises from developers of educational technologies, there is now cause for guarded hope. This briefing will discuss why this is so.

This briefing should also stimulate both short- and long-term thought within the NCO training community for how such tools might meet current and coming needs. Not all the examples used in this briefing are directly applicable to the issue of developing NCO leaders, but analogous tools could be appropriate.

Agenda: Briefly Touch on a Number of Areas

- **Overview of management skills increasingly emphasized in corporations**
- **How the Vocational Education community is meeting this challenge**
- **Why be optimistic about technologies that support training?**
- **Review of current and emerging training technologies (demos/videos)**
- **How to be a "smart consumer: Ask the right questions**
- **The Internet and WWW: Future delivery source of training technologies?**

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This briefing begins with an overview of how increasingly information-rich work environments are demanding new skills from employees in the corporate world. It also briefly lays out the kinds of skills that are increasingly being sought by corporations. It then touches on how certain high-performing schools in the vocational education community have risen to meet these challenges.

Next, the presentation briefly reviews some of the trends in technology and communication development that should provide reasons to be guardedly optimistic about the future of technology to benefit training. The review of specific categories of technologies are each discussed, followed by a discussion of some general questions that might be appropriate for good consumers to ask of training technology purveyors.

The briefing closes with a look at the Internet and World Wide Web as future delivery mechanisms of all the technologies discussed.

Future Skills Needed for Force XXI and AAN: Overview

Directions of commercial firms & Army lessons:

- **Leverage information: Future Army operates in information-rich environments, e.g., AWE at NTC. Increasing needs for analysis and synthesis skills**
- **Less top-down: Decisionmaking and responsibility more distributed and moved closer to "work"**
- **Increasing "entrepreneurial" flavor: Design work and incentive structures for work teams, manage budgets**
- **All workers understand "big picture": How each task generally fits into the overall business process, "end-to-end" focus**
- **More service-oriented/customer-oriented work**
- **Training continuously and multifunctionally**

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Like world-class commercial organizations, the Army must adapt to the uses of information technologies to stay competitive. Force XXI and future Armies must continuously change to keep pace with the evolving information environment, just as past armies have had to evolve with previous major changes in global economies. The Industrial Revolution had significant impacts on the way that wars were waged in the later half of the 19th century, and countries that did not evolve the technologies, and the appropriate ways to use them, did not succeed.

Force XXI has embraced the tenets of securing for American forces "information dominance" on future battlefields. Recent demonstrations in an advanced warfighting experiment at the National Training Center, Fort Irwin, demonstrated a number of new technologies aimed at the goal of better collecting, analyzing, and using information toward a number of goals, including high-veracity situational awareness and battlefield visualization.

Commercial firms that have moved toward leveraging information have often also been able to move toward less top-down management structures. Units at lower levels can get information to directly inform their decisions. When implemented appropriately, such distributed decisionmaking allows for more nimble, responsive organizations. Managers who have the necessary information, responsibility, influence, and accountability can adjust their local work to best fit the needs of their work environment while also best meeting the needs of the overall business process and final customer. This "entrepreneurial" perspective has interesting potential applications to NCO leadership. As situational awareness improves through information availability, how does the role of NCOs change? Will it perhaps require more analysis, decisionmaking, and creative responses?

A final point is that evolving technologies demand that employees continuously update and add to their skill set. As tasks become more technically sophisticated and workforces become more lean, team members are increasingly being asked to cross-train and cover multiple expertise. Specialization in a single task or type of equipment is becoming less common. Being able to cover for absent team members and keep the work moving forward, via cross-trained team members, will continue to be a priority.

How Do You Teach Such Skills?
What High-Performing Vocational Ed Programs Do

Prepare the ground: Begin changing org's culture

- **tolerate experimentation and honest failure**
- **become a "learning organization" ("5th Discipline")**
- **build the infrastructure (hardware, comm, skills)**

Emphases on learning by doing: Hands-on or simulated work experiences

Provide specific training on "enabling skills," e.g., fundamentals of accounting, statistics, technology

Leverage technologies, where appropriate

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The vocational education community has recognized the increasing demand by commercial firms for new employees who have general problem-solving skills, the attitudes of continuous learners, and the ability to use information resources and technologies. In order to change their training institutions and practices, leading companies are well along in the process of significantly changing their organizational structure and teaching methods (Stasz, Ramsey, Eden, DaVanzo, Farris, and Lewis, 1992). Instead of adhering to traditional teaching strategies and content, they have embraced the changes in the work world. Some vocational education schools have set up environments that are friendly to experimentation. Classrooms where innovations, not all successful, are accepted have become the source of institutional learning.

The leaders are also investing in the infrastructure to maintain an adaptive posture to training. They have retooled with new technologies (e.g., computer-numerically controlled machines, information technologies, networks, access to the World Wide Web), and they have supported teachers retooling their skills through release

time and on-the-job training experiences where they can get current on the newest methods and technologies in their fields.

They have also maintained an old tradition in vocational education: Doing hands-on learning. This takes place in the classrooms through forming work teams that must cooperate to complete design, manufacturing, or constructive tasks. Students encounter real problems that they must define, structure, and solve. There is also a continuing emphasis on going into workplaces in apprenticeship-like programs, not only to observe and participate in work, but also to learn about the culture of the workplace. There is also growing recognition and response to explicitly teaching the enabling skills that will be required to be an effective team member in environments that require analysis, quality control, technology use, and collaborative group work.

Finally, these institutions have, where appropriate, sought educational technologies such as teleconferencing, computer-based instruction, and simulation-based instruction.

While We're "Visioning"...
Why Be Optimistic about Training Technologies?

Improving tools for developing training materials improve

Cost of hardware and memory continue to decrease

Speed of comms continues to increase

Power of hardware continues to increase

A: There's a lot to be optimistic about...

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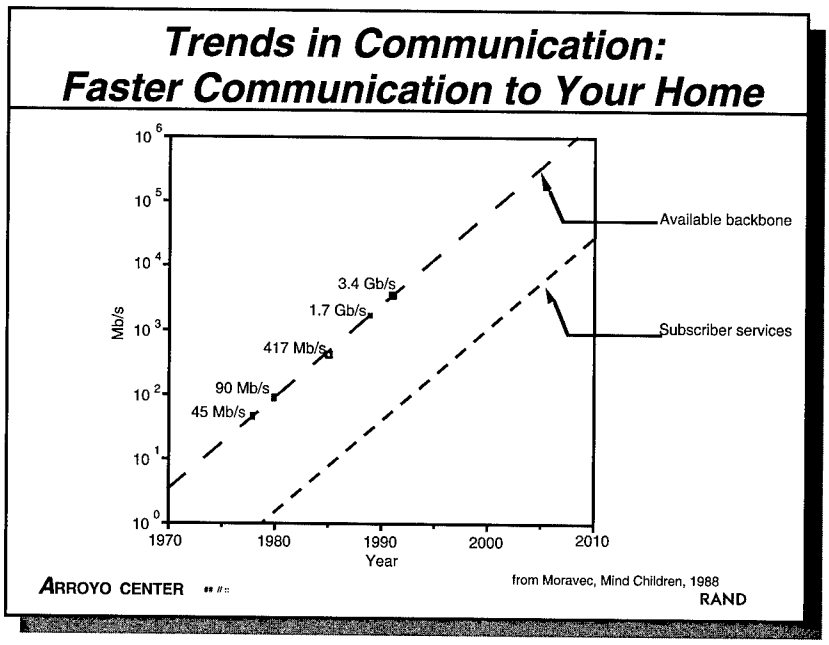
There have been several waves of educational technology that have received much touting and predictions of "revolutionizing" education. These include broadcast radio, movies, broadcast television, computer-based instruction, two-way videoconferencing, and most recently the Internet. Historically, the waves (up through computer-based instruction) have all grown in popularity but ultimately not lived up to their hype and promises. Building the appropriate educational content and integrating the technology into the complex "cultures" of classrooms have always been the stumbling blocks of success (Cuban, 1986).

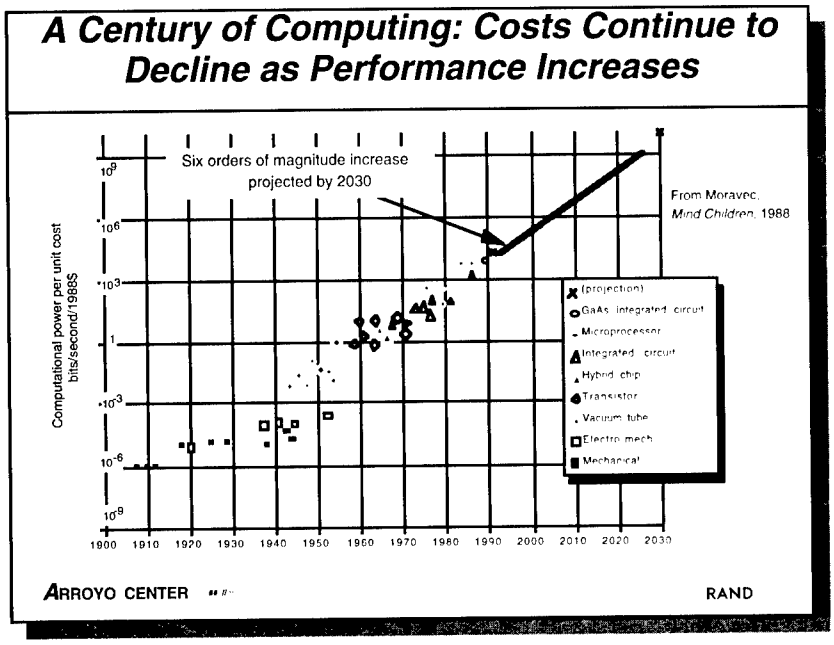
However, there are several reasons that Americans should be guardedly optimistic about the most recent wave of technology: all of them relate to networked access to educational technology via powerful personal computers. First, the tools to develop compelling, interactive, multimedia-based educational software have improved dramatically and continue to evolve. As personal computers become faster and more powerful, the builders of authoring tools have continued to field better products for content developers. Second, the

delivery of such well-designed educational software continues to become more affordable. The availability and affordability of powerful multimedia PCs and "network computers" will continue to increase. Finally, there are constant improvements in the speed of communications, i.e., how many bits can be pushed through a communications "pipe." Although computer-based instruction has proved to be more effective than traditional classroom instruction (Kulik, Kulik, and Shwalb, 1986), there are still open questions about the cost-effectiveness of this technology.

The educational effectiveness, and cost-effectiveness, of real-time, one-to-many videoconferencing has yet to be demonstrated.



This graphic, adapted from a book by Hans Moravec entitled *Mind Children* (1988), depicts the steady improvement in amounts of information that can be moved through the communication backbones in the United States. This improvement is shadowed by about 10 years in the service that is available to American homes. This trend continues and appears to offer much higher bandwidth to the home in the future.



As the speed of digital communications increases, so does the computing power that you can buy. This slide, also adapted from Moravec (1988), shows the exponential increases in computing power, in constant dollars. This steady increase in computational "bang for your buck" is a variant of "Moore's Law," which says that the amount of data storable on a fixed area of silicon doubles every year. Certainly there are physical limits to this growth, but there still appears to be much room for improvement. These trends promise increasingly cheaper, faster computers available for training applications.

Brief Technology Overview: Established and Emerging Technologies

Current technologies

- **Video conferencing (1- or 2-way): One-to-many instruction, real time**
- **Computer-assisted learning (Army "SIMITAR" screens)**
- **"Multimedia," hypermedia, (DEMO: "Palenque" video)**
- **Storage media: CD-ROM, DVI, videodisc, etc.: Storage of bits...**

Emerging technologies

- **Simulations: Black boxes (DEMO: SimCity)**
- **"Microworlds": Glass boxes ("NTC repair cycle" screens)**
- **Computer-supported cooperative work: Many-to-many collaborative work across distance/time**

Hybrids...

PLEASE SHARE EXAMPLES YOU'VE SEEN!

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A number of technology categories will be very briefly reviewed and critiqued. The presentation of this briefing included some videotape segments and some demonstrations of software. These technologies are roughly broken into those that are currently available to training developers and those that are now emerging and maturing but are not widely used. Also, the categories are not "clean," but "gray."

These categories are offered to help members of the training community understand the underlying mechanisms in technologies and their accompanying capabilities.

Computer-Assisted Instruction, Computer-Based Learning, Computer-Based Instruction

History:

- Been around since the 1960s
- Based on self-paced instruction ("programmed instruction")
- "Drill and practice"

Strengths:

- Now has nice graphics, animation, sound
- Good at teaching facts and specific procedural skills

Weaknesses:

- Must be scripted in advance: Usually single scenario for each problem
- Does not allow novel solutions
- Expensive to do well

Examples: Federal Express Manager Training, SIMITAR (screen dumps)

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The first category of recent educational technology that most people have encountered is known by a number of names: computer-assisted instruction (CAI, used in this briefing), computer-based learning, computer-based instruction, and others. The basic mechanism underlying these technologies is the use of frames of information that have been explicitly authored in advance and are linked together. As the learner makes decisions or answers questions, new information or materials are presented. These have been authored and ordered in advance by the courseware developers. This model is based on the "programmed instruction" models that were originally developed with paper materials, in which the learner turned to different pages based on his/her decisions. It has primarily been used to support "drill and practice" style, self-paced instruction.

A fairly recent addition to the strengths of this class of tools is that now authors can include very compelling graphics, animation, and sound to support the same basic mode of learner interaction with the system. However, the underlying mechanisms remain the same. CAI has generally proved useful for teaching facts and specific procedural

skills, e.g., the names of parts in a fuel system, or the steps to take in order to change an air filter.

There are a number of weaknesses inherent in this class of tools. The first is that it is labor intensive to script all the details and responses to a given learning interaction. This usually leads developers to teach only one method or sequence of activities to achieve a task, where there might actually be a number of different solution methods. The technology also does not allow a learner to stray off the known, scripted path of instruction. Novel approaches cannot be accommodated. Finally, the time-intensive nature of developing CAI causes it to be expensive to do well.

The briefing presents examples from a training video for managers at Federal Express that is an interactive video version of CAI. In one interactive video vignette, the manager-in-training is presented with a video of a confrontation interaction between employees that s/he manages. This interaction is performed by actors. The trainee then views 3 options for how, as a manager, s/he might choose to handle this situation. The situation resulting from that choice is then played out so that the trainee can see one possible result of their choice, again acted by the performers. The trainee can also examine the videos scripted to show the other two reactions to the alternate choices. Such a tool, although simple in design and underlying training strategy, provides the trainee with detailed examples of how another manager might handle a situation, complete with verbal and body language. The company that produced these materials is Internal External Communications, website at:

http://www.iec.com

the Army has also developed some compelling CAI for teaching certain knowledge to Army Reserve Battle Staffs and FSB units. This set of tools, developed as part of the SIMITAR program. A DARPA/NGB Project, SIMITAR stands for Simulation in Training for Advanced Readiness, website at:

http://205.130.63.3/bstssum.htm

includes the "Staff Linkage Trainer," which allows the trainee to play through a scenario based on a deployment to the National Training Center. The trainee can play the role of any of nine different mem-

bers of the maintenance and supply organizations, including the Battalion Motor Officer, the Maintenance Company commander, the shop officer, or the MST chief. The training tool includes nice graphics that let the learner look at maps and operation orders. It also allows the user to use the radio and phone to contact other members of the FSB staff. However, like other CAI, it is a single scenario that can be viewed from a number of perspectives. It appears to teach the basic roles of each participant as well as how they contact each other and from whom it might be appropriate to get different information and questions answered.

There is also interesting work in the area of CAI development at the United States Army Medical Department Center and School, Fort Sam Houston, San Antonio, Texas. A description of that work is at:

http://www.cs.amedd.army.mil/ITPLAN/ITP13.HT

Multimedia or Hypermedia...

History:

- Been around since the 1980s
- Defn: "Nonlinear interconnection of multimedia materials"

Strengths:

- Can incorporate nice graphics, animation, sound
- Supports exploration
- Provides structured access to large amounts of information

Weaknesses:

- Each learner takes different path, learns different content
- Navigation is always a problem
- Expensive to do well

Examples: HTML on WWW, Palenque (Video): Think about taking a multimedia tour of a BSA...

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"Multimedia" and "hypermedia" are terms that have received a good deal of exposure and "hype" in the last few years. Multimedia is simply a computer application that includes multiple modes of media, e.g., some combinations of written, audio, pictorial, graphic, and video information. "Hyper"-links within or between media are nonlinear connections between materials, e.g., being able to click on an acronym and see the definition, or being able to look at a graphic of a brigade support area, click on an icon of the tech supply office, and see a video presentation of an interview with the shop officer explaining their main tasks. These capabilities have been generally available since the mid-1980s, and they have become more popular as machines have been able to present these media more quickly and with better resolution.

Learners report that having the various media and abilities to jump via hyper-links to different material makes learning from such materials very motivating. Exploration is very easy, and learners will end up seeing different materials at their own pace and in the order they

choose to encounter it. It is also a way to organize large amounts of material in a nonlinear format.

From a training perspective, however, these strengths are double-edged swords. The ability to explore freely means that different learners will encounter different materials in a fixed amount of time. This makes training specific curriculum goals difficult. Each learner can learn what he or she wants to learn. Navigating in a hypermedia environment is always a challenge. It is difficult for designers to provide a good "road map" of the material that allows learners to track where they are in the material and navigate to the information they might want to visit next. Finally, the planning necessary to effectively lay out information in ways that make it easy to navigate takes time and resources. Producing high-quality graphics, audio, and videos also requires many resources and is expensive.

The video presentation provides an example of a well-designed multimedia, hypermedia environment that lets the learner explore the ruins of an actual ancient Aztec city called Palenque (Wilson, 1988). Learners can "walk" down paths that have been videotaped, moving their focus of attention up and down the pyramids and other buildings. They can examine carvings, visit museums in Mexico City, and study the habits and sounds of animals in the surrounding jungles. There are also interactive games, such as how to solve puzzles involving hieroglyphs.

An analogy to NCO issues might be allowing a soldier to explore a brigade support area, hear interviews with other soldiers, observe equipment in action (e.g., a small emplacement excavator), look around inside well-constructed fighting positions, etc.

Simulations: Dynamic but Opaque

History:

- Been around since the 1960s
- Not extensively used in education

Strengths:

- Dynamic, interactive
- "Generative": Can do as many different cases as user can vary vars
- Can drive compelling graphics
- Emphasizes understanding of complex systems

Weaknesses:

- Risks of mislearning due to simplification of simulation
- "Black box" nature of underlying math models often makes inspection/understanding difficult
- Cannot change the underlying model to test hypotheses
- Expensive to do well...

Examples: SimCity, Project Manager, USMC Doom...

