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**REVIEW OF ARMY OFFICER
EDUCATIONAL SYSTEM.**

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**VOLUME I.
SUMMARY REPORT.**

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**REVIEW OF ARMY OFFICER
EDUCATIONAL SYSTEM**

**VOLUME I
SUMMARY REPORT**

MAJOR GENERAL FRANK W. NORRIS

1 DEC. 1971



DEPARTMENT OF THE ARMY

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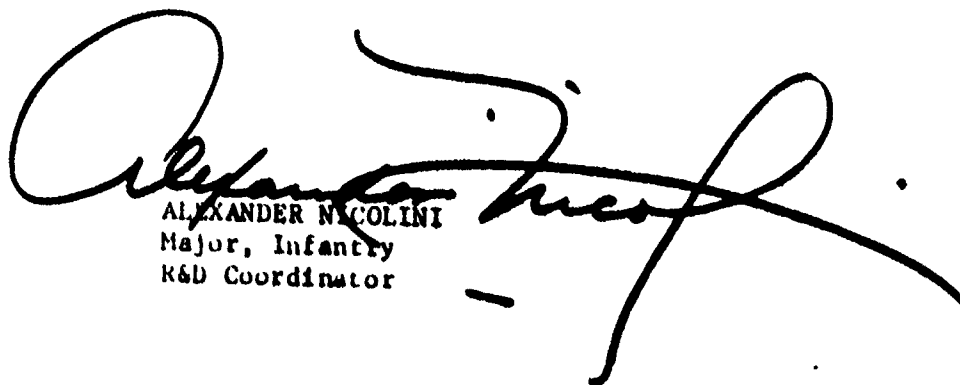
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CHAPTER 1

INTRODUCTION

Section I. BACKGROUND

1-1. Study Directive

At the direction of General Westmoreland, this review has the broad mission of recommending changes in the Army officer educational system which will better prepare ~~our~~ officers to meet the challenges of the seventies. The Chief of Staff ~~also~~ directed that this review be a personal examination of the system from a policy basis and that it adopt a philosophical approach when this would serve to develop important issues. The study directive for conducting this review is shown in Appendix A. A detailed approach to the review is given in Appendix B.

1-2. Technique of Review

Personal visits were made to all Army schools, to selected schools of our sister Services, and to industry and civilian educational institutions. Many individuals I interviewed had already devoted much excellent thought to educational issues, so the task confronting me was basically one of synthesis of existing thoughts and ideas rather than conduct of original research or development of new concepts. Although empirically based, this report does not lean heavily on statistical support. It gives references, research, and statistical data only when essential to validity, accuracy, or emphasis.

Since this report is primarily personal and subjective, a question arises as to the validity of many of the comments. Normally, the statements which are derived from visits to schools are not statistically supported because they do not stem from a formal questionnaire or from some intensive recordkeeping. However, I am confident that, in controversial areas, this report reflects a consensus of the individuals interviewed, who were themselves a representative sample of three principal constituencies: commandants, faculties, and students. Moreover, when more than one school is involved, the consensus of a substantial majority of the schools is expressed.

1-3. Relationship to Haines Board Report

A far-reaching review of the Army officer educational program was conducted in 1965-66 by the Haines Board. The report of the Board is acknowledged throughout the Army as marking an important milestone in our military educational effort, and its recommendations have served the Army well during a turbulent period. Several matters considered in this review and some of the recommendations are already fully developed in the Haines Board Report; these are included in this review solely to make this document self-sufficient and to lend weight to the proven elements of the Haines Board Report.

1-4. Other Ongoing Actions

This review occurred during a particularly intensive period of activity involving the officer educational system (eight such actions are listed at Appendix C). I have maintained informal liaison with these important on-going actions. However, in the interest of self-sufficiency, this review does not attempt to coordinate in detail with them, but will draw directly upon some; for example, the Leadership Study and the History Study. I hope the unavoidable overlap and duplication will, through reinforcement of recommendations which appear to me to be sound, serve to support the common objective of improving officer education.

Section II. SCOPE

1-5. Outline

The outline of this summary of the review is--

Chapter 1 - Introduction and Outline

Chapter 2 - Overview - Environment of the seventies and impact on officer education

Chapter 3 - Overview - Roles and missions of Army schools and gaps in coverage

Chapter 4 - Basic Course

Chapter 5 - Advanced Course

Chapter 6 - C&GSC

Chapter 7 - Army War College

Chapter 8 - Civilian Education

Chapter 9 - Theory of Teaching

Chapter 10 - Faculties

Chapter 11 - Evaluation

Chapter 12 - Organization

Chapter 13 - Areas of Special Interest - Leadership, History,
Interbranch and Interservice Education,
Facilities, Regulations, Staffing Guide,
Educational Innovations

Chapter 14 - Concluding Comments

Chapter 15 - Recommendations and Guidance

Annex A - Good Programs

B - Perspectives and Philosophies

C - Costs/Feasibilities/Priorities

1-6. Explanation

A brief explanation of these subject areas and the relationships between them follow.

In the environmental overview I analyzed certain factors or conditions that will predictably have an impact on the officer educational system, and derived from them some basic directions and broad parameters which will condition our educational program.

Moving from this broad overview to a narrower focus, I examined the roles and missions of the Army schools with

relationship to assignments that Army officers can logically expect. From this, I developed a general appraisal of the effectiveness of the school system in preparing officers for their real-life jobs.

The scope is then directly narrowed with a chapter considering each of the four levels of military instruction and the civilian educational program, and separate chapters covering four important subjects: theory of teaching, faculties, evaluation, and organization.

A number of areas of special interest are briefly developed in the next chapter; some broad conclusions are drawn, and the recommendations and guidance are summarized.

The annexes may be helpful. The Good Programs (Annex A) compiles some 110 specific efforts and activities observed at individual schools which I think merit the attention of other schools and staffs. The perspectives and philosophies at Annex B contain some thoughts, attitudes, and approaches which strike me as significant; for example, a comparison of the officer educational system with the civilian educational system and a comparison of the Army educational system with the Air Force and Navy systems. As for costs, feasibilities, and priorities as covered in Annex C, I have neither resources nor capability to project them in the detail required for staff action, but I hope to develop some basic considerations and guidance which will be helpful. No specific recommendations will stem from these annexes.

Section III. RECOMMENDATIONS AND GUIDANCE DEFINED

1-7. Actions stemming from this review are presented in two forms: recommendations and guidance. "Recommendations" cover issues which are generally clear cut, are subject to a yes-no decision, and merit overall direction and supervision by DA and CONARC.¹ "Guidance" covers issues which rest in the fields of educational policy, philosophy, and approach. Normally such issues are not as

¹For example, "Change the mission of the Advanced Courses of the combat support and combat service support branches to include preparation for branch-related staff duties at major headquarters."

precisely defined as those covered by recommendations, and effective action on them can often be taken at the school level.² Guidance rather than recommendations is preferred for some issues because it is consonant with the direction of the Chief of Staff to address problems on a policy and philosophical level, it permits a greater degree of flexibility and decentralization in taking action on issues than a formal recommendation does and it permits recognition that some schools may already have solved an issue, while others have not addressed it at all.

The fact that an issue is covered as guidance and not as a recommendation does not downgrade its importance. For this reason, guidance merits the same review and decision actions as recommendations.

²An example of guidance is, "Branch schools should provide a full, happy, and satisfying year to the Advanced Course student and his family, with special attention to strengthening his career satisfaction and his career commitment."