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Applying computer simulations to education and training has occurred for as long as computers have been generally available. However, for some good reasons they have never found wide acceptance. Their strengths are that they are interactive and dynamic, and can be used to present as many different scenarios as the learner would like to try.

Examples of such simulations are commercial game-like products like the line of "Sim" games from the Maxis company. Their website is:

http://www.maxis.com

these games allow the learner to design and "run" different complex simulations of real phenomena such as a city, an ant farm, or an ecosystem. The learner designs the scenario and then runs his or her simulated "city" forward for tens or hundreds of years to explore the long-term effects of early decisions or later tunings to the model.

Other examples include a simulation called "Project Challenge," which puts the learner in the position of manager of a complex manufacturing process. As the simulation runs, problems occur with supply, shipping, labor, and machinery breakdowns; the project manager must respond to attempt to keep the project on time and under budget. Another simulation-based training tool, called "Log Lab," allows Air Force and Army logistics managers to experiment with managing the storage and shipping of valuable assets. These simulation-based training tools are being done by Thinking Tools, Inc., website at:

http//www.thinkingtools.co

Perhaps of direct interest to the NCO community is the use of a commercial "futuristic close combat" simulation game called "Doom." This game has been adapted by the U.S. Marine Corps for training squad-level fire coordination, website at:

http://www.marines.com/doom/doom.html

The biggest change in these simulations in recent years is the improvement in graphics. This has made the games more interesting and compelling and may allow unsophisticated learners to more easily understand many features of the complex systems simulated. Graphics will continue to improve in quality.

Learning from such tools, however, has weaknesses. Any simulation is an approximation of an actual system, with many assumptions and simplifications. This leaves room for learning the simplification instead of the actual complexity of the real system.

Typically with such tools, the underlying simulations that drive the training tools are opaque to the learner: They cannot look beneath the surface of the game application to see why the system is performing as it is. This "black box" nature of such tools does not allow direct inspection and understanding of the simulation, and hence limits the learner's understanding of the actual system that is simulated. Black-box simulations also do not readily allow the learner to change aspects of the underlying simulation. Exploratory learning can be enhanced by giving the learner the opportunity not only to try out different scenarios, but to critique the simulation itself and engage in

hypothesis testing by changing the underlying simulation and observing the results.

These later shortcomings of simulations are addressed by microworld models, discussed next.

Microworlds: "Management Flight Simulators"

History:

- Been around since the 1970s, blossomed in the 1980s
- Defn: "virtual, interactive subset of the world, limited to a specific domain" (Lawler)

Strengths:

- Dynamic, interactive: Emphasizes understanding of complex systems
- "Generative": Can do as many different cases as user can vary vars
- Can drive compelling graphics
- "Glass Box": Encourages users to look into and change underlying model

Weaknesses:

- Risks of mislearning due to simplification of microworld
- Inexpensive to do quickly, more expensive to do well...

Examples: NTC repair cycle (screen dumps), HBS use

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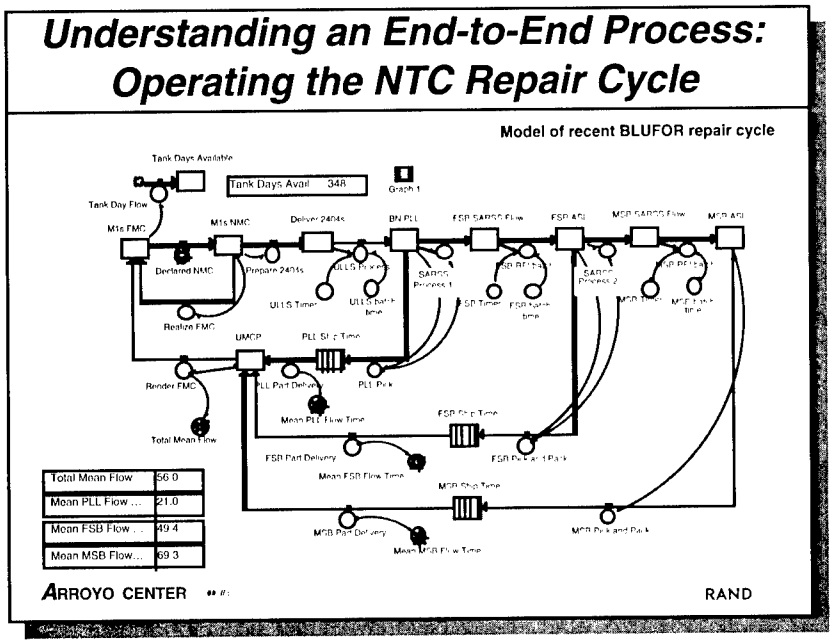
Microworlds differ from simulations in one primary way: They allow the learner to inspect and alter the underlying simulation. Microworlds have been used to teach complex processes like the biology/ecology of a stream, the interaction of Newtonian forces, and the social, political, and economic factors that interact to influence revolutions in developing countries. Like simulations, they are simplifications of the actual systems they model and hence have the potential to cause mislearning. However, they are increasingly being used by corporations to model business processes and do strategic planning. The use of such "management flight simulators," as they are called in Peter Senge's popular business process redesign books, *The Fifth Discipline* (1990) and the accompanying text on how to make changes to an organization, *The Fifth Discipline Fieldbook* (1994). True to the "flight simulator" analogy, Senge argues that microworlds can allow managers to be exposed to different business and management situations in a simulated, low-risk environment and practice their skills.

Building such microworlds can be done fairly inexpensively and quickly for simple systems. More complex simulations that might use actual data from real business processes will be more expensive and time-consuming to develop.

The following two slides showcase a microworld developed at RAND to help teach Army personnel about the operation of the repair cycle for M1 tanks during a rotation at the National Training Center.



This slide is a screen image from the microworld that shows the actual model itself: This is the "code" constructed to make the model. It is programmed graphically, through a direct manipulation interface. Resources flow through links via valves and conveyors, and collect in reservoirs.

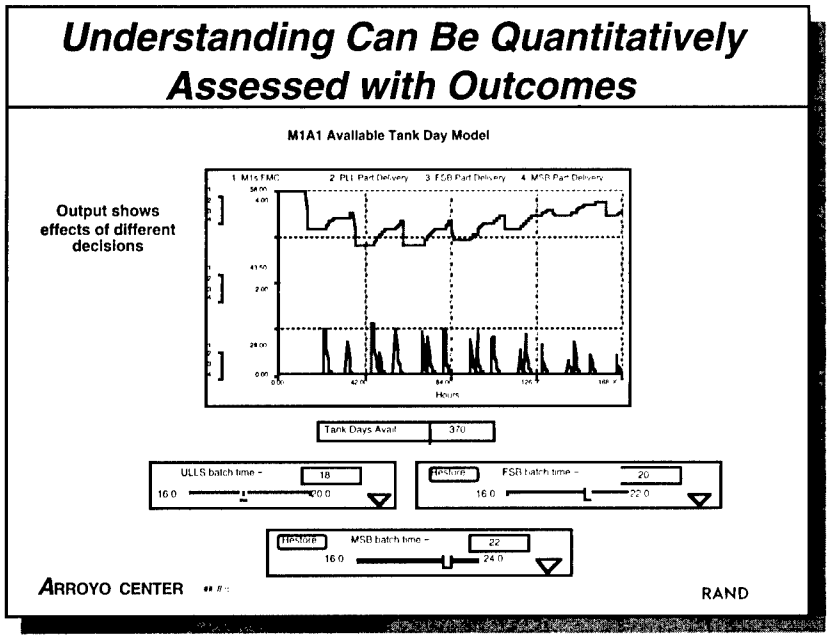
This simulation represents the Division (Main Support Battalion) and below in-theater repair cycle. The "reservoir" in the upper left-hand corner represents the number of Fully Mission Capable (FMC) M1s that are available to the Task Force commander at any point during a rotation. The counter at the top keeps a running total of the number of M1 days of operation that were realized up to any point in a rotation.

As vehicles break down, they move into the Non-Mission Capable (NMC) reservoir; problems are diagnosed and parts identified. This process takes a certain amount of time. The part requests then flow back to the echelon of supply where the part is in stock, either as part of the Prescribed Load List at the company level, or on the Autho-

rized Stockage List of supplies at the Forward or Main Support Battalions. The movement of information between STAMISs is critical to the speedy movement of parts to repair down vehicles. How the echelons have scheduled their STAMIS batch cycles affects how many parts are delivered, and hence how many vehicles are repaired.

The flow of resources through this simulation is graphical: The learner can see the effects of his or her decisions in how smoothly the system flows. Set the batch times inefficiently, and the requests move and stop repeatedly, resulting in a low number of available tank-days. Set them efficiently, and the system flows smoothly, resulting in more tanks repaired and in the battle the next day.

As a final note, once a process is understood, creating a simple but effective simulation to teach about the process can take place fairly quickly. This model took approximately twelve hours of programming time to create and tune to this level.



The interface to the microworld is easy to use: Sliders (just below the graph) are used to adjust the hour that the batch systems are run at each echelon.

The outcome graph shows rotation time across the bottom, the spikes depict when batches are released, and the top shows the simulated OR rate changes as vehicles break, as parts begin to flow, and as repairs are achieved. Uncoordinated batches add wait times to the process by slowing part orders and delivery which, in turn, slows repairs and lowers OR rates over time. This graph closely resembles the actual OR rate changes during a rotation at the NTC.

By carrying out a number of simulation runs, the learner can explore the best set of settings for a number of different scenarios that contain different variables, such as distance between echelons or speeds of travel on connecting supply routes.

Finally, learners can go back to the dynamic simulation diagram, pictured on the previous page, and experiment with other aspects of the

system. For example, they might try running two or more batch cycles per day, or speeding up the time it takes to deliver the part.

These sorts of interactions with the internals of the models demonstrate the usefulness of having "glass box" versus "black box" simulations: You can see and manipulate the underlying assumptions.

"Artificially Intelligent" Tutoring Systems

History:

- Been around since late 1970s
- Much hype in mid-1980s A.I. boom
- Simulate both correct and incorrect human actions during problem-solving to provide feedback

Strengths:

- "Generative": Can solve new problems presented (within constraints of knowledge base)
- Separates teaching knowledge from area knowledge
- Can provide tailored explanations of errors

Weaknesses:

- Limited to areas of instruction where skills are "well-defined" (e.g., math, procedural skills)
- Very expensive to do well

Examples: Intelligent Maintenance Training System

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The mid-1980s was the peak of commercial interest in and hype about the potential for "artificial intelligence" (AI) to be applied to many different domains. Applications ranged from diagnosing illness, to inventing new polymers, to building "smart" teaching machines. Now that the hype has had time to burn out, there are some areas where AI-based training still has applications. The heart of such systems are simulations of human cognitions and problem-solving skills. "Expert systems" that model the correct and incorrect problem-solving steps made by humans allows programs to not only solve novel problems, but provide a guide to diagnosing where and why human errors occurred. In turn, such a diagnosis allows a system to tailor its feedback to the learner. These systems are "generative," in that they can generate the solutions to novel problems, unlike the scripted CAI programs discussed earlier.

The great weaknesses of such systems are two-fold. First, they can only be built for areas of training where the skills to be taught are "well defined," i.e., where there are a small number of different actions that can be applied at any point in the problem solving. The

system must also have a way to evaluate the "goodness" of steps in a problem solution. In the cases of solving an algebra equation or a geometry proof, for writing some computer programming code, or for diagnosing the fault in an electrical system, this is fairly straightforward. In the cases of evaluating the quality of a written paragraph or the quality of a plan for a hasty defense, this task is much more difficult.

The second weakness is that building such AI-based systems is very expensive. There is still work in applying AI in the medical diagnosis area, with some tools being commercially available. AI-based tutors for high school level mathematics are being extensively field tested, but none are on the market. In most cases, however, the development work for such training tools has been done in university environments. The mainstream availability of such tutors has been much slower than was predicted, and will continue to occur at a very slow pace, given their complexity and development costs.

Collaborative Learning Environments

History:

- Been around since the 1970s, synchronous or asynchronous
- Subset of "computer-supported cooperative work" area
- Defn: "tools that support group processes embedded in educational software"

Strengths:

- Teach collaborative design, management, decisionmaking activities
- Capitalize on expertise at a distance: Tele-mentoring
- Bridge distance and time, record activities

Weaknesses:

- Generally as good as the collaborators/mentors
- Communication bandwidth

Examples: Share white boards, structured databases, hybrids that include simulations and human mentors

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Using computers to help groups of people work or learn collaboratively, often across distance and time boundaries, has long been a goal of a community of software designers. The "computer-supported cooperative work" (CSCW) community is concerned with furthering the development of applications of technology to help work, but also to support learning. Applications of this technology touch the areas of decision-support environments for group decisionmaking, supporting management of business process, and helping learners at all levels (from elementary to graduate-level to professional training) cooperate with the goal of acquiring both individual and group-based skills. One class of such tools is aimed at providing asynchronous and real-time mentoring across the WWW. This "tele-mentoring" makes it possible for experts, at a distance, to coach the learning of learners in other parts of the world. This can be done in real time as the mentor observes the behavior of a student, who is manipulating a simulation or microworld, and provides comments, evaluations, or suggestions. The learner and mentor can communicate, via the WWW, on shared white boards, through voice, and by sharing the same view of the simulation's output.

Worthy of note, however, is that since these tools aim to be bridges between communities of learners, or between learner and mentor, their overall effectiveness will primarily be limited by the effectiveness of the humans involved. Good collaboration tools can improve that effectiveness, but cannot substitute for high levels of human teaching expertise.

Understanding Different Technologies: What Questions to Ask

1. What skills is it designed to teach? Be as specific as possible...
2. Is the software scripted or is it "generative": Can it do more than a few prestored scenarios?
3. Does the software have the ability to explain the reasons for correct or incorrect learner actions?
4. How many hours per week would students spend with this software?
5. Can you show me reviews of the software from magazines or journals?
6. What proof do you have that the system is educationally effective? Compared to what?

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One of the goals of this briefing is to help members of the NCO Corps become more knowledgeable—and hence more demanding—consumers of educational technologies. The slide gives a number of good starting points for questioning the purveyors of new educational technologies. These not only hold for evaluating training tools for NCO leadership development, but also for evaluating educational software for home or school use.

Asking these questions should provide the consumer with a much richer view of the tools they encounter. Question four is really aimed at trying to gauge the amount of instruction included in a software package. One of the primary predictors of educational effectiveness is the amount of time that a learner spends engaged in learning a task. If the system only provides an hour a week, then the content of that hour and the activities included should be scrutinized.

Questions five and six speak to the issue of proving educational effectiveness. Getting a positive review from a magazine is the beginning of building a belief in the value of software for training. How-

ever, most articles are the opinions of the reviewer, as opposed to hard data on how well the software trains. A published article in a refereed journal that reports quantitative data is the most reliable source of unbiased data on effectiveness. However, even these must be read carefully and questioned closely to assure that the appropriate experimental and comparison conditions were met.

How the Internet/WWW sweeps up all of the above....

The "Web"offers:

- **limited N-way video-conferencing**
- **distance access to traditional computer-based instruction**
- **distance access to multiplayer simulations (3DO, others) and microworlds**
- **distance collaboration with shared tools, mentoring**

Download speeds will increase: Wider pipes, better streaming technologies

Access at work and at home: WebTV in living rooms

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This briefing closes with a look at the Internet, or World Wide Web (WWW) as the delivery mechanism for all the educational technologies mentioned earlier. There is already two-way video-conferencing over the net, but it is of limited quality due to current bandwidth constraints. Current Hyper Text Mark-up Language (HTML) technology allows limited use of the WWW's "page-based' paradigm of interaction for traditional CAI. There are already commercial applications of distributed access to multiplayer simulations and some limited microworlds. These will continue to improve in quality and quantity. Finally, there are a number of tools for collaborating (e.g., shared white boards and reasonable audio conferencing).

All of these applications of the WWW as a delivery mechanism will become more attractive as the download speeds increase and the web programming paradigm shifts from being page-based to being "stage" based. That is, instead of manipulating a page of information at a time by downloading a new page, the emerging paradigm is that web browsers will instead use downloadable programs to make a single page dynamic and interactive. Elements and characters will

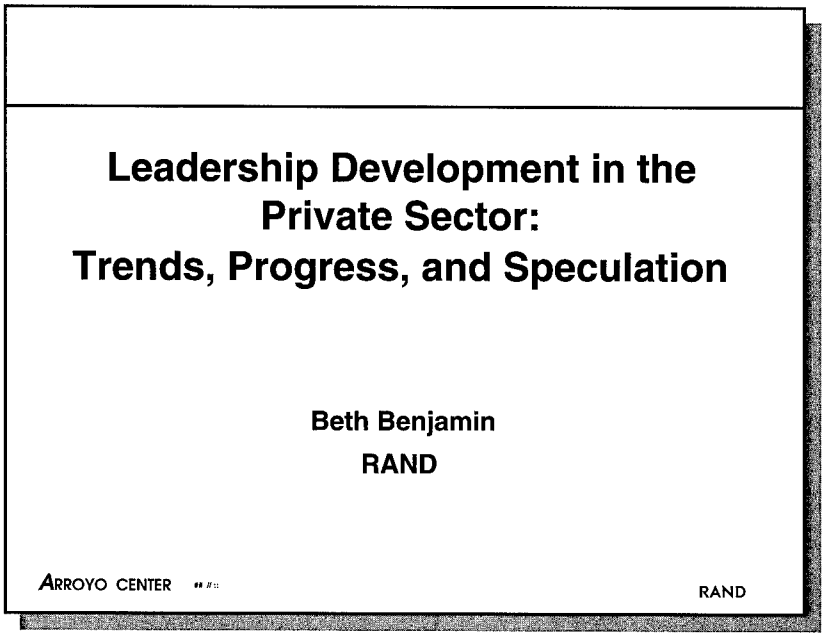
appear and interact on the screen, as if it were a stage. The user-friendliness of such interfaces will be dramatically improved.

Finally, the advent of inexpensive network computers and Web TV means easier access to WWW-based resources in more homes across America. Web-TV brings the WWW to a user's living room couch.

Many changes in use and new applications of educational technology lie ahead. It is the task of the NCO trainers to understand the new tools for training and leverage them appropriately to meet their needs. The more the NCO community understands of these tools, the better, more demanding consumers they can become.

Appendix E

RAND "MINI-LECTURE": A PRIVATE SECTOR PERSPECTIVE



This appendix contains the annotated slides for a briefing presented on April 31, 1997 to the "Future Leader Development of Army Non-commissioned Officers" workshop. The briefing identifies and discusses leadership development trends in the private sector, then broadly reviews empirical work on leadership and leadership development. The briefing concludes by offering some speculation about changes that will need to be made in leadership development as we enter into the twenty-first century.