CHAPTER 2

THE ENVIRONMENT OF THE SEVENTIES AND ITS IMPLICATIONS FOR OFFICER EDUCATION

2-1. Environmental factors

The results of this environmental survey will be presented at a very rudimentary level. In no sense is this an exhaustive portrayal of all the influences that might be considered, but simply a discussion of certain environmental factors that seem to have an especially significant impact on officer education. The factors considered are:

- a. Increased threat, decreased resources
- b. Continued antimilitarism
- c. The Nixon Doctrine
- d. Continued sociological revolution
- e. Continued technological advance
- f. Increased specialization
- g. Educational explosion
- h. Undereducated hump
- i. Need for fighting ability

2-2. Increased threat, Decreased resources

There are two principal implications from this factor.¹ The first

¹The following discussion is an example of the admitted narrowness of this environmental appraisal. Note, for example, that the threat is viewed solely in terms of the increasing USSR/CHICOM military capability. There is no discussion whether this military threat is directed primarily at the U.S. or elsewhere; and the rapidly shifting international political scene is ignored.

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is that with the extremely limited resources available, the Army must make some tough decisions on priorities. Where will it get the best return for the dollar? Since we can not meet the massive and diversified communist threat on a hardware basis, it seems prudent to concentrate on three nonhardware areas where the payoff can be great: intelligence, R&D, and education. In the critical years ahead, they deserve special weight. I make no attempt to ascribe relative priorities within them; but I do point out that education is the fundamental talent which supports the intelligence and R&D efforts. The second implication is that the Army must be able to get more defense from less resources. One of the answers to getting more from less is found in better management and command. Both, especially management, can be taught effectively in our officer school system. Our management instruction must be timely, adequate, and of the highest caliber.

2-3. Continued antimilitarism

a. There is, of course, no clear prediction as to the total scope, virulence, place, and significance of antimilitarism in the seventies. Some observers view it as a most serious and portentous factor; others adhere to the traditional view that the current antimilitarism will ameliorate in time, as past experience would indicate. In any event, we can expect that, at least for the short term, antimilitarism will continue to be concentrated in the media/academia/some political areas; and we should not be surprised to find that antimilitarism has a broader base and a more virulent attitude than the Army has experienced before. (For example, the current antimilitary orientation of many of today's high school students may be a totally new factor.) Certainly this antimilitarism means that we can expect increased criticism of all failures, however small, and a closer surveillance of all military activities. It will also translate itself into an intense skepticism of all military requirements.

b. The educational implications of continued antimilitarism include - -

(1) Officers must be educated in the forms antimilitarism can take and its sources in various social strata and ideological opinions. This includes not only traditional issues such as civilian control and size of the Army, but modern issues associated with the Army's role in maintaining domestic order.

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(2) Officers must be prepared psychologically for existence in a neutral or potentially hostile domestic environment. They must be able to inculcate in their men a balanced understanding of antimilitarism to mitigate its detrimental effects upon morale.

(3) Increased weight should be given to education in the communication skills, especially how to handle the military position in a hostile audience.

(4) Officers must be prepared in cases of civil disturbance to play a role in situations that will provide a severe test of their humanity and professionalism. They must possess wisdom and prudence and be consummately well educated.

2-4. The Nixon Doctrine

a. The Nixon Doctrine is taken here as symptomatic of a basic trend which may be described as the "new pragmatism" in American foreign policy. The origins of the new pragmatism lie in such major developments as the changing relations with the Soviet Union since the death of Stalin, the current thaw with Communist China, American disillusionment with the Vietnam War, and a sharp increase in social and political ferment calling priority attention to domestic ills.

b. The important implications of the Nixon Doctrine and the new pragmatism in foreign affairs include --

(1) Officers will have to develop perspectives consistent with the new outlook, just as perspectives were shaped by the policy of containment during the cold war.

(2) A rethinking of the strategy and force implications of the new pragmatism, in view of changed assumptions about the threat and the limits of U.S. involvement in dealing with the threat, must go forward.

(3) This rethinking should embrace not only military strategy but the total strategy for dealing with instability and insurgency in modernizing nations.

(4) In keeping with a less overt role for the U.S. in the world arena, MAAG's and missions will assume greater importance even as

M

their visibility is reduced; consequently, the best possible education is necessary for the military assistance advisor. In keeping with total strategy, this education should embrace the entire spectrum of social, economic, political, military, and intelligence measures to assist friendly governments to preserve stability and defeat incipient insurgency. This translates into strong support for the MAOP program.

(5) Emphasis must be given to training allied officers in the United States.

2-5. Continued Sociological Revolution

The continuation of the sociological revolution has special implications for the military and its educational system, primarily because we are a disciplined element of an assumedly democratic society. The overall question of how to maintain discipline in a society undergoing this revolution is a most difficult one; yet it is one which the military must face, and is one where the educational component is highly significant. The principal implications of the sociological revolution apparently rest in the leadership field, because it certainly poses new dimensions of difficulty and complexity to military leaders at all echelons from corporal to four stars. The broad educational implications include --

a. The Army must develop and maintain a leadership instructional program of the highest caliber. This program must include full exploration of the sociological changes which impact on leadership.

b. It must establish the authority of leadership on the soundest possible footing, overcoming the crisis of authority engendered by the new lifestyle and influx of those with values and beliefs not necessarily compatible with the traditional military ethos.

c. Since the junior leader today is in the front rank on drugs, race and dissent, his education in these areas deserves special attention.

d. The orientation and instruction of the senior NCO is even more important and difficult than the officer educational problem.

2-6. Continued Technological Advance

Continued technological advances can be safely predicted. These

will be particularly evident in transportation, communications, computer systems, automation, energy, space, weather control, organizational processes, travel, oceanography, microbiology, and bio-engineering.² As one astute observer has noted:

In the brief lifetime of the protesting youth of today, we have had four major epochs--the atomic age, the computer age, the space age, and the bio-engineering, or DNA age. Each of them is as significant as the Bronze Age, the Iron Age, the Renaissance, or the Industrial Revolution, and all have been telescoped into the postwar years.³

While this summary is no place to highlight the consequences of these developments, attention should be focused on certain factors of significance for our educational program. These are--

a. Educational and technical obsolescence will impose a requirement for our professional military educational system to institutionalize the process of continuing education. It will also place a premium on development of conceptual thinking, critical judgment, and innovation rather than imparting of factual knowledge and skills which quickly become obsolete.

b. Technical advance is pushing the Army toward increased specialization to develop and maintain essential expertise. This will continue to lead farther away from the concept of every officer a generalist, and will impact upon officer career patterns, the philosophy

²For discussion, see the following:

U.S. Army Combat Developments Command, Man and the 1990 Environment (Washington, 6 July 1970).

Alvin Toffler, Future Shock (New York, Random House, 1970).

U.S. Department of Labor, Bureau of Labor Statistics, Technological Trends in Major American Industries, (Bulletin 1474, Washington, 1966).

Syracuse University Research Corporation, The United States and the World in the 1985 Era (Syracuse, N. Y., 1964).

³Lord Ritchie Calder, "The Doctor's Dilemma", The Center Magazine, (Vol IV, No. 5, Sep-Oct 71), p. 72.

of officer career development, and career management practices. Changes in career patterns will naturally influence the type of education or training an officer should receive. (This is developed more fully in paragraph 2-7 below.)

c. Technical advance will generate requirements for officers with knowledge and skills in newly emergent fields of potential military significance, such as oceanography, weather control, cybernetics, and so forth.

d. Burgeoning knowledge and increased complexity of technical innovations will increase the educational investment required in some fields. To illustrate, Signal and Air Defense branches, both highly subject to technological change, have found it necessary to conduct lengthy courses for selected officers in critical areas; Communications - Electronics Systems Engineer Course (54 weeks) trains officers in the engineering and planning activities involved in the employment of military communications; the MOS 1181 course (33 weeks) involves comprehensive study of the physical sciences associated with mechanical, electrical, and aeronautical engineering and includes a follow-on graduate program to obtain a master's degree.

e. A service-oriented economy will demand new skills, many of which will also be required by the Army. Hence, the system of branch assignment of ROTC cadets and the whole program of junior officer procurement may have to be closely related (except for the combat arms) to disciplines in which the Army has requirements.

f. Technological advance will profoundly effect Army organization and management. The future will see more use of team management -- ad hoc working groups specially created for a particular purpose and dissolved when the purpose has been achieved, more lateral communications to reduce response time, and more experimentation with the new organizational forms.

g. Effective communication with the scientific and technological community, in government, business, and industry will pose an increasing requirement for Army officers, mainly in the R&D field, who have a level of educational attainment equivalent to their civilian contemporaries.

h. Changing technology will continue to impact heavily on the

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Army school system, adding new courses and at times new schools. Adjustments in the structure of the school system will become increasingly complex as traditional lines of differentiation among schools become blurred.

2-7. Increased Specialization

a. Skill diversification as a consequence of technological progress is an evident trend within the military and raises important questions concerning education, organization, and career development.⁴ The trend is accurately reflected by the emergence of the eleven officer special career programs, which are in fields of Army-wide importance, that do not fall within the career development patterns of any single branch. Members currently are required to maintain branch proficiency and to perform alternating assignments in their branch and specialty areas. This attempt to straddle two stools is becoming increasingly difficult as branch and specialty functions become more complex and obsolescence of knowledge occurs at a faster rate. Full-career and mid-career specialization, including repetitive assignments in specialty areas, is one of the principal innovations of the new Officer Personnel Management System currently under review. This trend toward increased specialization will continue as a result of the following forces:

(1) Continued technological advance, with consequent subdivision of old specialties and spin-off of new specialties. (See preceding paragraph.)

(2) Increasing technical job content which places a premium on expertise.

(3) Continued accumulation of knowledge and increased requirements for education and updating.

(4) The need to obtain a payoff from education before obsolescence of knowledge occurs.

⁴ Morris Janowitz (ed), The New Military, (New York, Russell Sage Foundation, 1964).

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(5) The need to stay in touch with new developments, making it increasingly difficult to be an intermittent specialist. Conversely, the need to ensure that the specialist attains an adequate perspective of the larger scheme of things.

(6) The increasing status and prestige of many specialties and sub-specialties, giving them the attractiveness and cohesiveness of professional status.

b. Increased specialization has important implications for officer education and career development. The most important educational implications are:

(1) The proper balance of military and civil schooling for the specialist officer, and

(2) The problems of continuing education for specialists.

These questions can only be answered fully in the context of the career patterns and career development policies applied to specialists. The concepts of full-career and mid-career specialization now under consideration by DA, which are themselves a response to the trend toward specialization, will consequently impact on the type of education required and the manner of its accomplishment. These issues are not addressed in detail in this review.

2-8. Educational Explosion

a. At least four important implications are apparent. First, the educational advances of the past decade will continue to upgrade the formal educational level of U.S. society. To illustrate, during the decade 1958 to 1968, the national output of MA's and PhD's increased 164 percent. During the decade 1968 to 1978, the U.S. Office of Education projects the percentage increase in graduate student enrollment to be almost twice that of undergraduate enrollment.⁵

⁵U.S. Office of Education, National Center for Educational Statistics, Digest of Educational Statistics 1970 and Projections of Educational Statistics to 1978-79 (Washington, U.S. Government Printing Office, 1970).

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b. Second, sharply rising aspirations for higher education among today's youth will influence the Army's ability to attract and retain quality officers. When the West Point Class of 1970 was asked what was the highest academic degree they expected to earn during their military career, the response was 6.5 percent, baccalaureate; 59.5 percent, master's; and 29.5 percent, doctorate; the remainder, professional. This means that 89 percent of this class aspired to attain at least a master's degree.

c. Third, there are important trends in higher civilian education which will influence our military effort. Not much concrete change is yet evident in the civilian area, but the outline and mandate for change has been drawn by some recent excellent studies, e.g., Dr. Frank Newman's Report on Higher Education, and the fine series by the Carnegie Commission on Higher Education. These studies forecast: increased emphasis on continuing education of the individual after he finishes formal college training; broadening educational opportunities for adults; multiple paths to learning; diversification of educational methods and increased use of mechanical aids for teaching; and the "college without a campus," with liberal transfer of credit provisions. Since the Army's professional military education is essentially "continuing education of adults," the parallel with civilian trends is real and our opportunities for mutual improvement are great.

d. Fourth, progress in instructional technology is another major factor on the educational horizon. Application of technology to education has progressed steadily for more than a decade; it is rapidly approaching the take-off stage. The implications for military education are major. We must recognize that we stand at the threshold of potentially revolutionary change in educational processes. We must seek to grasp the new technology, not as a piece of hardware to be used as an adjunct to favored teaching methods, but as a powerful tool for reshaping the total learning process. We must grapple with the problems of application, adopting a systems approach to reconfigure the relationships among teacher, student, and machine to yield optimal learning.

e. Finally, we must prudently discern the capabilities and limitations of new hardware and must not fall victim to fadism, novelty, or desire for prestige.

2-9. The Undereducated Hump

The undereducated hump is a problem peculiar to the Army and poses issues of urgency and importance. The hump occurred because during the Vietnam buildup there was no call up of Reserves or mobilization; so the Army accepted a tremendous influx of OCS officers who did not have a baccalaureate degree. The problem is concentrated primarily in the grade of captain where 46 percent of the officers (52 percent of the Reserves) do not have college degrees.⁶ Now many of these officers, who served their Nation well during Vietnam, want to remain in the Army as commissioned officers. The size of this undereducated hump is currently estimated at between 16 to 20 thousand officers (Appendix D). However, reduction in the size of the Army should reduce this number to about 9 or 10 thousand. It is especially important to note, despite low academic achievements, that this group contains many competent officers who have proven themselves in combat (many with two or more tours in RVN). Furthermore, they served the Army and the Nation well at a time when many more educationally endowed individuals were actively evading service. They retain a high motivation for service now and want to be career officers. The Army has a moral obligation to these men. Investing heavily in their education is both a moral and practical necessity.

2-10. Need for Fighting Ability

Last, but most important, the requirement to be able to fight across the spectrum of conflict is the iceberg beneath the tip of all the other environmental factors. Regardless of the distractions incurred as the Army adopts to other factors, the fundamental purpose of the Army and the fundamental purpose of its educational system is to prepare officers to fight ("from the MP's billyclub to the effective employment of nuclear weapons"). Consequently, our educational system must not lose its concentration on the conduct of the highest caliber professional military education at each level. This remains the number one priority for the system.

⁶

Office of Personnel Operations, Civilian Education Level, Army Department Officers (January 1971).

21-
2-11. Conclusion

The moral and institutional strength of the Army in the seventies will depend in large part upon its response to the challenges posed by increasing social and political ferment, reordering of national priorities, cultural changes in our society, continued antimilitarism, and pragmatic determination of national interests abroad. The issues will be complex and the possibility of error large, yet the margin for error will be intolerably small. Smaller in size, the Army must seek greater efficiency in utilizing manpower to avoid reduced combat effectiveness. It must carefully evolve solutions to the problems of drugs, race, and internal dissent. To maintain cohesion as a fighting force, it must develop new concepts of authority and techniques of leadership in the face of changing cultural values. Accomplishing these tasks will require creativity, found only within a well-educated officer corps. As the source of vital intellectual resources, the officer educational system will bear a heavy responsibility for the strength and viability of the Army in the seventies.