Agenda

- **Prevailing Perceptions**
- **Trends in Leadership Development**
- **Empirical Research on Leadership and Development - Progress & Challenges**
- **Speculation for the 21st Century**

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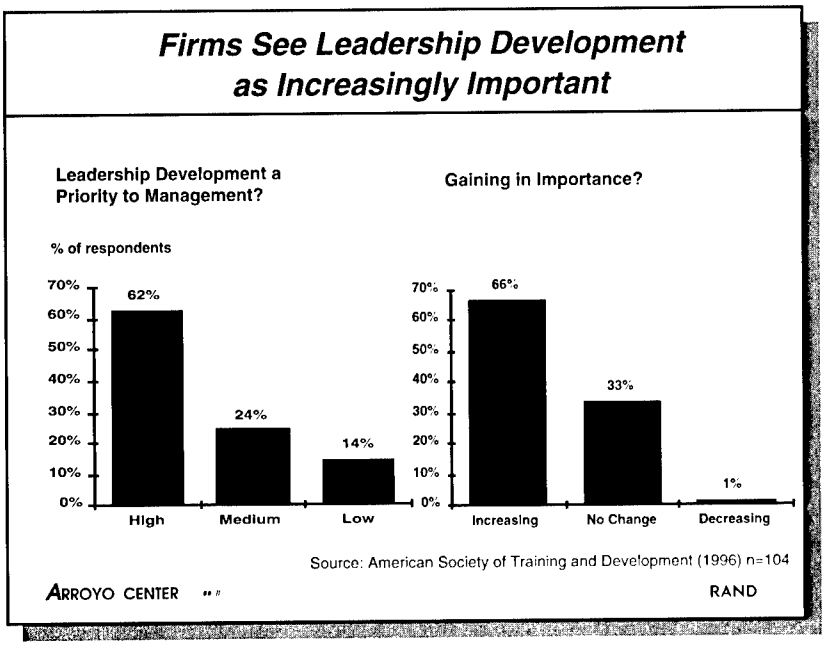
The briefing is organized as follows. First, I provide evidence that suggests that leadership development has become increasingly important in the private sector. Yet, with organizations spending more on leadership education and training than ever before, the question remains: are such development efforts effective? The evidence is inconclusive.

Second, I explore private sector development trends in greater detail. I identify the changing role of executive education in the workplace and discuss how organizations are redesigning their development efforts to meet new demands.

Next, I examine the current state of leadership research and empirical work on leadership development. Though organizations in the private sector maintain that executive development has become an important strategic tool for affecting organizational change, sound research on leadership and management training continues to be scarce.

Finally, I conclude the briefing with speculation about the future. As the twenty-first century draws near, it is clear that industry will face a number of complex challenges. As in the military, leaders will need to be ready to meet these challenges. This presentation provides a brief glimpse at what the private sector is—and will be—doing to equip its future leaders.



By most accounts, there has been a resurgence in leadership development and training since the early 1990s, at which time a slowdown in the economy forced many companies to cut back on their training budgets. Though well-designed studies with statistically valid sampling techniques are virtually nonexistent, there appears to be consensus within the business, human resources, and general leadership literatures that organizations are devoting more resources to leadership and management development (Fulmer & Vicere, 1996; *Business Week,* Special Reports, 1993; 1995; Yeung & Ready, 1995).

A 1996 leadership development survey conducted by the American Society for Training and Development provides a good illustration of recent trends (see above). The survey asked training and development professionals to indicate the extent to which their firms viewed leadership development as a priority. Of the 104 professionals who responded to the survey, more than 60 percent reported that leadership training was a high to very high priority. Twenty-four percent considered it a medium priority. And, only 14 percent reported that leadership development was a low priority or not a priority at all.

Eight out of ten respondents reported that they offered leadership development programming to their executives. Of those who offered programming, two-thirds viewed leadership development as gaining in importance.

Of course, it is important to recognize that both public and private sector organizations use the terms "leadership development," "leadership training," and "executive education" quite broadly. Programs may include anything from advanced functional training, leadership skill building, self-awareness training, personal growth programs, and team leadership training, to name a few (Conger, 1993). Leadership development programs are offered by a growing number of providers as well. Providers include professional training centers, public or private universities, consultants, corporate universities and other in-house training and education departments.

Increased Emphasis on Leader Development Reflected in Corporate Expenditures

- **70% of private sector employers report increases in training expenditures (U.S. Dept. of Labor, 1996).**
- **Estimated $15B/year spent on executive education programs.**
  - **Motorola spends approximately $150 million/year on Management Training**
  - **GE spends more than $500 million annually**
- **Leadership "gurus" receive $20,000-$50,000 per session**

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Based on a 1994 survey of more than 1000 private nonagricultural businesses, the Bureau of Labor Statistics reports that nearly 70% of all establishments increased their training expenditures between 1991 and 1994. (U.S. Department of Labor, 1996).

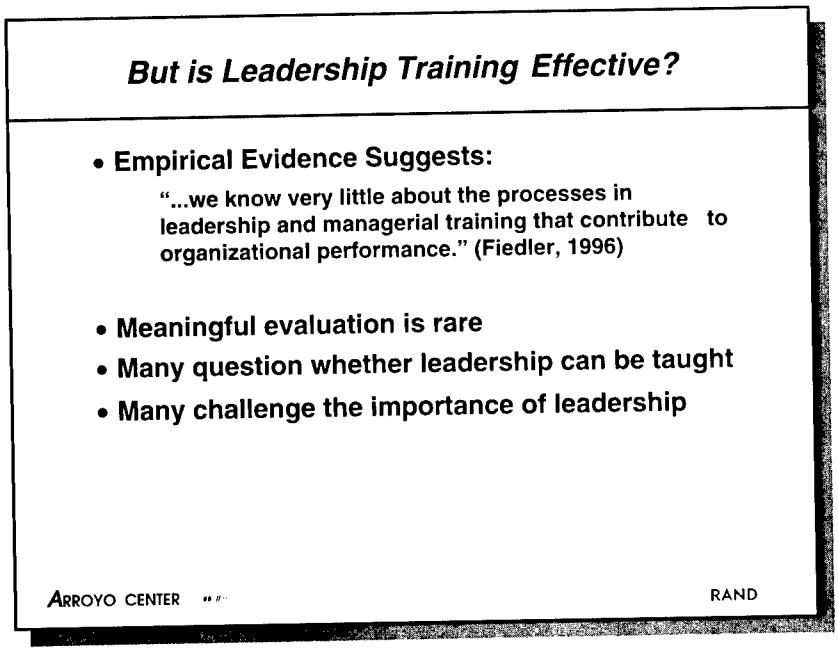
If we look solely at expenses for leadership training, we see that firms in the private sector invest a substantial amount of money in leadership development. Various estimates suggest that over the past decade total corporate expenditures for training have grown from approximately $10 billion annually to $45 billion. Of the $45 billion spent each year, a recent Penn State study estimates that approximately $15 billion goes to executive education which is typically considered one form of "leadership development" (Fulmer and Vicere, 1996).

Obviously, some companies value training and development more than others. Moreover, it is difficult to determine from corporate estimates what percentage of the training dollar goes to formal leader-

ship training as opposed to management training of a more functional or technical nature. Still, the figures are impressive.

Motorola, for example, spends approximately $150 million per year on some form of management training, requiring nearly all of its employees to complete at least 40 hours of formal training each year. General Electric, long known as a leader in leader development, spends more than $500 million annually on training. In 1992 alone, GE sent 1,100 senior managers and executives through a seven-day leadership program at its Leadership Development Center in Crotonville, N.Y. These managers, in turn, sent an additional 75,000 other managers to similar programs (Forbes, 1996)

As firms have begun to increase their investment in leadership development, the field of leadership training has exploded into a thriving industry. In 1994, business schools alone reportedly provided somewhere in the neighborhood of 500 to 600 different executive education programs (Fulmer & Vicere, 1996; Fortune, 1994). Professional training centers such as the Center for Creative Leadership and the Pecos River Learning Centers offer three- to six-day courses for upwards of $500 to $7,000 per parcticipant. And management "gurus" who take their show on the road can charge anywhere from $2,500–$20,000 a day, with "major leaguers" like Tom Peters, Stephen Covey, or Ken Blanchard commanding $50,000–$65,000 per two-hour session.



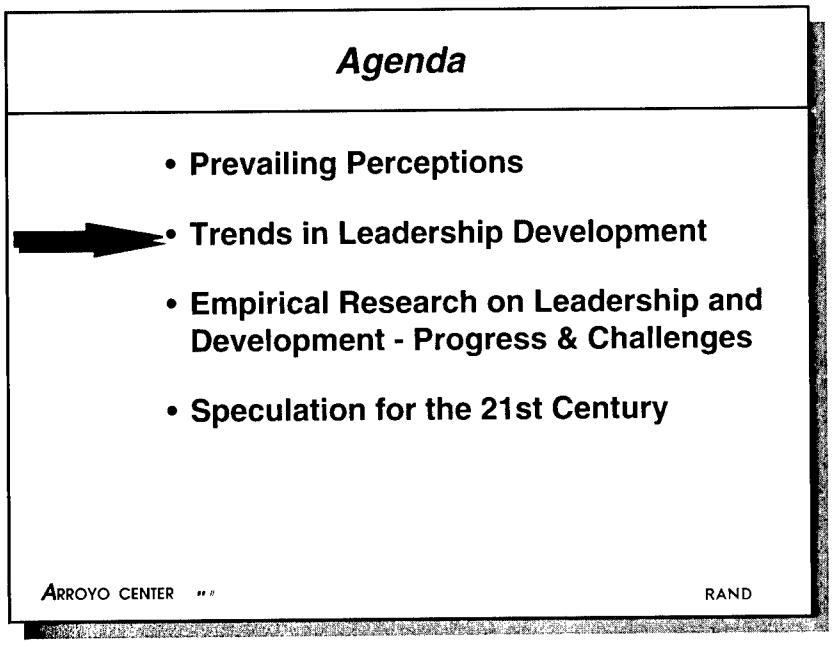
Despite a large and growing investment in leadership development, returns on this investment remain largely unknown. In fact, leadership researchers know relatively little about the effectiveness of various training approaches or the processes within training that contribute to enhanced performance (Fiedler, 1996).

Why is so little known about the effectiveness of leadership development? Perhaps the most succinct answer is that despite the significant amount of resources devoted to leadership training, most organizations rarely evaluate their programs in any meaningful fashion. Ongoing operational demands, rapidly changing organizations, and the complexity of assessing leadership skills are but a few of the reasons that evaluation is often neglected.

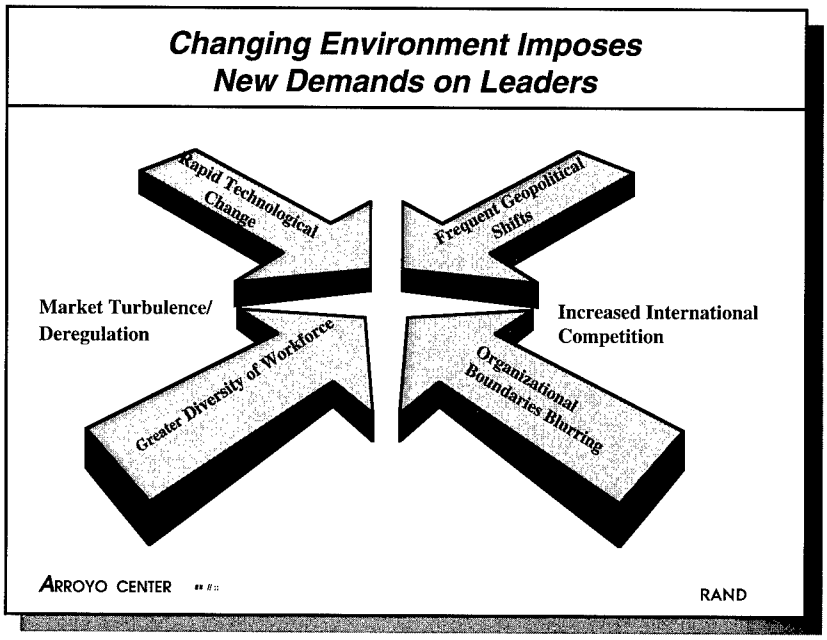
Two other factors also help to explain why we know so little about the effectiveness of existing leadership development efforts. The first is simply the fact that many researchers and practitioners question whether leadership can actually be taught. Indeed, some evidence suggests that many leadership qualities—such as energy or intel-

lect—are genetically determined, while others such as confidence, achievement drive, and interpersonal skills are shaped by early family experiences. Again, rigorous research has yet to be conducted.

Second, many researchers in the field of organizational behavior challenge whether leadership, in and of itself, significantly affects organizational performance at all. These scholars argue that critical contingencies in the organization's environment (i.e., the amount of competition an organization faces, political shifts, resource constraints etc.) exert a much greater effect on organizational performance than do the relatively small influences of leadership and training.



Since organizations in the private sector appear to be increasing their emphasis on leadership development, it is important to examine how their programs have changed to meet current and future demands. In this next section, I discuss the forces that have led many organizations to increase their training efforts and I lay out some significant changes in training focus, content, and delivery.



This chart illustrates the major forces currently shaping the business landscape of many private sector firms. Environmental shifts in competition, technology, government regulation, organizational networks and the composition of the workforce have placed significant new demands on many leaders.

With the entry of foreign producers and the deregulation of many local markets, private sector firms face fiercer competition than ever before. Competitive pressures have escalated into virtual "competitive battles"as firms have fought for dominance both in consolidating markets at home and emerging markets abroad.

Firms have become increasingly aggressive in their efforts to overcome these competitive challenges. From an economic standpoint, fierce competition has in many ways been good: it has increased innovation and improved productivity. Yet competition has imposed significant challenges as well. For example, competition has made it *necessary* for firms to develop innovative strategies and products just to survive. It has brought about shorter product development cycles

and it has accelerated the pace of technological change. It has pushed companies to search for markets far outside their homelands and it has increased their vulnerability to geopolitical shifts. And, greater competition has forced organizations to change both intra- and interorganizational structures.

In addition to heightened competitive pressures, the *changing composition of the workforce* has also placed new demands on leaders. In 1950, only 33.9 percent of all working age women participated in the American workforce. By 1993 the number of women in the workforce had risen to 57.9 percent, and projections estimate that by 2005, it will increase to 63 percent. The ethnic composition of the workforce has also changed. Blacks, Asians and Hispanics make up a larger percentage of the workforce than ever before. In fact, fewer than one-third of the people that enter the civilian labor force between 1992 and 2005 will be white males (Commission on the Future of Worker-Management Relations, 1994).

Greater diversity, media attention, and public scrutiny—coupled with far less tolerance for indiscretion—means that leaders will have to be more interpersonally competent, more versatile, and more willing to question their own assumptions if they hope to lead tomorrow's workforce effectively (Conger, 1993).

Leadership Development: The New Objectives

1) **Link education with specific organizational goals**

2) **Achieve alignment on strategic issues, facilitate change**

3) **Immediate application of useful knowledge**

4) **Build depth of leadership talent**

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Leadership training has been profoundly influenced by these environmental changes. As leaders have begun to face new and different challenges, the role and objectives of leadership development have also changed. Today, leadership development strives to achieve four primary goals (Conger, 1993).

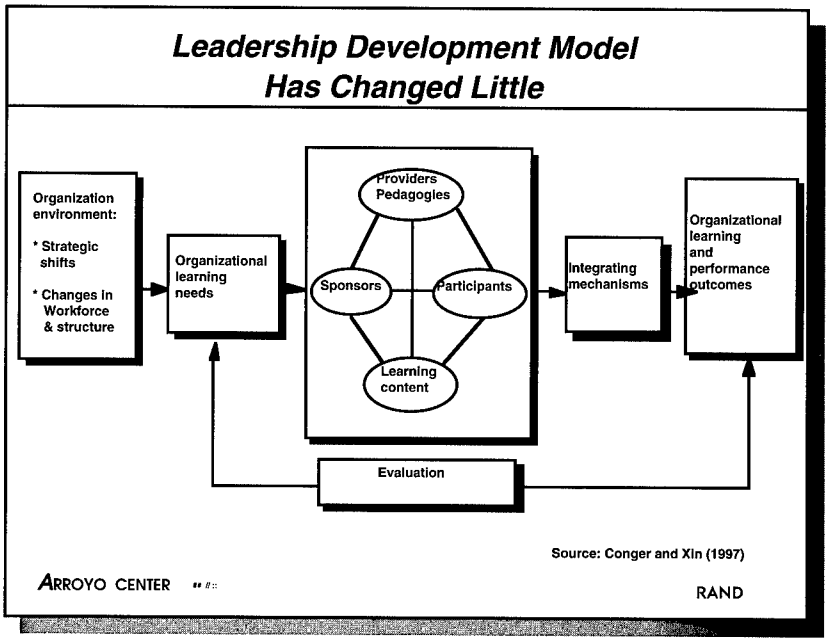
First, because organizations are facing greater competitive pressures, leadership development has become more concerned with linking educational experiences with specific organizational goals. So, for example, a firm hoping to enter into new markets might focus some of its leadership training on market development and how to manage in foreign cultures. A firm hoping to penetrate existing markets might focus its leadership training on distribution strategies or developing high quality processes.

Second, as organizations have had to alter their strategies and practices, many have come to realize that management education can be used not only to improve critical leadership skills, but also to effect organizational change. As a result, leadership development today is

often viewed as a means to effect change and facilitate strategic objectives, in addition to enhancing leadership competencies. Many programs, for example, bring leaders together to solve strategic problems and to build alignment around jointly determined solutions. In the process, leaders learn to work across organizational boundaries, to operate as a team, and to think more collectively.

Third, leadership development has also become more concerned with instilling useful knowledge quickly. Given today's competitive pace, programs that take a long time to develop may be unable to address today's development needs until long after they have been replaced with more pressing needs tomorrow. The new development objective is to provide knowledge that has immediate application and that can provide immediate value.

Finally, many development programs are trying to develop leadership skills deeper within the organizational hierarchy. Providing leadership development to more levels of management serves two purposes. First, it increases the impact that leadership training can have on the entire organization. Providing training to a greater number of managers ensures that managers throughout the organization have a shared understanding of the firm's vision and a common understanding of the strategies that should be used to achieve the vision. Second, developing skills more deeply in the organization ensures that mid-level managers are equipped to take on greater responsibility. As organizations have flattened their hierarchies to reduce costs, and decentralized decision making to enhance responsiveness, managers at lower levels in the organization have had to assume greater responsibility. Similar to NCOs, who have taken on duties traditionally reserved for officers, these managers require additional leadership training to enable them to carry out their new duties to the best of their ability.