CHAPTER 3

AN OVERVIEW
COMPARISON OF EDUCATIONAL MISSIONS OF SCHOOLS
WITH PROBABLE STUDENT ASSIGNMENTS
TO DETERMINE EDUCATIONAL GAPS

3-1. Introduction

Since the basic purpose of the Army school system is to "prepare individuals to perform those duties which they may be called upon to carry out in war or in peace," (paragraph 2-2, AR 351-1), it is useful to examine the school system in the light of this purpose. A simple technique for accomplishing this is to determine how closely the stated educational missions of our schools relate to the assignments which graduates normally receive. That is, does the educational system prepare officers to perform the duties which they can expect to perform? Does it prepare them in a timely, but not premature, fashion? Such an overview can serve as a gross appraisal of the effectiveness of the educational coverage within our system. Table 3-1 summarizes this comparison between educational mission and preparation of the student for his probable assignment.

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Table 3-1. EDUCATIONAL GAPS

School	Scope of Mission	Does scope prepare officers for probable assignments?	Gaps
Basic	First assignment (duties of lieutenant)	OK (-)	Company-level duties
Advanced	Command and staff at battalion through brigade. Emphasis on battalion command	OK (-)	CS and CSS staff duties (terminal education)
C&GSC	Command and staff with Army in the field	?	High-level staff duties (terminal education)
AWC	Command and key staff at major military and departmental headquarters	OK	

3-2. Discussion

It is apparent from Table 3-1 that three educational gaps (company level duties, combat support and combat service support staff duties, and high level staff duties) and a general condition (terminal education) do exist.

a. The gap in company level instruction. This gap exists because the basic course correctly concentrates on the first duty assignment of the junior officer, and the advanced course correctly

concentrates on battalion, brigade and higher levels. The important company level lies in the middle, and is not covered in depth by either school.

My discussions at the schools developed no consensus concerning the importance of this gap, but there was general agreement that the administrative and management burdens on today's company commanders are very substantial and our current educational system doesn't prepare them to meet these. Company officers must learn these onerous tasks on the job with an accompanying high degree of frustration, wasted motion, and inefficiency. At least the management and administrative deficiencies which result from this gap should be covered somewhere in our educational program.

b. Preparation of combat support/combat service support officers for staff duties. This gap stems from the fact that the stated mission for the advanced courses concentrates on the battalion and the brigade level.¹ This mission statement is precisely correct for the combat arms. However, for the combat support (CS) and combat service support (CSS) branches, there is a need to concentrate not only on the limited battalion and brigade command opportunities within these branches, but also on the branch-related staff duties which these officers will normally perform at many levels in subsequent assignments. A majority of CS/CSS assignments for advanced course graduates are branch-related staff duties that officers must perform professionally, yet the requirement for professional education in these duties is not specifically recognized in the mission statement.

Although the point is partly semantical, the phraseology of the current mission statement is too vague to provide adequate guidance to school Commandants on preparation of CS and CSS officers for these duties. It seems advisable to amplify the mission statement for the CS and CSS branches by explicitly including this major professional demand in the mission and by following up this recognition with appropriate coverage in the curricula.

c. The preparation of C&GSC graduates for high-level staff duties. Pursuant to its assigned mission, C&GSC concentrates primarily on the command and operational aspects of the Army in the field. The Army in the field is the "heart" of the Army--the Army's basic reason for being--and a strong concentration on its

¹ AR 351-1, para 2-5b(3).

operations is essential. However, the annual production of 972 C&GSC graduates who are especially educated in field operations and relatively uneducated in other areas appears to be disproportionate in view of the diversity of Army requirements.

Essentially 100 percent of the C&GSC graduates who become colonels serve at CONARC or higher level during their careers. Approximately 80 percent of the graduates who become lieutenant colonels serve at CONARC or higher levels. Approximately one-third of each graduating class will serve at the DA Staff or higher staff levels immediately following graduation. Effective service on higher level staffs is an important professional requirement. Yet most graduates, finding themselves in such an assignment for the first time, must fulfill this requirement through OJT. The character and complexities of high level staff functions can be taught at an educational institution like C&GSC. Its graduates would then be substantially better equipped to perform effectively in the assignments they can logically expect to receive.

It is difficult to arrive at a consensus concerning the significance of this gap. There is considerable agreement, with some important exceptions, that C&GSC overproduces command/G3-oriented students, but less agreement exists on the requirement for formal education to prepare officers for staff functions of a higher organizational level. In my opinion, the gap is important and the education at C&GSC should be reoriented to cover it. This is discussed in detail in Chapter 6, C&GSC.

d. Terminal Education. This is not really a "gap". It is more of a general condition that exists because approximately 50 percent of advanced course graduates do not attend C&GSC, and approximately 79 percent of C&GSC graduates do not attend a senior service college. Thus, the advanced course and C&GSC mark the last formal level of military schooling for these important segments of our officer corps. Essentially all of the officers who do not progress beyond the advanced course or C&GSC will continue as career officers and serve from 20 to 30 years, many in positions of considerable responsibility.

This raises the question whether the education in the advanced course and C&GSC provides an adequate foundation for continued effective performance of professional duties, especially in an Army

and environment undergoing an educational explosion where demand for educated officers is increasing. Some recognition of this condition in the mission, curricula, and instruction at the schools appears to be in order.

3-3. Remedial Actions.

Remedial actions to compensate for these gaps and conditions are discussed separately in other parts of this report.

CHAPTER 4

BASIC COURSE

4-1. Characteristics of Students

Before reviewing the basic course in detail, a brief consideration of the characteristics of the students will serve to develop a number of factors which should be recognized by designers of the course and, in turn, should condition the Basic Course itself. The following seven characteristics of Basic Course students seem significant--

a. Diversity. The extraordinary diversity of Basic Course students is one of the most evident and educationally important characteristics. The input to the Basic Course is diverse, not just in terms of sources of commission (ROTC, OCS, USMA), but in other more important factors such as educational experience (ranging from summa cum laude to semiliterate), attitude (ranging from dedicated patriotism to militant dissent), and military background (ranging from substantial to minute).

b. Sociological revolution. These students are products of--and many have been participants in--the sociological revolution of the last decade. They are no strangers to the issues of drugs, dissent, and racism; almost all have had considerable exposure to these and other social problems of our times.

c. Cultural shock. These students undergo varying degrees of cultural shock as they make the transition from a relatively permissive civilian academic environment to a relatively disciplined military one. Depending upon their past backgrounds and experiences, this cultural shock can be traumatic or light.

d. Assured but concerned. Outwardly, most of these students are self-confident, but inwardly, most are concerned about just how well they will handle their military jobs. Their misgivings stem primarily from recognition of the sociological revolution and its impact on the leadership problems they will confront. As one basic officer said, "It's a lot of fun to be a part of a social revolution but it's a pretty scary thing to lead its products, particularly if they are your contemporaries."

e. Academic consequence. Most (not all) of these students are accustomed to a highly competitive academic system, where there are substantial rewards for doing well and substantial penalties for doing poorly. They are academically oriented and welcome a high academic challenge with resultant academic consequence. They do not find these in the Basic Course.

f. Theory of teaching. The bulk of the student's learning experience has been student oriented, with relatively few hours of class attendance and a large amount of reading and self-study. They encounter a radical change in the Basic Course, which is predominantly instructor centered, with many contact hours and a large amount of platform presentation. (This point is developed in depth in Chapter 9, Theory of Teaching.)

g. Inability to relate instruction to reality. The large majority of these students have never served with an active Army unit, and they do not know what life in a unit is like. Consequently, they are unable to determine the relative importance of the different subjects they encounter, and their sense of priorities in learning is practically nil.

4-2. Appraisal

With these basic characteristics in mind, an appraisal of the basic course develops some significant areas for increased emphasis and improvement.

a. Mission. The mission, as stated in paragraph 2-5b(1), AR 351-1, is "to prepare newly commissioned officers for their first duty assignments; to instill in them a feeling of dignity and confidence, and a sense of duty and obligation for service." This is an excellent statement of mission, but the foregoing student characteristics call for increased emphasis on the second part of that statement, "to instill in them a feeling of dignity and confidence, and a sense of duty and obligation for service."

b. Shift in emphasis. In the past, when dealing with a more homogeneous group of basic officer students with generally similar outlooks and favorable attitudes toward military service, the Basic Course could strongly emphasize the practical problems of the first duty assignment (the first part of the mission) and could assume that

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professionalization (the second part of the mission) would already be present or easily induced. Not so any longer. Now, an effort is required which takes into account the student characteristics described above (the first four characteristics require a stronger measure of professional socialization than heretofore) and builds on them to produce a junior officer who has the dignity and confidence required for his difficult leadership role. The environment of the Basic Course has become as important a part of the basic officer's educational experience as the course work itself.

c. Retain fundamentals. Nothing in the proposed shift of emphasis should alter the fundamental characteristics of a good Basic Course.

(1) It is essentially a training course (acquisition of skills), not an educational one (mastery of concepts and ideas).

(2) It should emphasize hands-on, field-type, real-life instruction in lieu of theoretical, classroom treatment.

(3) It should be rugged and demanding, both academically and physically.¹

4-3. Educational Program

a. Adjustments for diversity. There is little possibility of making adjustments for this characteristic prior to entry of the student into the Basic Course. Once the course has commenced, adjustments include a strong battery of diagnostic tests to determine strengths and weaknesses, especially focused on weakness in ability to write (literacy) and on technical weaknesses (for example, mathematics for the engineers). There is a limited but important field for validation of some students in some subjects, such as validating USMA graduates in Escape and Evasion, but in the Basic Course emphasis should be more on diagnostics than on validation.

¹In this regard, the most consistent comment from basic students was that the course was not as "tough as they expected, especially physically." Although the hours were often long, the demand was too light.

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b. Actions concerning the sociological revolution. This subject should be formally recognized in the curriculum and expertly treated by prepared units of instruction which emphasize realistic, fact-of-life, what-to-do situations which the junior leader will probably encounter. The type of treatment initiated by the race relations package at the Infantry School and further developed by the CONARC Leadership Board is the desired action.

c. Accommodations to the "assured but concerned" characteristic. Primarily this includes improved leadership instruction, but the weight of the other actions suggested in this section will tend to improve this condition.

d. Actions concerning cultural shock and inability to relate instruction to reality. Here a variety of significant actions can be taken which, in the aggregate, add up to a good Junior Officer Retention Program (see Annex A, Good Programs for specific examples).

e. Actions concerning academic consequence. Cut all classroom instruction to a minimum. Then, assure that the academic instruction which does remain in the course is tough, demanding, and good; and develop an evaluation system which will support the elimination or decommissioning of unfit or unsuitable officers.

f. Actions concerning theory of teaching. The bulk of instruction in the Basic Course will still be designed for "training" rather than "education," so it will be instructor centered and practical exercise oriented. Nevertheless, this is the course where maximum use can be made of programmed instruction, computer-assisted instruction, educational television, and audio-visual teaching devices to permit individuals to move through the information-gathering courses at their best pace. In addition, the small-group, participatory method of instruction should be used in leadership and similar areas.

4-4. Course Length (Combat Arms)

The length of the Basic Course is a perennial issue for the Army school system. Historically, it has varied from minimum of 5 weeks to a maximum of 18, and a recent effort has been made to increase

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the current length from 9 weeks to 12 weeks for the combat arms.² I fully support the extension in length and urge its early approval. As substantive support for this position, I can add little to the rationale advanced by CG, CONARC, in his proposal, but the following points may add weight.

a. In my opinion, the poorest place in the school system to save time is in the Basic Course. It is essential to train the basic officer and get him to duty with a unit as rapidly as possible, primarily because of the man-year factor and the boredom factor, but this should not be accomplished at the expense of effective performance of duty. During this period of Army history when this green lieutenant stands inescapably at the focal point of new, difficult, and complex leadership problems, he should be professionally prepared for troop duty at his Basic Course, and it is my conviction that the revised course recommended by CONARC would be a small price to pay, manpower-wise, for the improved performance of junior leaders in our units.

b. Although inter-Service comparisons can be very misleading in the educational field, it is interesting to note that the Basic Course for the Marines is 26 weeks (during the buildup for Vietnam, the Marines reluctantly reduced the length to 21 weeks). The mission for the Marine basic course is essentially the same as ours; their input is drawn essentially from the same sources (except they have a higher percentage of college graduates); and the problems their

² As cited in the Final Report of USAIA Experimental Infantry Officer Basic Course Evaluation, January 1971. The experimental Infantry Officer Basic Course was significantly more effective in preparing Infantry lieutenant graduates for their first duty assignments than was the Regular Infantry Officer Basic Course. This fact was evidenced by: (1) The Experimental Classes' significantly higher level of overall confidence in their ability to perform the tasks required of an Infantry Platoon Leader in his first duty assignment, and (2) The Experimental Classes' significantly superior overall performance on the Objective and Performance Examinations employed in the evaluation.

graduates face are essentially the same problems as ours face (except the Army lacks their homogeneity). The Marines feel that 26 weeks³ of intensive training are required to convert their input into acceptably competent leaders of men. I know the Army cannot afford the relative luxury of a 26-week course, but the Marine Corps program is impressive support for lengthening ours to a minimum of 12 weeks.

4-5. Course Length (Combat Support and Combat Service Support)

An increase in the length of the Basic Course for the combat arms as recommended above does not necessarily require a comparable increase in the length of the course for the CS and CSS branches, primarily because--

a. Many of these branches already have a variable length of course to meet their MOS requirements; so careful engineering of the Basic and MOS-producing courses might avoid the necessity of extending the "core" Basic Course to a minimum of 12 weeks.

b. The principal reason for increasing the length of the Basic Course for the combat arms is to give the student more opportunity for field exercises where he can conduct real-life, hands-on training. Such an increase may be neither feasible nor necessary for the CS and CSS courses.

Under these circumstances, it seems logical to adjust the length of the Basic Course for the CS and CSS branches as required, on an individual basis, after detailed consideration by CONARC and the commandant concerned.

4-6. The Company-Level Gap

A fifth level of schooling is not recommended to cover the company-level gap noted in chapter 3. Although we have had such

³ This 26-week course is their "basic" basic course. After this, officers who are becoming artillerymen or support go to special "MOS-producing" courses of substantial length.

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a level of school in the past, I do not believe it is required now, and even if it were required, I am certain that manpower and cost considerations would not permit it. Rather, I recommend the preparation under CONARC, of a carefully systems-engineered package of instruction on company administration and management to be presented by a variety of instructional means (mobile teams, schools at major commands and installations, etc).