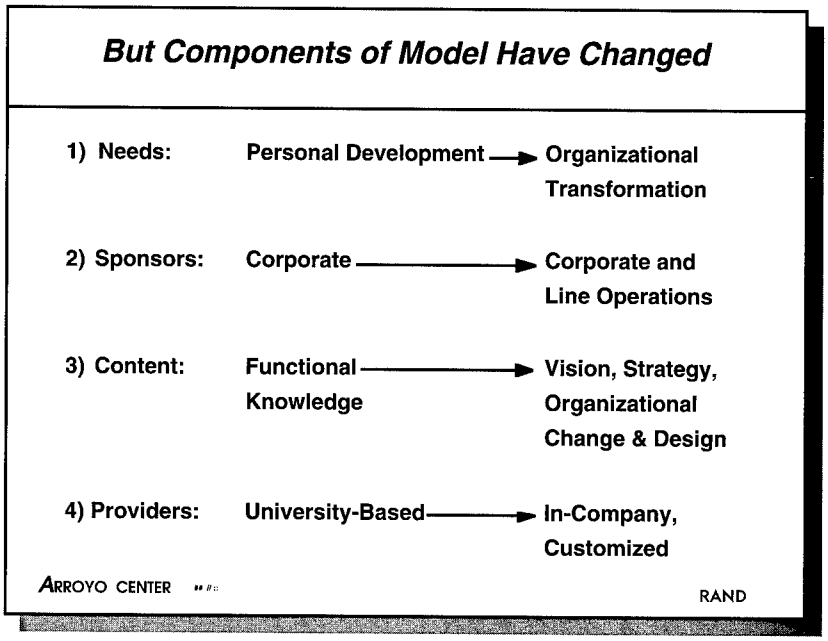
Despite the different challenges facing leaders today, the basic model for the design and delivery of leadership training has remained much the same. With the exception of a renewed emphasis on the external environment, the leadership training model remains much as it was in the early 1980s (see Goldstein, 1986).

The diagram above lays out the various components of a typical leadership development design model. Leadership development typically takes a "systems approach" (Katz & Kahn, 1978) to the training and education process. Such an approach recognizes the interrelated components of needs assessment, program development, and evaluation (Goldstein & Gessner, 1988).

As illustrated above, the model begins with a comprehensive assessment of the organization's environment and the relevant forces within the environment that influence its strategy and its ability to carry out that strategy. Based on an assessment of the organization's strategic goals, and the competencies of its current and future leaders, a set of organizational learning needs is then established.

Next, in light of specific needs and resources, the appropriate content matter and delivery mechanisms are chosen. The appropriate choice may depend on who is sponsoring the development effort (i.e., corporate officers or a particular function or business unit?) and who the participants will be (i.e., senior vice presidents or division managers?).

Mechanisms for integrating new learning into the work environment represent another critical—yet often overlooked—factor to consider. These integrative mechanisms determine how well leaders apply their learning once they return to their jobs. Finally, the learning and performance outcomes used to assess the program's impact must also be determined. Criteria must be carefully defined, and evaluation systems must be designed to assess the degree to which goals are achieved. As mentioned earlier, evaluation systems tend to be the weakest component of most development efforts.



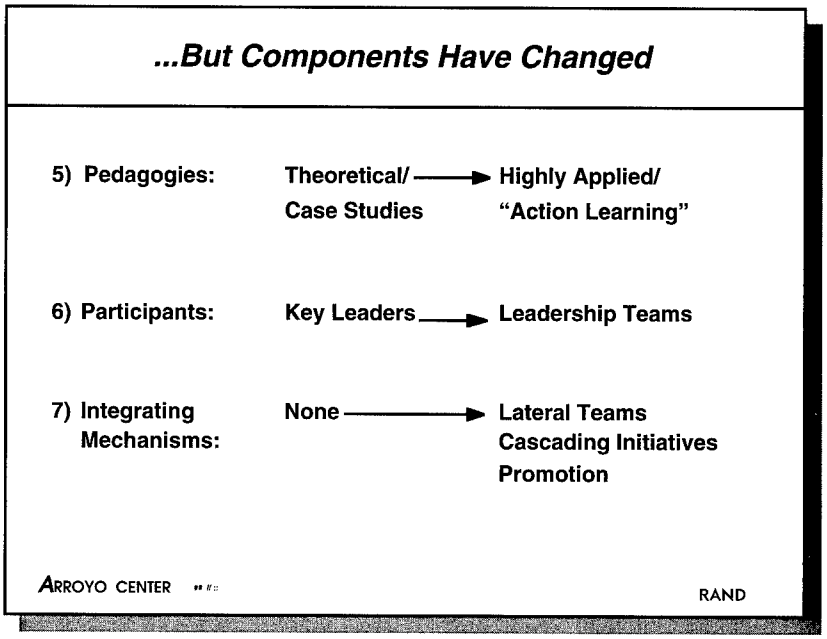
Though the fundamental framework for thinking about leadership development has remained largely unchanged, the components within the model have changed substantially.

If we look at organizational needs, for example, we find that in the past people stayed with a single organization for many years. Organizations viewed executive education as a way to reward effective leaders, enhance personal development, and provide long-tenured managers with exposure to different industries and ways of thinking. Today, however, leaders tend to move among organizations more frequently. As such, they have often already been exposed to other industries and other business models. Today, organizations have less need to impart industry or functional knowledge and more need to facilitate organizational transformation. Though industry and functional knowledge remain critical, the focus of leadership development has shifted beyond a purely educational role to a role in which education serves to facilitate change and to impart the skills and capabilities required to lead and manage it.

In addition to changing needs, the sponsors of many development efforts have also changed. Whereas in the past, the corporate center controlled the design and delivery of leadership training, today we see more line operations also providing training (Conger & Xin, 1996). As organizations seek to be more responsive to increasingly diverse markets, leaders of different business units often require different educational experiences to serve their markets well.

The content of many training programs has also changed. To be competitive, organizations are finding that they need to improve not only functional expertise, but also strategic thinking capabilities, and the ability to provide vision and direction.

Next, organizations have begun to move away from external, often university-based providers, to more customized programs often designed in-house (see p. 21). Customized, company-specific programs allow learning materials to be tailored to the needs of a particular company or industry. This, in turn, produces knowledge that is more immediately applicable to the organization's current business needs and strategic challenges. Studies report that over 75 percent of all executive education dollars in the U.S. currently go to customized programs (Fulmer & Vicere, 1996).

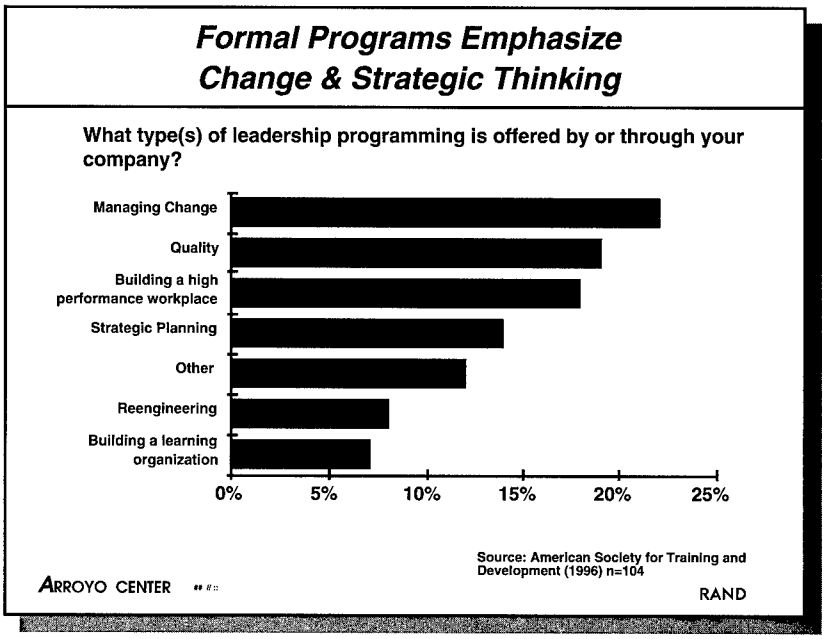


Organizations have also begun to use different pedagogical methods to develop leadership competencies. Pedagogies—or the methods used to teach—have moved away from teacher-centered models, to models that are centered more around the learner. Whereas teacher-centered models tend to rely on lectures and case studies to enhance learning, learner-centered models allow participants to experience leadership issues first-hand. They also produce more immediate results for the organization. "Action learning" programs are one example of these more applied pedagogical methods (see p. 22).

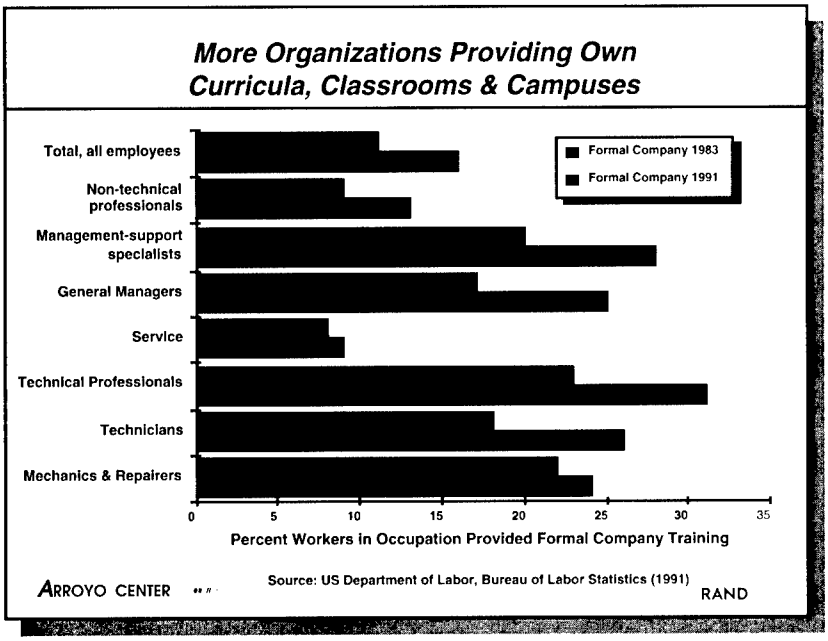
Participants have also changed in the new development world. In the past, a typical leadership development program would bring together individual executives from different parts of the organization or, if the program was offered by a university or training center, from different organizations. A typical program, for example, might include one executive from the marketing department, one from product development, one from the large trucks division, etc. Similarly, a university program might consist of executives from Motorola, General Foods, J.C. Penney, PointCast etc.

Today, many programs have started to bring together entire executive teams. These programs seek to enhance leadership skills; however, since leadership today increasingly means working across functional and organizational boundaries, programs have begun to focus on teaming and negotiation skills as well. By structuring learning around executive cohorts, leadership development can facilitate organizational change by helping leaders to communicate more effectively and by helping them to build a common vision. In so doing, these programs also improve coordination and buy-in.

Finally, many leadership development efforts have begun to address the difficult issue of integration. Many training efforts fall short when competencies learned in training fail to be supported on the job. Organizations have begun to facilitate training transfer by: 1) involving lateral teams of executives who continue to work together after the program is over, 2) involving a greater percentage of managers in leadership training, and 3) cascading leadership training downward throughout the entire organization.



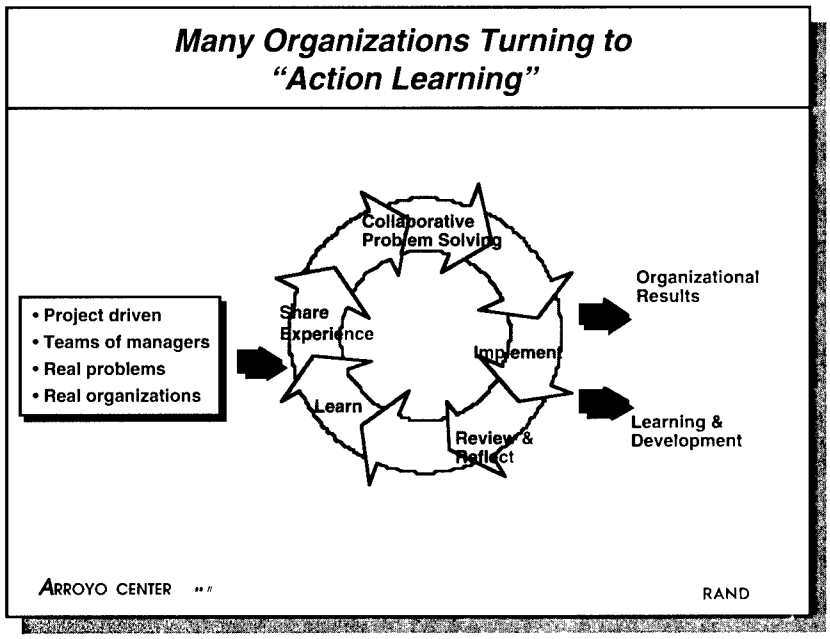
This chart illustrates that organizations are devoting more of their leadership development programming to change management skills, strategic thinking, and the design of flexible and adaptive work systems. Such programs emphasize the importance of aligning strategies and support systems, reducing redundancy, distributing power and authority to lower levels in the organization, and learning from best practices.



A study conducted by the U.S. Department of Labor (1991) found that between 1983 and 1991 organizations increased the amount of training provided to workers through formal corporate development programs. Though the Labor Department's data does not focus on leadership training specifically, it illustrates a general trend away from university-based training to training that is more customized to a particular organization's needs. Another Labor Department study conducted in 1995, reported that 76 percent of employees who received formal training did so through classes or workshops conducted by company training personnel. 48 percent participated in classes or workshops conducted by outside training providers, and 36 percent attended lectures, conferences, or seminars. Only 17 percent of those who received formal training indicated that they had taken courses at educational institutions (U.S. Department of Labor, 1996).

As these figures suggest, during the last decade, there appears to have been a significant shift towards customized learning materials tailored to the needs of individual companies and specific to the in-

dustries in which they compete. Some programs utilize outside expertise by inviting well-known faculty or speakers to discuss important topics relevant to organizational challenges. Some programs work with outside training providers to develop programs specific to the organization's immediate concerns. In all cases, leadership training has begun to focus more explicitly on developing competencies that can be *applied* to *immediate* organizational demands.



"Action Learning" models represent one of the biggest trends in leadership development today. Action learning is based on the idea that individuals learn better by doing than by watching. The point is nicely conveyed by the Chinese proverb "I hear and I forget; I see and I remember; I do and I understand."

The "doing" in action learning consists of real problems—generated by teams of managers—that are acted on in conjunction with traditional classroom experience (Revans, 1983; Raelin & LeBien, 1993). A typical action learning experience might consist of a group of six to ten managers, who come together to develop a strategy for entering a new market or for making an existing product more profitable. Projects typically have recognized clients who take a genuine interest in the assignment and expect a high-quality outcome within a specified period of time. Action learning projects at GE, for example, are selected by CEO Jack Welch who also reviews each team's final report out. Process action teams in the Army might constitute another type of action learning project.

When done right, action learning projects can produce a number of benefits for both the individual and the organization. They can enhance individual learning and, at the same time, produce tangible organizational results. Even so, a number of pitfalls can limit the success of action learning programs. Potential pitfalls include a lack of appropriate support from sponsors or collaborators, poorly-defined objectives, and subsequent assignments that fail to provide opportunities for applying new knowledge.

Leadership Development Trends: Concerns and Issues

- Formal needs assessment rare
- Little evaluation of program effectiveness
- Shift to immediate relevancy may sacrifice development of conceptual skills for more procedural ones
- Shift to customized programs and action learning may limit exposure to different ways of thinking
- Integration remains weak
- Empirical research largely ignored

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Despite the shift in leadership development toward programs that emphasize change management, relevancy, and immediate application, the cost-to-benefit ratio of these programs remains unknown. There are a number of reasons to question whether these trends have actually improved leadership development and enhanced leader performance.

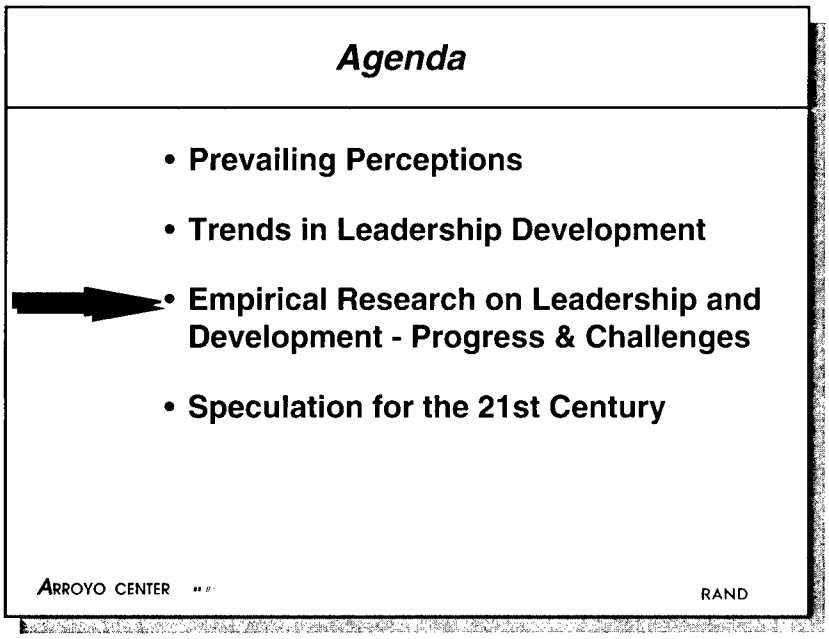
First, organizations rarely specify in any systematic fashion what their development needs are or what they hope their programs will accomplish. Though many organizations define specific competencies that leaders should possess, few actually evaluate their leaders' strengths and weaknesses and how they relate to current and future strategic challenges.

Second, like formal needs assessment, formal evaluation is also rare. If and when development efforts are evaluated, they tend to rely on simple self-report data, and to ignore more objective evaluation of learning and behavior change.

Third, it is likely that some development practices sacrifice long-term strengths in order to achieve short-term objectives. For instance, the shift to immediate relevancy may cause some programs to cut back on the development of broad conceptual skills in an effort to bring leaders up to speed on the vagaries of particular markets or technologies. Similarly, the shift to customized programs and action learning may limit the extent to which leaders are exposed to different ways of thinking. A narrow range of experiences could, in turn, impede the development of strategic thinking capabilities.

Fourth, despite the fact that organizations are increasingly trying to improve the integration and transfer of training, inconsistent support systems, limited resources, and cultural barriers continue to impede integration efforts.

Finally, and perhaps most suprisingly, "despite some three thousand empirical studies of leadership conducted by academic researchers, this literature has gone largely unnoticed or ignored by policymakers, the press, and practicing managers" (House, 1995, p. 413). Leadership remains a difficult topic to define, let alone create. Given the daily demands of most organizational managers, and the sheer number and variety of leadership responsibilities, development specialists rarely have the time or resources to evaluate and incorporate into their programs the results of rigorous empirical research.