4-7. Recommendations

It is recommended that--

- a. No changes be made in the current statement of mission,⁴ but greater emphasis be placed on executing the second part of the mission ("to instill a feeling of dignity and confidence, and a sense of duty and obligation for service") in order to assist in earlier professionalization of the new officer. (Recommendation 1)
- b. The length of the Basic Course for the combat arms be not less than 12 weeks, in consonance with the experimental Basic Course developed by the Infantry School. (Recommendation 2)
- c. The length of the Basic Course for the combat support and combat service support branches be variable, but not less than 9 weeks, with the length of course for each school determined by CG, CONARC. (Recommendation 3)
- d. A package of instruction on company administration and management be prepared under the supervision of CG, CONARC, to be presented by a variety of instructional means; for example, mobile teams; at major command, installation, and unit schools; and orientation at branch schools. (Recommendation 4)
- e. An evaluation system be instituted and executed to support the elimination or decommissioning of unfit or unsuitable basic officers. (See chapter 12, Evaluation, for related discussion.) (Recommendation 5)

⁴As stated in AR 351-1, paragraph 2-5b(1), the current mission of the officer basic course is "to prepare newly commissioned officers for their first duty assignments; to instill in them a feeling of dignity and confidence, and a sense of duty and obligation for service."

f. A battery of diagnostic tests be utilized to determine the strengths and weaknesses of basic officers, especially focused on weaknesses in ability to write (literacy), and on technical weaknesses (mathematics for the engineers). (See chapter 12, Evaluation, for related discussion.) (Recommendation 6)

4-8. Guidance

It is suggested that--

a. The Basic Course remain essentially a training course, emphasizing hands-on, field-type, real-life instruction in lieu of theoretical classroom treatment. (Guidance 1)

b. The Basic Course be more rugged and demanding, both academically and physically, than it currently is. (Guidance 2)

c. Although the field for validation in the basic course is relatively limited, it should be used whenever practical. (Guidance 3)

d. Each school develop and execute a junior officer retention program which recognizes the characteristics of the basic officer (paragraph 1 above) and capitalizes on existing programs (see Annex A, Good Programs). (Guidance 4)

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CHAPTER 5

ADVANCED COURSE

5-1. Introduction

Readers of this chapter must recognize the high probability of error inherent in generalizations about advanced courses. Within these eighteen courses, a welcome variety of approaches, attitudes, and techniques exists; so any comments, guidance, and recommendations about such a heterogeneous group can be inaccurate or inappropriate for some schools.

5-2. Characteristics of the Advanced Course Student

Adopting the same approach as for the preceding discussion of the basic course student, seven salient characteristics of today's advanced course student are:

a. Diversity

Although not quite as diverse as basic course students, especially in attitude, an extraordinary spread in academic and military backgrounds continues to exist. As an extreme example, we can find an officer with a 10th grade education in the same classroom with a Rhodes Scholar, both receiving essentially the same educational experience. Military qualifications of individuals are varied because they have not had sufficient service¹ to acquire much professional depth. Many, especially the aviators and specialists, have very limited military backgrounds.

b. Professional Experience

These officers have had narrow but vivid professional experiences, almost exclusively from Vietnam. This is the only war

¹ This factor may become less significant as the length of service prior to attendance increases from the present average of about 5 years.

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they have fought. They may properly be proud of their personal parts in it, but they have been denied the professional satisfaction and uplift enjoyed by officers who served successfully in World War II and Korea.

c. Intellectual Attitude

Most of the students are intellectually critical, academically competent, and mature. In these respects, they are older brothers of the basic course officers and share many of the same attitudes and perspectives. They are competitors, both academically and professionally, who want challenge and who do not want to be part of mediocre outfits. The desire for advanced degrees is especially strong with this group.

d. Aware of Issues

These students are products of the TV age and have been exposed to most problems. Their understanding and scholarship are not yet as deep as their awarenesses. They expect Army schools to address contemporary issues; they are highly skeptical of the "school solution" and the narrow view.

e. Acceptance of Specialization

Students in this group recognize that increasing specialization is a fact of professional life which applies not only to the eleven career specialty fields (atomic energy, aviation, comptroller, logistics, etc), but also to the military profession at large. They support the development of multiple paths to career satisfaction and are prepared to follow them.

f. Career Orientation

The advanced course student is career oriented, but he is not necessarily career committed. He is aware of his options, and he should not be taken for granted.

g. Army's Role

These students are intensely concerned with the Army's role and image and with their own places in the Army.

5-3. Educational Program

With these characteristics in mind, the broad outlines of an educational program can be determined. This program should be composed essentially of a core of professional military subjects and a broad family of military and nonmilitary electives.² It should have a concurrent civilian educational effort, consisting of both on-duty and off-duty study, that could be meshed with the OPO bootstrap and degree completion programs so that the student can pursue either a baccalaureate or advanced degree.

5-4. Educational Techniques

a. Diversification

Educational techniques should be diversified by greater use of validation and diagnostic testing; personalizing and individualizing the academic program in line with the student's aptitudes, interests, and experiences; and by moving from instructor-centered to participatory methods of instruction. (See chapter 9, Theory of Teaching and chapter 11, Evaluation, for expanded treatment of this important area.)

b. Address Issues

The advanced course should address contemporary issues in a brief but realistic manner. Controversial views should be exposed. This addressal should treat those issues which are of concern to the professional military student today; it should recognize that this student must be prepared to function effectively as an informed and aware officer in an issue-oriented Nation.

c. Competition

To enhance the value of the advanced course in the eyes of the student, we must do away with the notion that it is a ticket to be

² Readers will note nothing new in this thought. It is well expressed and strongly supported in the Haines Board (Report of the DA Board to Review Army Officer Schools), Vol I, paras 97-99, pp. 39-40.

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punched and a free ride for all. This requires both tougher OPO pre-screening so that not all officers attend, and stiffer in-house evaluations of students to eliminate those who fail to measure up.

d. Career Satisfaction

A SPECIAL OBJECTIVE OF THE ADVANCED COURSE SHOULD BE TO ASSURE THAT THE STUDENT HAS A FULL, REWARDING AND "HAPPY" YEAR. This calls for a balanced program, with special emphasis on academic effort, and a good mixture of athletic, recreational, social, and family activities. The advanced course offers the Army the best opportunity it will have to develop each student into a dedicated, competent professional. In the past, we have frequently missed this opportunity. As a matter of priority, we should adjust programs and, more importantly, attitudes and approaches toward this objective. The Army could profitably capitalize on Air Force experience in conducting its squadron officer school for this purpose. (See Annex A "Good Programs").

5-5. Expansion of Mission

a. All Schools

The current statement is--

to prepare officers for command and staff duties at battalion through brigade or comparable levels in both divisional and non-divisional units, with emphasis on the exercise of command at battalion level. Where such command is not applicable, instruction will be directed toward an understanding of command functions, branch responsibilities for command support, and development of managerial and specialist skills. In all cases the course will include instruction in general staff functions and sufficient instruction in division and higher level organization and operations to provide branch perspective and to orient students in activities pertinent to their branch (AR 351-1).

To deal with the condition of terminal education cited in chapter 3, this mission statement should be expanded for all schools by adding words comparable to the following: "To provide a foundation for

continuing education and further professional development." Possible additions to curricula which this revision of mission might involve are at Appendix E.

b. Combat Support and Combat Service Support Schools

To deal with the gap noted in chapter 3, the mission of combat support and combat service support schools should be expanded to include preparation of students for performing branch-related staff duties at major headquarters. This expansion would be a realistic recognition of professional demands upon these officers. Coverage involved under this mission enlargement are at Appendix F.

5-6. Recommendations

It is recommended that:

a. The current mission statement be revised to--

(1) Include a statement comparable to "and to provide a foundation for continuing education and further professional development".

(2) Include a statement comparable to "Combat support and combat service support branch schools will include instruction designed specifically to prepare officers for performing branch-related staff duties at major headquarters". (Recommendation 7)

As a result the mission statement would be: "To prepare officers for command and staff duties at battalion through brigade or comparable levels in both divisional and nondivisional units, with emphasis on the exercise of command at battalion level and to provide a foundation for continuing education and further professional development. Where such command is not applicable, instruction will be directed toward an understanding of command functions, branch responsibilities for command support, and development of managerial and specialist skills.

Combat support and combat service support branch schools will include instruction designed specifically to prepare officers to perform branch-related staff duties at major headquarters. In all cases the course will include instruction in general staff functions and sufficient instruction in division and higher level organization and operations to

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provide branch perspective and to orient students in activities pertinent to their branch."

b. OPO establish standards and institute procedures for tougher prescreening of officers prior to attending the advanced course to weed out unfit and unmotivated officers. (Recommendation 8)

c. Under DA and CONARC guidance, school commandants develop and execute an evaluation system to support the elimination of unfit or unsuitable officers (See chapter 11, Evaluation). (Recommendation 9)

d. Validation and diagnostic testing be used extensively in the advanced course to adjust to the diversity of the students. (See chapter 11, Evaluation). (Recommendation 10)

5-7. Guidance

It is suggested that:

a. The advanced course educational program be composed of a core of professional military subjects and a broad family of military and nonmilitary electives. It should have a concurrent civilian educational effort, consisting of both on-duty and off-duty study that could be meshed with the degree completion and officer undergraduate degree programs so that students can pursue a baccalaureate or advanced degree. (Guidance 5)

b. An explicit objective of the advanced course be to provide the student and his family a full, rewarding, and happy year to enhance his career satisfaction and develop his professionalism. (Guidance 6)

c. Where feasible, the academic program be personalized and individualized in accordance with the student's aptitudes, interests, and experiences; the student be allowed greater scope for self-directed and self-paced learning. (Guidance 7)

d. The programs and techniques indicated in Appendix E be adopted, where pertinent, in dealing with the condition of terminal education. (Guidance 8)

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e. The types of coverage indicated in Appendix F be adopted, where pertinent, in expanding the scope of the curricula of the CS and CSS schools. (Guidance 9)

f. The academic program should cogently address contemporary issues. It should be one of quality that reflects the maturity and interests of the students. (Guidance 10)

CHAPTER 6

COMMAND AND GENERAL STAFF COLLEGE

Section I. PIVOTAL ROLE

6-1. C&GSC has traditionally occupied a pivotal role in the Army school system. It has attained, and now enjoys, a preeminent reputation among the military schools of the free world. For the future, C&GSC should retain this pivotal role. An explicit objective of our educational program should be the enhancement of C&GSC status and reputation.

Section II. CRITERIA FOR C&GSC TO ACCOMPLISH ROLE

6-2. Recognizing this, the question is how can C&GSC best accomplish its pivotal role for the seventies? At least four criteria apply.

a. C&GSC should support the Army's need for professionally-educated field grade officers in skills which are appropriate for C&GSC teaching.

b. C&GSC should support actions to improve the status of military scholarship and enhance the military art.

c. C&GSC should support programs for degree completion and for acquisition of advanced degrees.

d. C&GSC should conduct courses of instruction which exploit to the advantage of the Army and the students the wide diversity of backgrounds, talents and interests of the students.

6-3. Discussion of First Criterion

a. Education of field grade officers

The most important criterion is that C&GSC should support the Army's need for professionally-educated field grade officers in skills which are appropriate for C&GSC teaching. C&GSC currently

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attempts to satisfy this criterion by conducting one 38-week course annually for 972 U.S. Army students. This course is essentially identical for all students, although an excellent family of electives are available which comprises 8 percent of the academic hours, and a promising concurrent degree program has recently been initiated. The professional military education concentrates primarily on coverage of the G3/Operations, and the Department of Command. This curriculum is eminently correct in view of the current mission of the resident course¹ and it adequately meets the Army's highest priority requirement for officers educated in the command/operations functions of the Army in the field. However, the current course does not adequately meet the Army's need for professionally-educated officers in other important professional skills, especially in preparation for high-level staff duty.

b. Problem areas

As pointed out in chapters 2 and 3, 100 percent of the C&GSC graduates who eventually attain colonel's grade serve on CONARC, DA, or higher level staffs; 80 percent of the graduates who attain the grade of lieutenant colonel serve on comparable staffs; and approximately one-third of each graduating class goes directly to such assignments; yet C&GSC is the terminal level of military education for approximately 80 percent of these officers. Educationally speaking, there is a substantial body of knowledge in the principal functional areas embraced by the staff which ought to be conveyed to these officers. In this context, it is especially important to note that the problems of the Army in recent years have not stemmed from conduct of operations. Rather, our major problems and difficulties have been in other staff fields such as personnel, logistics, intelligence, and public information. These

¹As stated in paragraph 2-4b2(a), AR 351-1, the current mission of the Command and General Staff Officer Course is "to prepare selected officers for duty as commanders and as principal staff officers with the Army in the field from division through Army group, and at field Army support command and theater Army support command; to qualify those officers as Military Assistance Advisors (less language and area orientations); to provide these officers with an understanding of the functions to the Army General Staff and of major Army, joint, and combined commands; and to develop their intellectual depth and analytical ability.

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problems today are so complex and acute that they demand the concerted application of a variety of staff and specialized skills. In an era when the function of military power is both to deter and to wage war, sound conduct of these important functions in peacetime assumes greater significance. These factors argue against continuing the centrality of the G3/Army in the field coverage in the Leavenworth curriculum and lead to the conclusion that C&GSC should reorient its curriculum to include education in the principal staff functions. (This conclusion is addressed in greater depth in Section III, Alternative Educational Programs. An outline of the proposed educational coverage in a reoriented curriculum is at Appendix G).

6-4. Discussion of Second Criterion

C&GSC should support actions to improve the status of military scholarship and enhance the military art. This criterion is directly related to the program to attain degree-granting authority for C&GSC (the Master of Military Arts and Sciences). This relatively new MMAS program has not yet attained Army-wide recognition, and its status and importance is fuzzy in the minds of most observers. However, based on my observation of it, and the opinion of the people running it, and (most important) the opinion of the students who have participated in MMAS, it is a high potential program which deserves increased backing. A special advantage stemming from formalization of the MMAS would be the in-house boost it could give to our research and scholarship in military matters. This could inject new vigor and views into an area dominated during recent years by nonprofessionals. Vigorous action before Congress appears to be the essential element in attaining approval of the MMAS; this action should be forthcoming.

6-5. Discussion of Third Criterion

C&GSC should fully support programs for degree completion and for acquisition of advanced degrees. These programs, adequately backed by the excellent consortium of respected universities in the area,² will provide an ideal outlet and challenge to the intellectual capabilities of even the best academic performers; put the Army in tune with

² This includes, at least, The University of Kansas, Kansas State University, and The University of Missouri (KC).

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educational trends nationwide; establish a low profile program which should not be subject to GAO interest or challenge; and give the Army a large group of mature officers who have been educated at high levels of academic demand across a broad spectrum of skills. The existing program is an excellent start in this direction; continued impetus should raise it to even higher levels of attractiveness and efficiency. (See chapter 8, Civilian Education, for expanded rationale on this point.)

6-6. Discussion of Fourth Criterion

C&GSC should conduct courses of instruction which exploit to the advantage of the Army and the students the wide diversity of backgrounds, talents, and interests of the students. This diversity is a fundamental fact of Army educational life today. Properly exploited, it can be a real strength. Conversely, if this diversity is not recognized, considerable academic frustration results and the Army fails to capitalize on its academic assets. Hence, C&GSC should move to personalize and individualize its educational program to a substantially greater degree than is currently achieved.

Section III. ALTERNATIVE EDUCATIONAL PROGRAMS

6-8. Alternate Programs

With these criteria in mind, it is possible to pose alternative educational programs for C&GSC. There is a multitude of such programs, but the principal issues can be surfaced by a consideration of the following three:

Program A -- Status Quo

Program B -- Eliminate existing 10-month course; substitute two 4 to 5 month "core curriculum" courses annually

Program C -- Eliminate existing 10-month course, substitute a 10-month course which consists of a 4 to 5 month "core curriculum" and a 4 to 5 month staff functionalization course annually.