I now turn to a brief assessment of the current state of research on leadership and leadership development. It is important to note, that no attempt is made in this briefing to review the full spectrum of work in this area. Indeed, *Bass & Stogdill's Handbook of Leadership* (1990) cites over 7,000 articles on leadership alone. Here, I simply provide a brief update on the state of the field as it relates to progress in leadership development.

Brief Review of Leadership Research

	Dominant Perspective	Focus
1940's	"Great Man" Theories	Traits, behaviors personality
1960's	Contingency Theories	Leader-situation match
1970's	Transactional Leadership	Exchange-based cooperation, incentives, task structure
1980's	Cognitive Theories	Intellectual abilities, competence, experience
	Charismatic Leadership Transformational Leadership	Impact on emotions, values, trust & confidence
1990's	Strategic Leadership	Vision, foresight, change management

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Leadership is often defined as "direction, motivation, and control through individual, interpersonal influence" (Pfeffer, 1997). Leadership research over the last 50 years has progressed through a number of paradigms and has developed a number of perspectives on what leaders do and how they do it. The leadership literature confronts three primary issues: 1) does leadership matter to organizational performance, and if so, in what situations is leadership most important, 2) what do effective leaders do, and 3) can leadership be learned, and if so, how? (Pfeffer, 1997).

This chart illustrates a brief review of the dominant leadership theories that have evolved over the past five decades.

"Great Man" theories maintained that leaders demonstrate certain personality traits and engage in certain behaviors that produce effective leadership across all situations. Contingency theories, in contrast, emphasized that different leadership behaviors work better in different situations. According to contingency models of leadership, leader effectiveness depends not just on the leader's personal-

ity, abilities, or attributes but also on how well these attributes match the situation at hand (Fiedler, 1967).

Transactional leadership models viewed leadership as a transaction between a leader and his/her followers. According to this perspective, effective leaders manage leadership transactions by providing followers with instrumental reasons or incentives to achieve organizationally desired goals (House and Mitchell, 1974).

In contrast to transactional theories, transformational, or charismatic, theories of leadership described leaders as articulating a vision and mission which stir the emotions of their followers (Bennis and Nanus, 1985). Transformational theories maintain that leaders motivate and inspire followers by affecting followers' self-esteem, trust, values and confidence in what the leader stands for.

In contrast to transformational theories which emphasize emotion, cognitive theories of leadership identify the role of cognitive attributes such as intellectual ability, experience, technical knowledge and training. Like contingency theories, these theories maintain that different cognitive capabilities and levels of experience will be more or less effective in different types of situations. Highly experienced leaders, for example, are thought to be more effective in high stress situations, whereas leaders with superior intellectual abilities are thought to be more successful in less stressful situations (Fiedler, 1996).

Finally, recent strategic theories of leadership emphasize that effective leaders exhibit superior strategic thinking capabilities and the ability to manage and inspire change. These leaders, in some ways, possess an amalgam of transactional and transformational leadership skills, with a strong dose of future-oriented, critical analytic thinking thrown in for good measure (Hamel and Prahalad, 1994).

What Have We Learned From Leadership Research?

1) No evidence for specific leadership trait or personality type

2) Women, men, and people of different racial and ethnic backgrounds can all be good leaders

3) Two primary categories of leader behavior
   - task-oriented (structuring)
   - relationship-oriented (consideration)

But behaviors alone do not predict effective leadership.

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The vast array of leadership research has produced a significant body of knowledge. Some of the more reliable and important findings are listed here.

First, there does not appear to be any one ideal leader personality trait. Though effective leaders tend to have a high need to influence others, have a high need to achieve, and to be competent and bright, such qualities may manifest themselves through any one of a hundred or more personality characteristics.

Second, women, men, and people of different racial and ethnic backgrounds can all be good leaders—even though others with particular biases may not view them as so. Others things being equal, men and women and those with different racial and ethnic qualities have all been found to be effective leaders in a variety of situations (Fiedler, 1996).

Third, two major types of behaviors are typically associated with leadership (Misumi, 1985). One is the extent to which leaders structure the roles and working relationships of their subordinates. These

behaviors are typically called task-oriented behaviors. The other is the extent to which leaders treat their subordinates well or poorly—that is, with consideration, respect and caring. These behaviors are called relationship-oriented behaviors. Neither behavior alone can predict effective leadership across all situations—rather, their effectiveness depends on characteristics of the followers, the situation, and the interactions among them.

...What Have We Learned ?

4) **Leadership is an interaction between leader and leader situation**

5) **Critical aspect of situation is how it affects leader's**
   - **feelings of control**
   - **stress and uncertainty**

6) **Aptitude and experience improve performance only under certain conditions**

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Fourth, the strongest predictor of leadership performance is often the match between the leader (i.e., personality, aptitude, and experience) and the leader's situation. Relevant situational factors include the amount of stress or uncertainty in the situation, the amount of structure, and the behavioral characteristics of subordinates.

Fifth, the situational characteristic that currently appears most important to leadership effectiveness is the extent to which the situation affects the leader's feelings of control verses the extent to which it induces stress and uncertainty. To the extent the leader feels more in control and has less stress and uncertainty, the leader will be able to deal with followers and tasks more effectively (Borden, 1980; Fiedler, 1995). Obviously, these findings have significant implications for leadership training.

Sixth, though perhaps not immediately intuitive, a long series of research suggests that aptitude and experience do not improve leadership effectiveness in all situations. In fact, they each facilitate effectiveness under very different situational circumstances. For ex-

ample, a leader's aptitude does not appear to contribute to performance when there is a high level of interpersonal stress and uncertainty. Under these circumstances, leaders may dwell on stressful relations and may not be able to focus their intellectual abilities on the task at hand. Of course, since stress and uncertainty are perceived differently depending on one's experience with previous situations of a similar type, experience may allow one to overcome stress and uncertainty and perform more effectively. On the other hand, certain tasks require logical, analytical, or creative effort. Because, this type of work requires thoughtful deliberation, the careful weighing of alternatives, and a stress-free environment, leaders with greater aptitude may be more effective in low stress situations (Fiedler, 1995). The main point is that different leadership characteristics are more or less effective in different contexts. To the extent leadership training is able to improve a leader's ability to analyze the context and adapt accordingly (i.e., by bringing in others with complementary skills or by altering the situation to fit their strengths and weaknesses), leaders may improve their performance and their effectiveness.

Many Things We Don't Know

- **What situational factors affect leadership effectiveness?**
- **Can we teach leaders to "engineer" situations to capitalize on leader strengths?**
- **How/should leaders modify behavior when interacting with peers vs superiors vs teams vs subordinates?**
- **All the things leaders need to do to introduce and implement change effectively?**

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Despite the contributions of leadership research, there remain many important things we don't know about leadership. For example, we know only a few of the situational factors that affect leadership performance. There are probably many other dimensions of a leader's situation besides stress, uncertainty, and follower characteristics that influence whether different types of leaders perform well.

Another interesting question that has begun to generate interest among leadership researchers is the extent to which leaders can be taught to analyze and then engineer their situations to match their strengths and weaknesses. It is possible that more may be gained by helping leaders to recognize their competencies and how to match or change their environments to fit them, than trying to change engrained traits and behavior patterns. The implications for leadership training could be quite significant, especially for distance learning approaches which could be easily tailored to individual competencies and very specific leadership domains.

Another issue concerns how leaders should interact with their peers and superiors to be effective, relative to the way they interact with their subordinates. Studies of the private sector have begun to stress the importance of managing upward and sideways in addition to managing downward. In many cases, lateral and upward relations can be as critical to a leader's effectiveness as are relations with subordinates. Moreover, as many organizations move to team-based structures, leaders must become more effective at working in and leading teams. To date, little empirical research has examined the interactions within and among top management teams.

Finally, even with all the emphasis on change and all the fuss over the need for change, our understanding of *leading* change is actually quite deficient. Early theories of leadership say little about the processes that leaders use to bring about large-scale change in highly bureaucratic organizations (House, 1995). The role of leaders in determining, introducing, and implementing change continues to be an issue that poses signficant research challenges. Moreover, as the characteristics of the workforce change, even leaders in somewhat stable industries will have to deal with the unique problems and processes associated with changing demographic trends.

Empirical Research on Leadership Development

- **Lots of stories, some myths - little evidence**
- **Systematic evaluation rare - relation between training methods and results still unclear**
- **Empirical research focuses mostly on formal training, not informal learning (i.e., OJT, job assignments)**
- **But some work suggests that managers think formal training is less important than experience-based learning**

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Now for a brief update on the current state of research on *leadership development.* Twenty-six years ago, a leading industrial-organizational psychologist characterized the literature on leadership development as voluminous, nonempirical, inconclusive, and dull (Campbell, 1971). Unfortunately, more recent reviews have come to very similar conclusions (Goldstein and Gessner, 1988). One very recent analysis stated the following: "While the number of available training programs is considerable and continues to grow at an increasing pace, the scarcity of sound research on training has been among the most blaring shortcomings in the leadership area. Most of the training programs are untested and, at best, of uncertain value" (Fiedler, 1996: 243).

As noted earlier, to the extent that there has been *any* systematic evaluation of leadership training in the private sector, it has focused exclusively on formal programs evaluated by participant self-reports. Such an approach has at least two significant flaws. First, it is very likely that informal, experience-based learning is as, or more, important to leadership development than learning that occurs in the

classroom. Though work in the area of informal learning is quite limited, some studies suggest that managers themselves cite on-the-job experience as more important than formal training. Second, though self-report data provide one indicator of learning, other more objective measures are also needed to assess the effectiveness of different training techniques. To date, only one study has systematically and empirically examined different leadership training approaches using multiple evaluation criteria.

Empirical Research: Several Training Methods Have Moderate Impact on Learning

Training Method	Subjective Learning	Objective Learning	Subjective Behavior	Objective Results
Lecture	N/A	+	+	N/A
Lecture/ Group Discussion	N/A	+	+	N/A
Sensitivity Training	+	N/A	N/A	N/A
Behavioral Modeling	++	N/A	+	N/A
Lecture/ Group Discussion/ Role Playing	+	++	+	N/A

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Source: Burke & Day (1986)

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This table presents the results of the most systematic analysis of formal managerial training programs to date (Burke and Day, 1988). The study examined findings from 70 managerial training programs representing different training content areas, training methods, and evaluation criteria. The criteria examined were: 1) subjective learning as reported by trainees or other observers, 2) objective learning which was assessed by objective means such as standardized knowledge tests, 3) subjective behavior which included measures that evaluated changes in on-the-job behavior perceived by trainees, peers, or supervisors, and 4) objective results which included measures that evaluated tangible results such as improved quality, reduced costs, or number of promotions.

The analysis found that very few training evaluations were based on actual organizational performance measures—so few, in fact, that the study could not draw any meaningful conclusions for the objective results measures. The table above presents the study's findings. Again, in many cases, so few evaluations had been conducted that the analysis was unable to estimate the effects of certain training

methods on certain outcomes. The data were simply not available (N/A).

Overall, the study concluded that different methods of managerial training were, on average, moderately effective in improving learning and subjective evaluations of job performance. Surprisingly, the training *method* appeared to effect outcomes to a greater degree than did the training *content*. Different methods however, appeared to work better for improving different outcomes. In general, behavioral modeling (i.e., role modeling, "by-example") and training that used the lecture method appeared to produce the greatest learning and subjective behavior results. The study cautioned, however, that other factors such as trainer experience and trainer qualifications could potentially moderate these effects.

In sum, the study illustrates that systematic empirical research is desperately needed to evaluate the effectiveness of various leadership training approaches.

Most Research Emphasizes Formal Programs, But Managers Emphasize Learning-by-Doing

Which methods do managers report as most effective for developing leadership capabilities?

Learning Methods	Articulate Vision	Catalyst-Strategic Change	Getting Results	Catalyst-Cultural Change	Empower Others	Customer Orientation
Experience-Based Learning						
• Job Assignment		X	X	XX	X	XX
• Projects/ Task Forces	X	XX				
Classroom Education						
• In-company management development	XX					
• University Executive Education						

Source: Yeung and Ready (1995) n=1213 managers

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Additional research is particularly needed to evaluate the impact of different experience-based learning methods. While most research and evaluation efforts continue to focus almost exclusively on formal training programs, managers report that experience is the best teacher. In a study of more than 1,200 managers from ten major global corporations in eight countries, managers reported experience-based learning as the most effective method for developing leadership capabilities (Yeung & Ready, 1995). The slide above lists some of the methods that leaders felt were most effective. Job assignments, for example, were considered useful for developing leadership capabilities aimed at producing strategic change, getting results, changing the organizational culture, empowering others, and exhibiting a strong customer orientation. Other studies that have examined experience-based development have found similar results (McCall, Lombardo, and Morrison, 1988).

Learning-by-Doing

Projects/Task Forces	- Self-confidence; negotiation skills; management values
"Fix-it" Assignments	- Directing & motivating others; lateral cooperation
"Starting from Scratch" Assignments	- Standing alone and acting
Line to Staff Switches	- Technical knowledge; how business works; dealing w/ ambiguity
Managing Large-Scope Operations	- Self-confidence; directing & motivating subordinates

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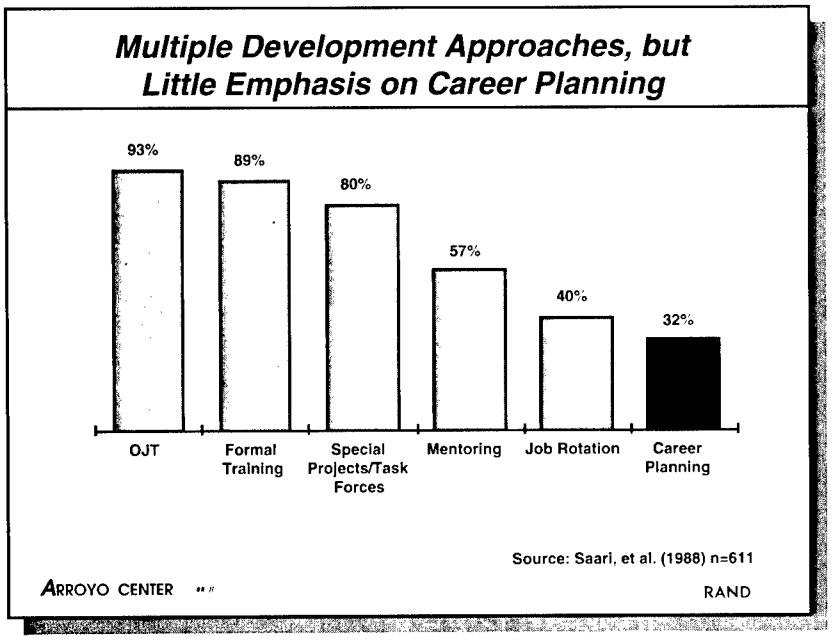
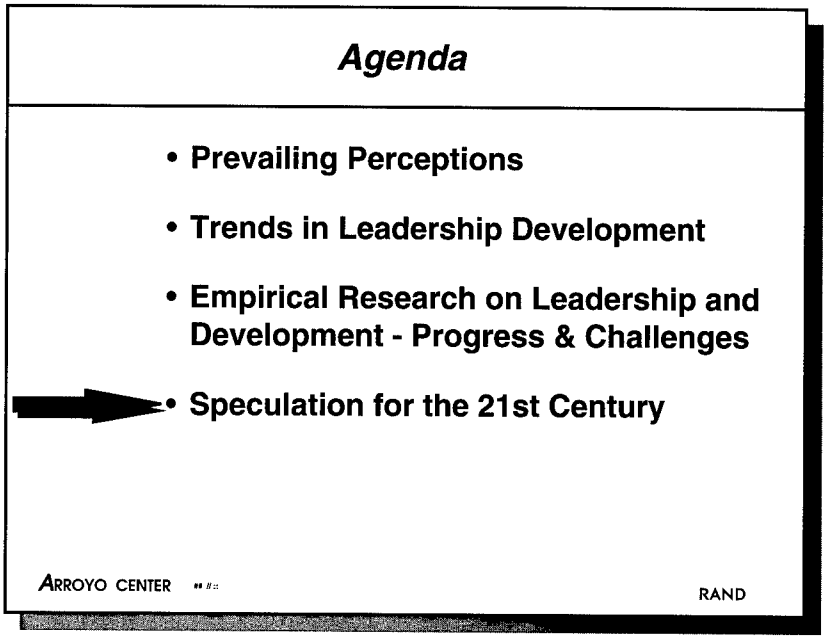
Learning through actual job experience, or "learning-by-doing," may provide some of the best training for leadership development. Though rarely studied in any systematic fashion, experience-based learning appears to facilitate the development of competencies ranging from enhanced self-confidence to greater perseverance.

In a study of 191 successful executives from six major corporations, researchers at the Center for Creative Leadership identified a number of work experiences that enhanced leadership learning (McCall, Lombardo, and Morrison, 1988). These experiences could be broadly described as assignments (specific jobs), bosses (others who exerted influence), and hardships (setbacks and tough times). Based on interviews and questionnaire data, the researchers found that different assignments enhanced different leadership skills. Projects and task forces, for example, taught the basic responsibilities of management and improved negotiation skills. They also built self-confidence. "Fix-it" assignments gave managers experience directing and motivating others and improved their collaboration skills. "Starting-from-scratch" assignments taught managers how to plan and carry

out assignments and how to deal with implementation issues. "Line-to-staff switches" improved technical knowledge and provided experience dealing with ambiguity. And, managing large-scope operations gave managers an opportunity to direct larger, more complicated efforts, motivate a greater number of people, and bolster their confidence for leading projects with greater impact.



Despite the wide variety of leadership development approaches available to organizations, private sector firms continue to rely heavily on formal training programs and informal, nonstructured on-the-job training. Though many companies use some form of mentoring or job rotation, relatively few engage in formal career planning. Given the fact that different formal training methods and job experiences provide different leadership skills, career planning is important for making sure that developing leaders receive well-rounded training. Though a lack of formal career planning may reflect the particular dynamic of the private sector, it may also be one of its greatest flaws in developing effective leaders.



Having reviewed the changing role of executive development in the private sector, and the current state of leadership research, I now provide some speculation on the demands that will face leaders as they move into the 21st century. I also suggest some changes that will need to be made in leadership development to meet these demands.

Speculation for Leadership in the 21st Century

- Quantity, scope and diversity of information will continue to grow
- Technology will cause jobs to be less routine, making direct supervision more difficult
- Leaders will have to access and assimilate more information and anticipate change more quickly
- Leaders will have to manage highly decentralized organizations and culturally diverse individuals/teams

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Even with the vast amount of information that currently overwhelms most leaders, leaders in the 21st century will face an even greater flood of knowledge. Increasingly complex alliances and rapidly changing communications technology will continue to increase the quantity, scope, and diversity of information that leaders will have to deal with. As a result, leaders will have to be able to cull critical data quickly and efficiently. They will have to empower a greater number of people to analyze new data, and they will have to rely on their subordinates to make increasingly important decisions. As such, leaders will need to ensure that people throughout the organization fully understand the "big picture" and have the power, authority, and information they need to make correct decisions.

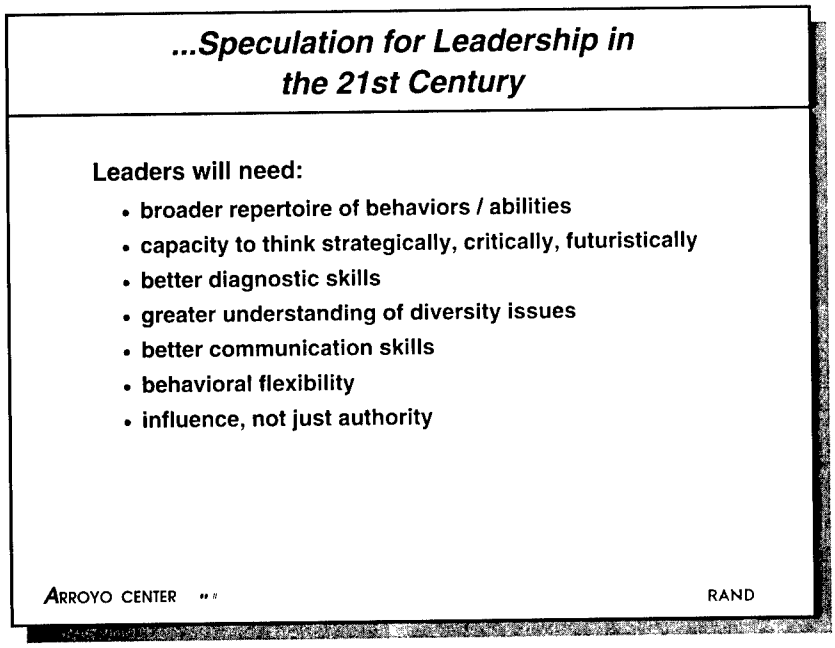
Second, technology will continue to make jobs less routine. Since routine work will be done by automated processes, much of the work in the 21st century will be intellectual rather than physical. Monitoring and controlling the processes by which work is done will be very difficult and an increasing number of people will work without direct supervision. As a result, leaders will need to instill in their subordi-

nates an internalized commitment to their work and their organization (House, 1995).

Third, the pace of change will continue to be rapid. Effective leaders will have to anticipate change more quickly and access and assimilate information efficiently. Again, this will require that they rely on a greater variety of technology and a greater number of people throughout the organization.

Fourth, to compete effectively in a century marked by speed and information, leaders will have to manage highly decentralized organizations. Like the control center of a high-tech octopus—each arm dealing with a different set of stimuli—leaders will have to relinquish a certain amount of control to the sensors and reactors closest to the input.

Finally, cultural diversity will require that leaders be comfortable with difference and that they be adept at resolving conflict. Effective leaders will be able to draw the best out of each of their subordinates regardless of their similarities and differences.



To deal with these new leadership demands, leaders will need additional competencies. Moreover, to deal with a more diverse, decentralized, and informed organization, they will need a *greater variety* of competencies. No longer will leaders be able to get by because they know a particular technology or a particular market. In the 21st century, leaders will need to assimilate information from multiple markets and across a number of technologies—just to keep up. To succeed, they will need to think strategically about potential futures and think critically about current structures and processes. They will have to be able to diagnose the complicated strategies of their competitors and manage the complex challenges created by an increasingly diverse workforce. Juggling and balancing these numerous demands will make sophisticated communication skills and behavioral flexibility a virtue.

Leadership Development in the 21st Century

Effective development programs will:

- **be applied, but more systematic**
- **be better integrated with work (i.e., modular, customized, aligned with support systems)**
- **provide opportunities for long range thinking and strategic breadth earlier in career**
- **involve intact teams and external partners**
- **enhance awareness of unconscious assumptions**
- **create ongoing dialogue - not just programs**
- **utilize empirical research on learning - not just training**
- **track learning and results broadly (360%) over time**

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Preparing leaders to meet the demands of the 21st century will obviously require improvements in leadership development as well. Several existing training trends will continue, but training practices will have to be modified to reach their full potential.

First, leadership training is likely to maintain a strong emphasis on application and immediate results. However, applied training methods such as "action learning" will need to be managed more systematically. Currently, many efforts fail to achieve their objectives because Human Resources managers lack the organizational clout required to orchestrate support and commitment from important operating units. Moreover, critical learning experiences are often wasted when developing leaders complete their assignments, only to be returned to jobs that fail to utilize new capabilities. In the future, development efforts will have to progress and build more systematically if they are to achieve desired results.

Second, training programs will need to be more integrated with the actual doing of work. No longer will high-potential leaders be able to

take time out of their busy schedules to spend thirteen weeks at a university or corporate training center. Leadership development efforts in the future will have to be designed in shorter, more portable modules. Modularized delivery will allow training to be deployed quickly across the organization as needed, and customized according to the requirements of a particular leader or leadership team. Training systems will have to be aligned more closely with the strategic goals of the organization and with other support systems such as the organization's selection, promotion, and performance review practices.

Many leaders today advance through a series of jobs which focus on and reward short-range thinking. Leadership development in the future will counter these forces by providing more leaders with an opportunity to reflect on long-term issues and provide input into long-range strategies. Career planning and job rotation will be used more extensively to provide strategic breadth earlier in a leader's career (Conger, 1993).

The fourth trend to expect is an increase in leadership training for intact teams. As organizations change more quickly and become more decentralized, common vision and buy-in become increasingly important. Future development experiences are likely to involve teams of leaders (who work together on an ongoing basis) to decide critical strategic issues. By providing training to intact teams, and potentially involving leaders from partnering organizations, leadership development programs may help to create the shared understanding and commitment needed to speed large-scale change.

To deal with greater diversity in the workforce, leaders will need to be more interpersonally adept and more aware of their unconscious assumptions. Training to improve self-awareness, as well as cultural awareness, will likely become another trend. Leadership development within this domain will focus on creating dialogue so that those who have different beliefs and values outside of the workplace will work together to achieve common goals within the workplace.

Finally, to be effective, leadership training in the future must pay greater attention to evaluation. Development efforts should examine the impact of different training methods, providers, and content on a

variety of relevant outcomes. Participant learning and organizational results should be tracked broadly over time.

Appendix F

OUTBRIEF OF WORKSHOP ON FUTURE LEADER DEVELOPMENT OF ARMY NCOs

Outbrief of Workshop on Future Leader Development of Army Noncommissioned Officers

3 May 1997
U.S. Army Sergeants Major Academy
Ft. Bliss, Texas

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Why Do We Have NCOs?

Presented by:

CSM Wayne Heinhold

##

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Why? (What We Did)

Addressed five fundamental aspects of NCO leadership:

- **Why are there NCOs and officers?**
- **Why are there NCO academies?**
- **Why are there three pillars?**
- **How to know how much development an NCO needs?**
- **Why up-or-out? Why do all soldiers have to be leaders?**

Assessed what is right and wrong with NCO leader development today

Worked on what might change in the future.

##

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Why? (What We Did, cont.)

Identified several changes that could affect NCO leader development.

Explored the implications of four of these changes:

- Much smaller budget/Army
- Much more purple world
- World with significant advances in educational technology
- World with significant changes in recruit quality

Developed a variety of ideas for adapting to the changed worlds (out-of-the-box stuff).

Identified two recurring imperatives across those worlds

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Imperatives

Keep the institutional pillar for important face-to-face practice

- Private industry reinforces need/utility
- Pressures to decrease this would come from worlds with:
  - Much smaller budget/Army,
  - Increased educational technology

Standardization is important for a professional Army

- Standardization is an antidote for worlds with:
  - Information overload,
  - Significant changes in recruit quality
- Will be serious concern in a much more "purple" world

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Issues To Fix

Self-development is weak
- Emphasized but not required
- Needs to be clearly defined
- Needs evaluation mechanisms

Institutional pillar is strong, BUT we don't
- Expect enough from students in the institution
- Train high enough, early enough
- Stress critical thinking enough

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Issues Needing Further Thinking

Is up-or-out a good idea if the Army:
- Is much smaller?
- Has retention/accession problems?
- Army much more technological?

Where should institutional leadership development occur?
- Earlier?
- More at lower level?
- More "continuous" than now?

What needs to stay at institutional level?
- What could be moved to other pillars?
- If so, where do time/resources come from?

What is best medium for given type of development?

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What Do NCOs Do and Why Do They Do It?

Presented by:

SGM Mike Cox

We Identified Five Key Roles

- Standard bearer
- Trainer
- Mentor
- Communicator
- Advisor

What's Right

NCO professional development system
Ethos, legacy, tradition
Loyalty--institutional, troops
Emphasis on soldiers, not technology
NCO roles: only "how" and "where" changes
Soldiers are damn fine
Risk management

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What's to Fix

NCO leadership tactics, techniques, and procedures
Refine training to meet OP/PERSTEMPO and technical demands
Make training more demanding
Start structural leadership training earlier
Career development plan
Revisit SDT/SQT, individual soldier evaluation

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What Requires Further Thought

- Balance between institutional, unit training and self development
- Need for new NCO technical skills
- Costs and benefits of additional NCO training
- Time line for professional development events
- Effect of PERS/OPTEMPO on professional development
- Exploitation of technologies for training
- Maximize learning from each training event
- CSM/SGM utilization

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What's Out-of-the-Box

- Joint, combined, multi-national training and operations
- Contract NCOs and soldiers
- Medium of training (Army Broadcast System)
- Need/availability of training areas
- Preserve value-based Army
- Investment-potential ratio
- No dirtbag Army
- Family influence: in, up, out--AFFT
- Seamless AC/RC/civilian education connections
- Melding combat arms/CS/CSS MOSs
- Pay-worth
- Responsibility creep: more NCOs, less officers

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How Do We Develop NCO Leaders?

Presented by:

SGM Danny Golden

How Does the Army Develop NCO Leaders?

Structure

- Time course: From first contact, continuous, sequential, progressive (with exceptions)
- Components: "3 Pillars" of NCO Leader Development

Mechanisms

- Methods: Interpersonal, academic, on-the-job, self-study
- Tools: Course curricula, materials, technologies, learning skills
- Evaluation and Feedback: Learning goals and standards, Peer input, informal counseling, formal NCOER, academic
- Incentives: Status/recognition, responsibility, pay, recognition, responsibility, benefits

Assumptions Regarding the Future of Army NCO Leadership Development

Restructuring/Re-engineering will continue: Fewer slots

Declining resources: Dollars

OPTEMPO and PERSTEMPO will continue to increase

More and better applications of technology to the Army

Society's on-going evolution of values will continue to affect Army

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Fixes to HOW the Army Currently Develops NCO Leadership

Eliminate redundancy in NCO development

Add to the POI

Relook PLDC POI

Select-Train-Promote-Assign in AC

Stop erosion of senior NCO incentives

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Imperatives: What's Right with HOW the Army is Developing NCO Leadership?

PLDC - should remain live-in environment

BNCOC/ANCOC - MOS should remain resident

Retain centralized promotions

Leader development should remain continuous, sequential, and progressive

Maintain the 3 pillars

Proponents should continue to set T.C.S.

Evolving sound evaluation and feedback are critical

- Personal
- Institutional

Incentives

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HOW Should We Develop NCO Leaders?: Issues for Future Thinking

Non-leader rank??

Dual track at senior NCO levels??

Leadership issues in future joint service teams??

Re-evaluate LDP as stated in Draft FM 22-100??

Separate common core in ANCOC/BNCOC??

Entrance requirements??

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Who Does NCO Leader Development?

Presented by:

MSG Dan Elder

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"Who Group" Summary

Questions

- Who is responsible for NCO leader development?
- Who controls leader development resources?
- Who trains/teaches leadership?

Perspective: The three pillars

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Some Cross-Cutting Assumptions

NCO Corps has the depth and breadth of experience to fulfill its leadership development role

Commanders are motivated to encourage and promote leadership development among their NCOs

Individual soldier bears ultimate responsibility ... and understands what's required

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Issues to Fix

- Communication/relationship breakdown between Center for Army Leadership and NCOES
- TASS: communication problem

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Imperatives

Self-development pillar stays

- Incentives

NCOES stays

- PLDC paramount
- Other courses: content tweaking only

NCOs continue to influence career progression assignments of their subordinates

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Issues Needing Further Thinking

- Should NCOES be tied to promotion (select-train-promote)?
  - Earlier training is a hedge against quality reduction
- RCPs: is there a good balance between mandatory separation and Army manpower requirements?
  - Possible shaping strategy against force reductions
- Who should control NCO career progression: Why are officers on NCO selection boards?
- Should self-development incentives be restructured?
  - Possible strategy against quality reduction

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Where Do We Develop NCO Leaders?

Presented by:

CSM Howard Rathmann &
CSM Bob Hall

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Summary

Discussed where NCO leadership training occurs as it currently exists and barriers to effectiveness in current locations:

- -Leader training occurs anywhere and anytime
- -PLDC, BNCOC, ANCOC, SMC
- -Unit
- -Other, i.e., the "Where" of self-development
- -Current physical location IS effective

Discussed unit training is degraded due to OPTEMPO, Right-Sizing, CINCOS

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Summary (cont.)

Discussed potential locations of leadership training:

- Inside Army - traditional proponents, institutions, RC, unit, individual
- Outside Army - non-traditional other services, training with industry, colleges

Discussed the potential effects of distance learning on leadership training effectiveness at all locations

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Issues to Be Fixed

OPTEMPO/PERSTEMPO distracts from timely training of NCOs

Training time must be fenced

Coordinate/consolidate distance learning initiatives to reduce duplication efforts/dollars (TRADOC)

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Issues Needing Further Thinking

Select - train - promote process

Reserve Component opportunities (TASS)

Other service opportunities (purple-izing)

Standardizing distance learning by TRADOC for the Army to include developing overview and basic understanding of distance learning technologies in IET

##

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Imperatives

- Core leadership training must remain institutionalized
  - Basis for our values and ethics as NCOs
  - Builds trust, confidence, credibility
- NCO interaction is crucial to leader development
- Unit training time must be fenced to capitalize on distance learning
- Switch on/switch off must be preserved
  - Taking leader from unit to allow for complete separation from mission and complete focus on training

##

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When Does NCO Leader Development Occur?

Presented by:

CSM Jewell White

We Looked At the Timing of NCO Leader Development

Addressed "formal" NCOES, self-development, and unit-based (giving and getting) for AC and the RC

Key insights:

- Most leader development occurs in units (greater than 50 percent)
  - Less in self-development; least in formal NCOES
- Formal NCOES is "back-loaded"; occurs late in the career (9 months SGM course)
- Self-development occurs constantly with more early in the career, with peaks before selection (SGT/SSG)
- In units, most "getting" occurs early, most "giving" occurs late

Key Features of When Leader Development Occurs

Defining characteristic: It starts *early*, occurs *continuously*, and *sequentially*

Reasons:

- Provides the foundation and glidepath for success in the career (early)
- Allows leaders to stay current and build expertise (continuous)
- Is required for promotion and assignment at each step up the career ladder (sequential)

But doesn't always work the way it should–sometimes sporadic, non-standard, and too late

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The Current Leader Development System Can Be Improved

Improve standardization of informal leader development

Self-development needs to be strengthened

- Improve alignment between Army and NCOs' needs (e.g., stronger command involvement)

More development is needed earlier

- Close the gaps between SFCs and SGMs
- Less institutional training for SGMs

Active and Reserve Component development programs need to be more closely aligned

- POIs need to be the same
- Equipment available across Components

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Imperatives on "When" We Develop NCOs

- Maintain high standards for recruits
- Emphasize institutional values early and continuously
- Stay "sequential"-- development tied to promotion
  - Maintain PLDC linkage to promotion to SGT
- Maintain leader development as a continuous process
- Maintain the institutional pillar but be willing to change
- Exploit new technologies (e.g., distance learning) to support self-development and development in units

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Issues for Further Thought or Research

Smaller Army– does this reduce continuity and mentorship?

Resource reductions– how these impact the timing of training?

How changes in promotion policies (RCPs, "select-train-promote") would affect when we train

How new technologies change when we train; e.g., course timing; when to incorporate computer training in a soldier's career

Effects of increasing "jointness" across services

Changes in responsibilities between NCOs and officers-- imply combined training?

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Future Leader Development of the Noncommissioned Officer Workshop

Overall Summary

##

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Recurring Themes

Need to strengthen self-development pillar

- Clarify and emphasize
- Increase incentives for soldiers and leaders
- Fence time

Importance of institutional pillar

- Maintain face-to-face aspects for selected functions

##

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Recurring Themes

Need to develop earlier
- More front-loaded
- Higher skills sooner

Potential for educational technology
- Match technology to task
- Don't over apply

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Assessment of Process

GOALS	ACTUAL
What we do	X X
Why we do it that way	X X
Assess current system	X
What could change	X
Imperatives to Pursue	X
Signposts	Not Yet
	Out of the Box Ideas

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Where From Here?

- Journey not a destination
- Core vision developed around imperatives
- Workshop proceedings published
- Research and analyze issues at appropriate levels
- Brief outputs to MACOMs & DA
- Leaders credit this workshop for changes made
- USASMA home page updates on workshop initiatives

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Appendix G

USASMA DRAFT OF PROCEEDINGS OF FUTURE NCO LEADER DEVELOPMENT CONFERENCE

Workshop Proceedings

"Future Leader Development of Army Noncommissioned Officers"

During the period 28 April through 3 May 1997, the United States Army Sergeants Major Academy hosted "The Future Leader Development of the Army Noncommissioned Officer Workshop" in El Paso, Texas. Noncommissioned Officers from all three components of the Army attended; these 64 SFCs through CSMs assessed the current NCO developmental process and suggested changes to take NCO development into Army XXI. Members from the Rand Corporation and USASMA facilitated the workshop.

The changes in job demands and training resources are affecting the Army's system for educating and developing NCOs. Jobs are changing and at the same time the schoolhouse which has traditionally provided the primary environment for growth and development is facing resource pressures from downsizing, budget reductions, and consolidation of training institutions. This environment is what the workshop addressed and specifically: How do you develop NCOs under these conditions and what strategies are necessary to provide the Army with leaders in the noncommissioned ranks.

The Rand Corporation attendees will supplement this workshop summary with their "Workshop Report" in October 1997.

This workshop report is broken down into the following sections:

I. Mechanisms for Developing the NCO

II. Assumptions that underlay the NCO development structure and changes in the environment that might affect the structure

III. Imperatives

IV. Strategies for NCO Development

V. Topics/Issues Requiring Additional Research

VI. Issues to Fix

TAB A. Outbrief of Workshop

TAB B. Briefing to TRADOC Commander—3 Parts (Workshop, Operational Plan and Rand's Observations)

TAB C. Attendees

Section I. Mechanisms for Developing the NCO

Three Pillars: Institutional, Unit, and Self-Development. The Unit pillar becomes the operational element for practice as well as training. The workshop participants all agreed the three pillars are what should guide and mold NCOs in the future.

VULNERABILITIES OF THE PILLARS:

a. Current OPTEMPO and PERSTEMPO conditions create problems for increasing NCO development using self-development and unit training methods.

b. Definitions vary. As technology affects training and development the terms have not changed. All 3 pillars need new definitions with corresponding shaping strategies.

c. Units don't feel in control of training. Too much has shifted from institutional to units without input or feedback from the unit NCOs. Because definitions are based on old teaching methodologies, institutional training done in units are perceived by units as unit training.

d. The Army as a whole is not managing unit and institutional training as well as it could for the NCO Corps. Management is too layered.

e. Duplication of training efforts from one post to another and one proponent to another.

f. Civilian education currently dependents on individual and unit emphasis. As the NCO Corps moves into the Army 2010 environment, more incentives and opportunities for civilian education may become necessary.

g. Since Select, Train, Promote came into existence, the three pillars have not been adjusted. As such, the pillars do not support the Select, Train, Promote system. Readjustment is necessary.

Section II.

Assumptions that underlay the NCO development structure and environmental changes that might affect the structure.

1. Restructuring and re-engineering of the Army will continue: There will be fewer slots for NCOs in the future.

2. Declining resources: Funds to support the military and training will continue to decrease.

3. OPTEMPO and PERSTEMPO will continue to increase: There will not be any let-up in the number of humanitarian missions, but perhaps there will be an increase in such missions. The turbulence of personnel movement within and into the military will also continue if not increase.

4. Society's on-going evolution of values will continue to affect the Army: As in the past, broader social changes in the society will continue to become part of the Army.

5. The current system of developing NCO leaders is structured and equipped to do a reasonable job. Because this development process is only rated "reasonable," minor changes to NCO development will affect the collective NCO development system in a cause and effect methodology.

Therefore changes as simple as course content need to be reviewed in relation to the macro view of the course(s) and NCOES, not just on a TSP training level.

6. Training will continue in some form but will be redistributed within the 3 pillars.

7. Core values will drive/provide the foundation for NCO development.

8. Standardization of institutional training is useful to the Army.

9. Self-development is useful to the Army.

10. NCO Corps has the depth and breath of experience to fulfill its leader development role for all 3 pillars.

11. Commanders are motivated to encourage and promote self-development.

12. Individual soldier bears ultimate responsibility for his or her self-development activities.

13. Soldiers need leadership training prior to leading.

Section III. Imperatives

1. PLDC: remain a live-in environment: there is too much that is learned from the direct interaction with other colleagues at this early stage of professional development, and this is where the foundation of a "professional network" is laid. PLDC must remain in institutional training.

2. BNCOC/ANCOC: MOS training should remain resident: There is too much of the training that is specific to the branch and specialty to conduct all this training at home station. Some tasks could be taught outside the resident training mode.

3. CENTRALIZED PROMOTIONS: Retain. This is the way in which the Army can make their promotion decisions as fairly as possible.

4. CONTINUOUS DEVELOPMENT: Link unit and institutional training. Leader development should remain continuous, sequential, and progressive. A participant said: "You cannot condense real-world experience. You can acquire it more or less quickly, but there are limits and certain lessons are learned by living through the experiences."

5. ACCELERATE NCOES: Target training earlier than present. Target the SGM course to the MSG. Both the MSG and SGM are skill level "5"—train skill level "5" as a prerequisite for MSG rather than SGM. Allow PLDC attendance of non-promotable SPCs on a space available basis. Move some of the BNCOC tasks to PLDC and ANCOC tasks to BNCOC. The view is that the current Select, Train and Promote system delivers training too late in a soldier's career and after filling a position. Potential initiatives range from moving TSPs from one course to another, selecting a different target grade for NCOES course(s), or consolidating between ANCOC and BNCOC on an MOS case by case basis.

6. ENHANCE FEEDBACK: Redesign evaluations and feedback systems for soldiers and institutions. Include knowledge as well as job performance on individual evaluations. Two way feedback—units to schools and back to unit that allows units to know the status of their recommendations.

7. DISTANCE LEARNING: Training time for the soldiers at home station must be fenced—it cannot be after hours or on a students own time. Core leadership training, performance tasks, and skills requiring student interaction must remain in institutional training and not be placed in distance learning initially. Require attendance—current TNET experiences indicate students are absent from training due to mission requirements.

8. STANDARDIZATION IN LEADER DEVELOPMENT: Cross level tasks/subjects between the three pillars and ensure that training is consistent with Task, Conditions and Standards no matter where the training is conducted.

9. RETAIN THE THREE DEVELOPMENTAL PILLARS—UNIT, INSTITUTIONAL, AND SELF-DEVELOPMENT. Movement between pillars is acceptable and necessary as doctrine and technology changes; however, the self development pillar needs strengthening and have incentives added. Expect more from students in the institutional pillar.and reasoning ability.

11. MAINTAIN HIGH STANDARDS FOR RECRUITS. Recruits become NCOs eventually. Don't lower standards for graduation from AIT. Reinforce IET standards in units and emphasize institutional values early and continuously.

12. CONTINUOUS PROCESS: Develop leadership training support packets

13. CORE VALUES: The NCO Core Values must be ingrained in all training—unit, institutional, and self-development.

14. KEY NCO ROLES: Standard Bearer, Trainer, Coach, Communicator, and Advisor. These roles are the cornerstone on which to develop NCOs.

Section IV. Strategies for NCO Development

(They tie into imperatives)

1. ACCELERATE NCOES: Train earlier in the NCO's career and migrate tasks from higher level courses to lower level courses within NCOES.

2. CONTINUOUS DEVELOPMENT: Link unit and school-house training and show all soldiers how they interface.

3. DISTANCE LEARNING: Fence soldier's time at home station and be selective in which subjects to move to distance learning.

4. RETAIN THE 3 DEVELOPMENTAL PILLARS BUT CROSS LEVEL BETWEEN: The pillars need to have a macro view reflecting how one task in another pillar supports the other. They must be holistic and life cycle driven.

5. CRITICAL THINKING: Develop NCOs with reasoning skills. Imbed critical thinking skills in training and unit activities that require NCOs to depart from doctrine to analyze the problem and select course of actions.

6. MAINTAIN AND ENHANCE CORE VALUES: Integrate NCO Core Values within all 3 pillars and develop stand alone courseware to train the core values. Also tie in the NCO roles to the core values.

Section V. Topics/Issues Requiring Additional Research

1. UP OR OUT POLICY: Retention Control Points—are they good for the Army if the Army get any smaller? This policy has retention and accession issues for a smaller force with corresponding training impacts. Is there a good balance between mandatory separation and Army manpower requirements? Needs relook.

2. INSTITUTIONAL LEADERSHIP DEVELOPMENT: Where should institutional leadership development occur? Do NCOs need training earlier which is not tied to a course or promotion? Can the new technologies be used to train leadership? Should Select, Train, Promote system remain?

3. DISTANCE LEARNING: What tasks need to stay at the institutional level? What could be moved to other pillars? What are the effects on the soldier and unit when a task is moved from institutional to unit or self-development? Distance learning is under which pillar? If distance learning occurs during BNCOC or ANCOC and under the current definition of the institutional pillar delivered to the soldier as a pre-resident package, will it remain institutional? Will the unit and soldier understand home station distance learning is still institutional training? How do you prepare the soldier for this shift in training methodology?

4. THREE PILLARS: How do you achieve a balance between the three pillars? Is there a need to balance? How do you restructure self-development incentives?

5. TECHNOLOGY MOS/ASI: Do we need a new MOS for the computer skills required in operations sections? Can an ASI do the job? Can the Battle Staff NCO Course be modified to train NCOs on the new technology? Is Battle Staff the correct place to train the NCO Corps on operational computer technology?

6. PERSTEMPO and OPTEMPO: Change is needed in professional development if the assumption that PERSTEMPO and OPTEMPO remains at or above the current levels. One change would shift some of the professional development from institutional to self-development or unit. Impacts on the soldiers and unit would be significant.

Can the Army accept more reliance on soldier initiative and unit picking up the load?

7. SGM vs. CSM: Dual track at senior NCO (SGM vs. CSM) levels: Should there be an alternative for CSM to move between SGM and CSM. Example: Allow CSM to take off the wreath and become a SGM for a tour at the SGM Academy to instruct SGMs and 1SGs.

8. NCOES ENTRANCE REQUIREMENTS: Increase entrance requirements for NCOES: In addition to selection for schooling, require soldiers to have certain academic courses on counseling, learning, or other topics as a prerequisite.

9. NCO CAREER PROGRESSION: Who should control NCO career progression? Can NCOs influence career progression assignments of their subordinates? Why are officers on NCO selection boards?

10. TOTAL ARMY SCHOOL SYSTEM: How do you send active component soldiers to Reserve and National Guard schools? The Total Army School System needs more emphasis and made total by including the AC under it. Should Active Component Schools fall under the TASS Command and Control Structure?

a. Example: Reserve Component soldiers in the western states have closer training locations for PLDC to Active Component soldiers but AC soldiers travel long distances to AC rather than attend RC PLDC sites.

b. Example: Within 35 miles of the soldier there are 2 PLDC instructional locations, one RC and one AC. Each on having student loads less than 75 per class. Consolidation would save training dollars.

c. Putting common core (Phase I of ANCOC and BNCOC) under one POI and let AC and RC attend at the closest location.

11. JOINT LEADER TRAINING: How do we get more training with sister services? At what level and when?

12. DISTANCE LEARNING STANDARDIZATION: Standardization of distance learning by TRADOC for the Army. Distance Learning in the Army is defined differently than in civilian education institutions—why? If Distance Learning is to work, it must start in IET—is that

feasible? Delivery system not standard—proponents and users need baseline. Proponents are moving out on DL but many are moving in different directions—need consistent effort.

13. COMMON CORE: Does each MOS need BNCOC and ANCOC or could one course train the soldier? By moving common core into a phase one does the MOS have enough tasks to require both? Why require both for promotion: BNCOC for SSG and ANCOC for SFC. This requirement keeps training going that may not be necessary. Functional courses in a self-development mode could supplement MOS skills so that either BNCOC or ANCOC as it is now could be eliminated.

Section VI. Issues to Fix

1. SELF-DEVELOPMENT PILLAR: Rework placement of tasks in each pillar. Provide incentives within the self-development pillar. Provide units with more training material.

2. NCO leadership tactics, techniques, and procedures. Field Manuals are becoming less detailed and more generic. NCOs need more prescriptive procedures that is not being written as Field Manuals consolidate. Need a new system to capture "How to" information. How do we save the data that is being lost?

3. Refine training to meet OP/PERSTEMP and technical demands.

4. Make institutional training more demanding. Raise standards. Re-look at the open book testing in NCOES. If you keep open book testing, then supplement it with closed book tests. Remember, the soldiers in combat conditions must act out of knowledge and recall of the subject rather then looking it up in an FM or AR.

5. Career Development Plan—How long has the DA Pam on career development been staffed. We need it and a system to enforce it. Link it to promotions, schooling, and assignments. The current plan is a model that is being disregarded. Use the plan to educate the officer corps on EMPS and NCOES.

Appendix H

ORIENTATION BRIEFING FOR NCO VISION WORKSHOP

NCO Leader Development in a Changing World

About The "Vision Thing"

Jim Dewar

July 17-18, 1997

RAND

Vision "Thing"-##
Printed: // ::

Impetus to Vision

"Vision is in vogue.... [T]here is increasing recognition that some sort of guiding image of the future is necessary...to steer...through the uncharted contours of this new era."

David Jablonsky, "Strategic Vision and Presidential Authority in the Post-Cold War Era," *Parameters*, Winter 1991-92, p. 2.

RAND

Why Should We Bother About Visions?

- They are important
  - –in distributing decision-making
  - –as a focal point for energy and commitment
- They are *not* indefinable
  - –we have empirical evidence of their
    - + essential elements or ingredients
    - + criteria for effectiveness
- They must come from those who can effect change
  - –who can create and reinforce visions
  - –by their words and especially their actions

RAND

Historical Examples of Influential Visions

- Nelson at Trafalgar
- Kennan and the containment of communism
- Morelli and AirLand Battle 2000
- LeMay and the development of SAC
- Rickover and the Navy's nuclear power program
- McNamara and the rationalization of defense
- Watson and IBM

RAND

Vision "Thing"–##
Printed: //

The Downside of Visions

- If they are wrong, they can do harm
  - Hitler's vision of the Third Reich
  - Zumwalt's face-lifting of the U.S. Navy
- We often don't know if they are right or wrong until it is too late
  - the visionary can be captured by the vision
- They can be scary, lonely endeavors
  - visions may have to be sold and resold
  - they usually compete with other visions
  - the issue is often in doubt until the visionary has gone and the vision must stand on its own

RAND

Vision "Thing"–##

The Essence of Visions

- Visions are nothing more (or less) than a revelation of the basis for future decisionmaking
- Where there is a shared understanding of how decisions or choices will be made, there is a vision
- Visions mean revealing one's intent. That means:
  - –sharing the controlling ideas
  - –exposing true (vice declared) motivations
  - –inviting the questioning of means to ends
  - –allowing dissidents to opt out
  - –being held accountable to the vision

RAND

Empirical Evidence for Visions

- "The *purposing* of high-performing systems"*

  A study of 100 human organizations
  - competitive teams
  - business enterprises

  that performed far above their peers or competitors and expectations of others

- Essential elements
  - *unique,* shared sense of identity
    Who are we?
  - *clear,* shared sense of purpose
    What are we about?

*Peter Vaill, *Organizational Dynamics*, Autumn 1982, pp. 23-39.

RAND

Four Linked Questions of Vision

1. Where are we coming from?
   – what is our history and heritage?
2. Who are we?
   – what is our unique sense of identity?
3. What are we about?
   – what is our shared sense of purpose?
4. Where are we going?
   – what is going to happen to us?
   – what are we going to make happen?

RAND

Vision "Thing"–##
Printed: //

A Hierarchy of Concepts

- Role – obligations and commitments
- Vision – senses of identity and purpose
- Strategies – relationships of means and ends
- Doctrine – rules for implementing strategy

RAND

Vision "Thing"–##

A Hierarchy of Concepts
Some Battlefield Equivalents

Mission	– obligations and commitments
⬇	
Commander's intent	– senses of identity and purpose
⬇	
Tactics	– relationships of means and ends
⬇	
Rules of engagement	– rules for implementing tactics

RAND

Criteria for Effective Visions*

- **Enduring and pervasive**
  - **for organizational stability and cohesion**
- **Inspirational and motivating**
  - **for individual dedication and commitment**
- **Clear and differentiating**
  - **for incisive decision making at all levels and on the most critical issues**
- **Realistic and relevant**
  - **for credibility and support from inside and outside the organization**

*Setear, et.al., *The Army in a Changing World*, RAND R-3882-A, June 1990, p. 19.

RAND

Testing Visions Against the Criteria

Vision: "containers" of Soviet communism

- Enduring and pervasive?
  - four-decade-long threat to Western values
- Inspirational and motivating?
  - nation's very survival depended on success
- Clear and differentiating?
  - set regional and technological priorities
- Realistic and relevant?
  - addressed the American public's greatest security concern during the Cold War era

RAND

Vision "Thing"–##
Printed: ##

Testing Visions Against the Criteria (cont.)

Vision: ~~a CONUS-based regional contingency force~~

- Enduring and pervasive?
  - "new order" still emerging, lacking consensus
- Inspirational and motivating?
  - "hired guns" for the world's policeman?
- Clear and differentiating?
  - competition from the UN and USMC?
- Realistic and relevant?
  - will it address the American public's greatest security concerns?

RAND

Vision "Thing"–##

Hoops on the Path to Visions

- A "world" view
  - of what's happening out on the horizon
  - of the coming problems and opportunities
- A "picture" of what needs to be done
  - an idea of what is missing
  - an aiming point for "purposing"
- A "concept" of what will work
  - that "clicks" into the larger picture
  - that is "doable" with resources available
- The abilities to make it happen
  - courage, conviction, position, for starters

RAND

Exhortations to Vision

"Where there is no vision, the people perish."

-- Proverbs 29:18

"Give to us clear vision that we may know where to stand and what to stand for."

-- Peter Marshall, 1947

"The very essence of leadership is that you have to have a vision. You can't blow an uncertain trumpet."

-- Theodore Hesburgh

RAND

Example: Vetting a Vision for NCOs

Sample vision: leaders by example

- **Enduring and pervasive?**
  - ***focuses on long history and heritage of NCO corps***
- **Inspirational and motivating?**
  - ***NCOs I've met are proud to be "dirt-under-the-fingernails" kind of leaders***
- **Clear and differentiating?**
  - ***differentiating enough to make decisions from?***
- **Realistic and relevant?**
  - ***emphasis on readiness for anything and on spending time with the troops***

RAND

Vision "Thing"–##
Printed: //··

Recommended Process for this Workshop

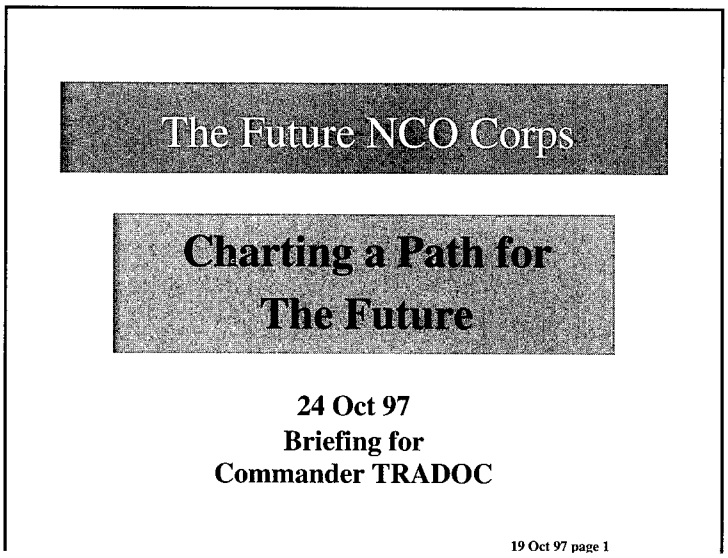
- **Frank, open discussion about visions**
  - » What is a vision?
  - » What is a good NCO vision?
- **No problem with generating two or more candidates**
  - » Needn't generate THE vision at this workshop
- **Continual revisiting of:**
  - » Who NCOs are/were/should be
  - » What they are/were/should be about
- **Continual testing of potential visions**
  - » Against the four criteria

RAND

Vision "Thing"–##

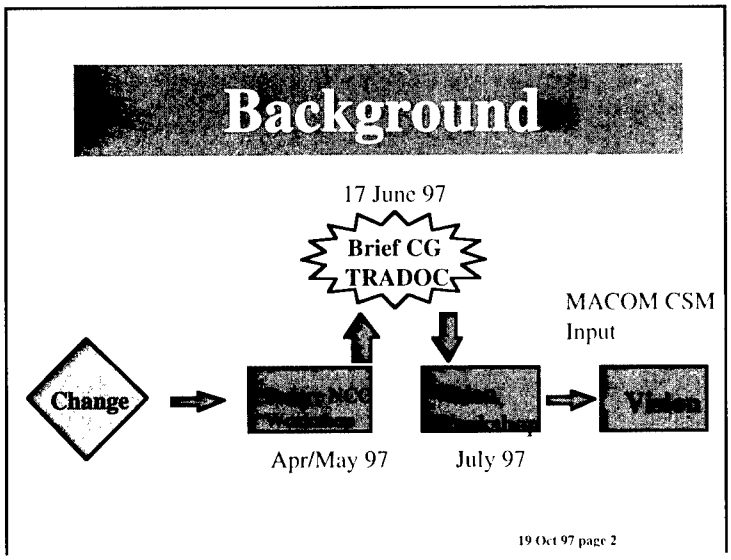
Appendix I

USASMA BRIEFING TO GENERAL HARTZOG, COMMANDING GENERAL, TRADOC



Good Afternoon Sir. We are here today to follow up on our 17 Jun 97 briefing on the Future of NCO Leader Development.

Team members present include CSM McKinney, CSM Bradshaw, Dr. Winkler and Mr. Shukiar from RAND.



In late FY 95 and early FY 96 it became obvious that change was needed. Based on this we conducted a Future NCO Leader Development workshop in Apr/May 97. On 17 June 97 we briefed you on the workshop results and some proposed follow on actions.

At the conclusion of that briefing, you tasked us to return at end of summer with a revised briefing package that included an NCO corps vision and a road ahead. In Jul 97 we conducted a tri-component vision workshop which drafted a vision statement. That vision was reviewed by the MACOM CSMs the following week...They made minor changes.

Purpose

- Provide Follow-up to 17 Jun 97 Briefing
  - Vision Statement
  - Road Ahead
- Provide Recommendations
- Obtain Approval/Guidance

19 Oct 97 page 3

Our purpose today is to present our proposed vision statement and a potential road ahead, provide you our recommendations, and obtain your approval/guidance

Briefing Content

- **Summary of Future Leader Development Workshop**
- Summary of NCO Future Vision Workshop
- Proposed Road Ahead
- Recommendations

19 Oct 97 page 4

Our briefing is divided into four major areas. First we would like to briefly review the Future NCO Leader Development Workshop results.

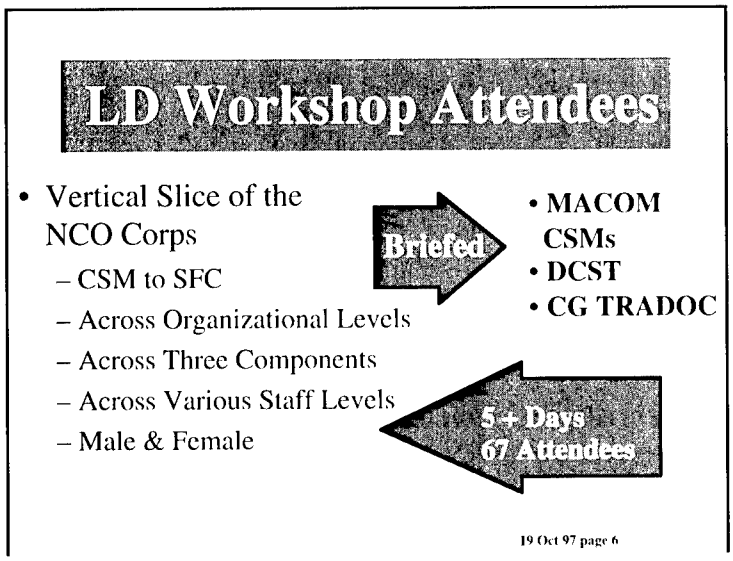
LD Workshop Objectives

- Thorough Examination of NCO Professional Development Today
  - What's Good
  - What's in Need of Improvement
- Determine Future Events that Could Affect NCO Professional Development
- Inform the Vision Workshop

19 Oct 97 page 5

The LD workshop took a hard look at the good and not so good aspects of today's system. The participants also tried to look into the future for events which might trigger change.

We used the workshop outputs to inform members of the subsequent vision workshop, some of whom participated in both workshops.



One of the keys to the workshop's success was the composition of the participants. Having a vertical slice from all three components provided a broad representative view. The end results are impressive.

These results were briefed to the personnel listed in the upper right portion of the slide.

Results of NCO Leader Development Workshop

- Met (Ambitious) Workshop Objectives
- Drew General Conclusions from the Discussion
  - NCO Leader Development is Basically Sound
  - Some Things Need to be Fixed
  - Vulnerabilities Imply that Change May be Needed in Future

19 Oct 97 page 7

Given only a little over five days, our objectives were very ambitious—but the group met the challenge. We drew some general conclusions from their discussions. What we are doing today is basically okay and meeting the Army's current needs. However, some areas require change to make our system better.

The Army's NCOs are the best in the world thanks in part to the institutional pillar and its emphasis on theory. The weakness in the institutional pillar is that it doesn't train early enough, and critical thinking needs more emphasis.

Workshop participants also concluded the the self-development pillar is weak. It isn't directional enough, lacks measurability, and isn't required or emphasized.

A very key area for the future NCO corps concerns how to deal with the vulnerabilities identified in the workshop.

Example: current OPTEMPO and PERSTEMPO conditions create problems for increasing NCO development using self-development and unit training methods.

Further, resource- and technology-driven pressures will grow to reduce the institutional pillar. Workshop participants understood these pressures but expressed serious concern that some of the institutional pillar's current strengths will be weakened in the process.

Briefing Content

- Summary of Future Leader Development Workshop
- **Summary of NCO Future Vision Workshop**
- Proposed Road Ahead
- Recommendations

19 Oct 97 page 8

Next we will summarize the vision workshop and provide a proposed vision statement to you.

Objectives of Vision Workshop

- Develop a Clear, Concise Overarching Vision of the Future of NCO Leader Development (NCO LD) that:
  - Understands NCO LD Today, and
  - Heeds Potential Changes that Could Affect LD, yet
  - Is Specific Enough to Aid Decision Making About the Future of NCO LD

19 Oct 97 page 9

These were our objectives for the vision workshop, which we believe we met. The group came to closure on a vision relatively quickly.

Our workshop attendees represented all three components and key army agencies. Their output was validated with minor changes by the MACOM CSMs.

After a quick coaching session from RAND on "what constitutes a good vision," the group worked to what we believe is a solid vision statement.

A good vision must be: enduring and pervasive, inspirational and motivating, clear and differentiating, and relevant and realistic.

Future Vision

An NCO Corps, grounded in heritage, values, and tradition, that embodies the warrior ethos; values perpetual learning; and is capable of leading, training, and motivating soldiers. We must always be an NCO Corps that--

- **Leads by Example**
- **Trains from Experience**
- **Maintains and Enforces Standards**
- **Takes Care of Soldiers**
- **Adapts to a Changing World**

19 Oct 97 page 11

This vision links us to our past, emphasizes the key/important roles of our NCO corps, is flexible enough to embrace future changes, and is specific enough to help in the decision making process of our senior leaders and the NCO corps.

Why the Vision is Important

- Codifies What NCO Corps Sees as Crucial
- Provides Context for Decision Making
  - Validates Policy (Things to Keep)
  - Identifies Conflicts (Things to Change/ Improve)
  - Identifies Uncertainties (Things to study)
- Helps to Hedge Against an Uncertain Future

19 Oct 97 page 12

This vision should codify what is important, helping decision makers as they examine today's system and help the Army move toward an uncertain future.

This vision should also tell NCOs what is important. It gives them solid, operational guidelines to guide their behavior.

The next three slides will address the decision making context aspect in more detail.

Things to Keep

Keep	Because
• 3 Pillars – Resident – Self-Development – Operational Assign	• Perpetual Learning – Enhances Stds/Adapt – Adaptability/Care – Enhances Experience
• Sequential/Progressive	• Perpetual Learning
• Centralized Prom	• Standards
• Emphasize Core Values	• Vision Capstone
• High Entry/Perf Stds	• Vision Capstone

19 Oct 97 page 13

We have combined the results of the two workshops by linking the Future NCO workshop conclusions (left side) with the vision statement (right side).

This slide shows what we think is right with the current system. For example, the Future NCO workshop recommends keeping the three pillars. The vision supports this because keeping the pillars supports perpetual learning. The resident/institutional pillar provides a mechanism for enforcing standards and for systematically adapting to a changing world. The self-development pillar helps in taking care of soldiers and in promoting adaptability. The operational assignment pillar supports training from experience.

Things to Change/Improve

Improve	Because
• Accelerate Education – Train Earlier – Speed Development	• Experience • Standards
• Do DL Right	• Enhance Adaptability/Not at Expense of Experience
• Define/Enhance Self-Development	• Adaptability • Care of Soldiers
• Enhance Curriculums – Info Mgt/Critical Thinking	• Enhance Adaptability
• Accelerate TASS	• Standardization

19 Oct 97 page 14

This slide shows those things we believe need improvement in order to make our system better. For instance, in Bosnia and other operational areas, our NCOs are being asked to perform many tasks at an earlier point in their progression and require training on selected tasks sooner.

By accelerating education, we can give soldiers the skills they need before placing them in operational assignments needing those skills.

Things to Study

- Self-Development
  - Incentives
  - Mechanism
  - Define/Measure
- How to Balance the Pillars
- Personnel Policies
  - CSM/SGM Utilization
  - RCP
- Effects of the Digital Division
- Training Policies

19 Oct 97 page 15

These are the areas we believe need additional evaluation. There is a sense that they will need to be addressed in the Army of the Future.

For example, the Future NCO workshop recommended the strengthening of the self-development pillar. But before we go down this path, we need a way to measure the pillar's effectiveness in order to assess the effects of various strengthening measures.

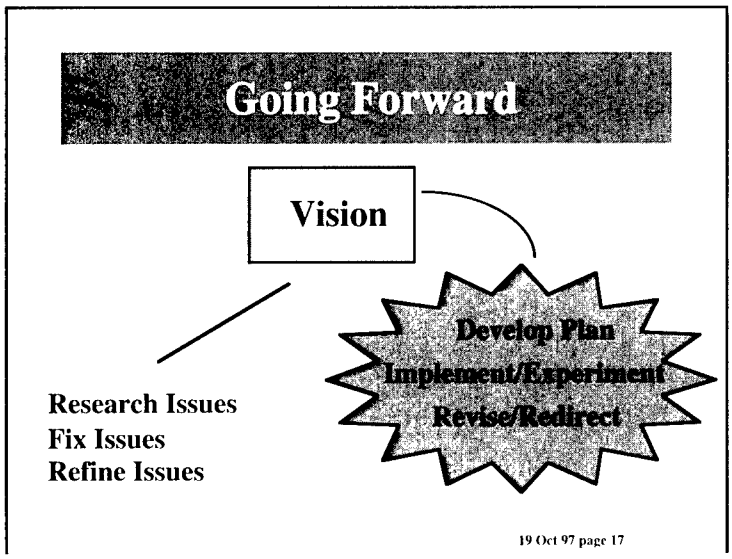
Also, resourcing constraints may require a shift of some training away from the institutional pillar. How should we determine which POI elements to shift? Further, the increasing pervasiveness of technology on the battlefield, and especially as the Army moves toward the "digital division," may require a reexamination of personnel management policies. Do RCPs, for example, need adjustment? Finally, should we reexamine training policies, e.g., select-train-promote, to see how alternatives affect experience levels?

Briefing Content

- Summary of Future Leader Development Workshop
- Summary of NCO Future Vision Workshop
- **Proposed Road Ahead**
- Recommendations

19 Oct 97 page 16

Next we would like to describe what we see as a road ahead.



Using our vision as the baseline and the issues needing change/study, we should move forward in a cycle of planning—experimentation—and revision. We cannot get to a perfect end state in one jump because at present we don't know how to specify the perfect end state. Rather we need to evolve gradually learn from each step. The end state will continue to be a moving target.

Project Manager

- TRADOC will Act as the Army Project Manager for this Project
- USASMA will act as Executive Agent and:
  - Lead NCOES Effort
  - Crosswalk Information between Lanes
  - Coordinate Briefings and Marketing to the NCO Corps
  - Act as Primary Project POC for RAND Input

19 Oct 97 page 18

As we move forward with this project, HQs TRADOC will act as the Army's project manager (TRADOC CSM and DCST NCO branch). USASMA will function as TRADOC's executive agent and lead agent for the NCOES effort.

Working Lanes

NCOES	USASMA Lead/NGB-OCAR
EPMS	DCSPER Lead/NGB-OCAR
TRAINING Policy	DCSOPS Lead/NGB-OCAR

19 Oct 97 page 19

We envision three primary lanes with several actions occurring within each lane. We will involve all three components in this process. The next several slides assign the conclusions derived from the Future NCO conference to one of the lanes for action.

NCOES Lane

- Balance Training Across Three Pillars of Development
- Enhance Self-Development
- Teach Critical Thinking/Human Relations
- Emphasize Development as a Continuous Process
- Reinforce Core Values
- Provide Leadership Training Prior to Leading

19 Oct 97 page 20

As part of the NCOES lane, the DCST, USASMA, and ARI are in the process of building and validating an enlisted common soldier task list....PVT to SGM. We will survey approximately 20,000 enlisted soldiers and their supervisors in all three components during the spring/summer 98.

We will examine each task with an eye toward determining where the task should fall among the three pillars. We will also examine each task's suitability for distance learning and resident training; further, we will evaluate when in the NCO's career the task should be taught.

This is one of several building blocks we will use to build a Future NCO education system.

NCOES Lane, cont.

- Accelerate Training
  - Train Earlier
  - Fill Gap Between ANCOC and SMC
  - Migrate Tasks Downward
- Keep Core Leadership Training and Performance Tasks in Institution
- Implement Distance Learning With Care
- Keep PLDC a Live-In Environment

19 Oct 97 page 21

As we go forward, we must ensure that we retain core leadership training tasks in the institutional pillar and implement distance learning in ways that enhance our training, not degrade it.

While we may apply distance learning to PLDC, we must keep the institutional pillar a performance oriented, live-in environment.

EPMS Lane

- Relook the RCP Policy
- Evaluate Impact of OPTEMPO/ PERSTEMPO on NCO Corps Development
- Retain Centralized Promotions
- Evaluate Allowing Selected CSMs to Voluntarily Move Between CSM & SGM

19 Oct 97 page 22

These are areas for the EPMS lane. There must be some crossover between lanes on some if not all items.

For example, what specialties should be candidates for extended RCPs? Why are they candidates? What are the personnel management implications of such extensions?

Also, how can operational assignment training be accomplished in the face of high OPTEMPO and PERSTEMPO?

EPMS Lane, cont.

- Determine Need for a New MOS for an "Automation Battle Staff NCO"
- Evaluate Current Promotion Policy

19 Oct 97 page 23

Does the current MOS structure capture the skills our NCOs will need? What new MOSs are needed?

Should we consider adjustments to promotion policy for some MOSs? Which ones? What are the personnel management implications?

Training Policy Lane Issues

- Review Select-Train-Promote Policy
- Review NCOES Entry Requirements
- Develop Self-Development Incentives
- Determine What to do About the Elimination of Doctrine on "How to" Information NCOs Need

19 Oct 97 page 24

These are the areas for the DCSOPS training policy lane.

For example, since select-train-promote has been implemented, how has it fared? How often is it violated in practice?

If we move training earlier, and we wish no increase in cost, should we consider imposing new NCOES entrance requirements? How will this affect NCO performance, retention, morale?

To strengthen the self-development pillar, can we find incentive frameworks that tell the NCO what is important to the Army? How should such incentives be structured? Applied?

Training Policy Lane Issues, cont.

- Adjust Policy to Allow AC & RC NCOs to Attend Either Component's Schools
- Change Policy to Make Common Core (ANCOC/BNCOC) a Separate Phase/POI
- Determine How to Get More Training with Sister Services

19 Oct 97 page 25

We still have not fully implemented the Total Army School System. The active component schools are still outside the TASS structure and TASS courseware and policies for NCOES still does not facilitate cross-component attendance.

The policies and course designs now require two different methodologies for attendance at BNCOC and ANCOC. The AC system is a single phase combining common leader and MOS training into one phase. The RC is a two-phase system with the common leader and MOS portions being two separate phases. This will not facilitate cross-component attendance.

We need to find ways to increase the joint training received by our NCO corps. For instance, in the future should we train a joint service common core in NCOES? Should all "E5s" from "all" services receive some type of leadership training together?

RAND Support

- Analyze Benefits and Costs of New Approaches to NCO Leader Development
- Maintain Involvement with Lead Agencies
  - Analyze ways to Strengthen Self-Development and Improve Balance Among the Pillars
  - Assess the Effects of Changes to Enlisted Personnel Management on NCO Development

19 Oct 97 page 26

RAND will continue to provide support to all lanes.

RAND's research effort will focus on two areas. First, RAND will examine the training balance among the three pillars. For example, it will examine how the self-development pillar's effectiveness can be measured. With the measures of effectiveness that emerge from this examination, RAND will then consider alternatives strengthening approaches, identifying the positive and negative aspects with these alternatives.

The second research area, informed by the first, will examine how personnel management policies might be altered to improve training outcomes and the NCO corps's experience levels. It will also assess the costs and benefits associated with these alternatives.

Next Steps

- **FY 98**
  - Concept Approval
  - Task Lead Agencies
  - Develop Master/Action Plans
  - Develop/Validate Task Inventories
  - Market Vision & Strategy to the Army

19 Oct 97 page 27

These are the actions we believe can/should be accomplished during this FY.

Briefing Content

- Summary of Future Leader Development Workshop
- Summary of NCO Future Vision Workshop
- Proposed Road Ahead
- **Recommendations**

19 Oct 97 page 28

In closing, the next slide provides our recommended actions.

Recommendations

- Approve Vision
- Approve Briefing Concept
- Obtain CSA Approval/Support
- Provide Additional Guidance
- Continue RAND Support

19 Oct 97 page 29

Sir these are our recommendations to you.

Subject to your questions and or guidance, this concludes our briefing.

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