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6-9. Analysis of Programs

An analysis of the adequacy of each of these programs with respect to the four criteria and a consideration of other advantages indicate that Program C is distinctly preferred over A and B. This analysis/comparison is omitted in the interest of brevity; it can be found at Appendix H.

6-10. Recommended Educational Program

In summary, I consider the proper role for C&GSC is to act as a professional university for the Army in the seventies. This should not be a one-course, one-curriculum university. Its principal emphasis should be on the conduct of high-caliber professional military education across the spectrum of skills required by the modern Army, along the pattern of Program C. This should be supplemented by vigorous participation in the MMAS program and by continued development and execution of existing elective and cooperative degree programs.

Section IV. EDUCATION OF MID-LEVEL LOGISTICIANS

6-11. Areas of Logistics Generalist Education

This discussion will address the education of the military logistician, subsequent to completion of his branch advanced course and prior to his attendance at a senior service college. This educational area can broadly be defined as that of the logistics generalist--the logistician who is educated beyond the branch specialty level; who can consider logistical problems at echelons from division through DA; who knows both wholesale and consumer logistics; and who can deal intelligently with problems of the CONUS industrial base. There is general agreement that this area is sufficiently complex, difficult and important to merit special preparation.

6-12. Review of Existing Educational Opportunities

A cursory review of the existing educational opportunities³ for

³These include C&GSC, AFSC, ALMC, AFIT, NPGS, AERB, and "management type" courses.

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mid-level logisticians from the standpoint of volume of trained logisticians indicates that C&GSC is the key. The other schools and educational programs, important though they are, simply do not hold sufficient potential for expansion or change. Directly related to the question of logistics instruction at the C&GSC level is the proper utilization of the facilities of ALMC. ALMC is an especially significant factor because it is a splendid facility waiting for a mission. It has a small, but high-quality, faculty which is interested in and capable of expansion into broader logistics educational areas. ALMC enjoys the active sponsorship of AMC; and AMC is distinctly interested in improving mid-level logistics education. For these reasons, ALMC can play a larger role in logistics education.

6-13. Alternate Use of C&GSC/ALMC Capabilities

There are five alternative utilizations of the C&GSC/ALMC capabilities for mid-level logistical education. These are:

- a. Case 1--Continue existing program, with C&GSC conducting a common course for all students (without any logistics staff functionalization) and with ALMC continuing to conduct its Logistics Executive Development Course for approximately 38 students for approximately 19 weeks.
- b. Case 2--C&GSC reorient its curriculum to include a 4 to 5 month core curriculum for all students followed by a 4 to 5 month staff functionalization course covering specific staff functions, to include logistics. Such a program would turn out approximately 150-250 midlevel logisticians annually.⁴ ALMC to continue existing Logistics Executive Development Course as in Case 1.
- c. Case 3--C&GSC would reorient its course of instruction as described in Case 2. ALMC would reorient its course to provide a core curriculum comparable to C&GSC and then conduct specialized logistics instruction (in essence, this would constitute the establishment of a C&GSC-LOG at ALMC). Such a program would produce approximately

⁴This range of figures has been internally developed by this review--it is an estimate of the number of C&GSC attendees in FY 73 (972) who would opt for or be directed into the logistics area.

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200 logistics trained graduates annually.⁵

d. Case 4--C&GSC would conduct reoriented course as in Case 3. ALMC would take graduates of core curriculum at C&GSC(I.V) and give them a follow-on Logistics Executive Development Course or comparable instruction in logistics. (ALMC would not attempt to construct initial core curriculum as in Case 3.) Such a program would produce approximately 150-250 logistics trained graduates annually.⁴

e. Case 5--C&GSC would conduct reoriented course as in Case 2. ALMC would conduct a separate course of not less than one calendar year in advanced logistics management with the objective of eventually obtaining degree-granting authority and awarding Masters of Logistics Management comparable to Air Force Institute of Technology. This program would produce approximately 150-250 C&GSC logistics trained graduates annually,⁴ plus the output of MLM's from ALMC (number unknown).

6-14. Recommendation

a. These five cases are analyzed in Appendix I. Based on this analysis, I recommend the solution advanced in Case 3, i.e., C&GSC conduct a staff functionalization course with the exception of logistics; ALMC become a C&GSC(LOG), and conducts a core curriculum plus logistics staff functionalization instruction.

b. IN CARRYING OUT THIS RECOMMENDATION, A BASIC OBJECTIVE SHOULD BE TO AVOID ANY HINT OF CREATING TWO CAMPS IN THE ARMY--THE LOGISTICIANS AND THE REST OF THE ARMY. For this reason, the following criteria should govern:

(1) The core curriculum conducted at the C&GSC(LOG) should be identical with the core curriculum covered at C&GSC (Leavenworth).

(2) The core curriculum should be instructed primarily by combat arms officers.

⁵ This figure is an unofficial estimate of the capacity of ALMC for this course. It has no official status and is a gross comparative only.

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(3) There should be a liberal allocation of students who are combat arms officers to C&GSC(LOG), not less than 10 percent, not more than 30 percent.

(4) There should be balanced representation of combat arms, combat support, and combat service support officers on the C&GSC(LOG) faculty.

(5) Students to attend C&GSC(LOG) should be selected by the identical process as students selected to attend C&GSC(LV), and they should all be on the same list and selected at the same time.

c. If these criteria are followed, I consider that the establishment of C&GSC(LOG) at Fort Lee, using ALMC facilities and faculty as a base, would distinctly improve the educational effort of the Army and would be an advantage to the Army at large, not just to the logisticians.

Section V. HOUSING AT C&GSC

6-15. Housing situation

The housing issue has been a critical one at C&GSC ever since the decision was made to drop the associate course and expand the regular course to its current size. A housing program is underway which will do much to alleviate the existing situation. (Statistics are at Appendix J.) The basic considerations concerning this housing problem are adequately documented elsewhere; only two additional points are pertinent.

6-16. Housing versus input

We should try to make the year at Leavenworth a happy, memorable, and satisfying experience for the student and his family. Adequate housing is an essential component of this effort. Carried to its logical conclusion, this could mean tailoring the student input according to the availability of adequate housing. Personally, I think it would be a mistake to have the housing tail wag the educational dog. The question here is not, "Is a Leavenworth student happier and better satisfied in good housing than in poor housing?" The question is, "Is an officer happier and better satisfied as a Leavenworth student in poor housing than not as a Leavenworth student at all?" Although no

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questionnaires exist on this to my knowledge, I am certain that candidates for Leavenworth would overwhelmingly elect to attend this school in inadequate housing rather than not go at all.

6-17. On post versus leased housing

A second point somewhat similar in vein concerns the subject of leased housing. There is a commendable desire to concentrate all students on the post. Certainly, this is preferable to living in leased housing, provided the housing on post is adequate. Here again, the real question seems to me to be not so much, "Is it better to live in adequate housing on post than in adequate leased housing off post?" as "Is it better to live off post in adequate leased housing, or on post in inadequate housing?" Here too, my guess is that a number of students would prefer to live in adequate leased housing off post rather than on post in inadequate housing. One additional small point in this regard. Proponents of having all students live on post point out the real advantage from association with fellow students. I suggest the same closeness of association can be obtained by concentrating the leased housing. With a student body the size of Leavenworth's, this close association is usually formed around a single block of the housing area anyhow, so the occupants of leased housing are likely to have almost as close an association with fellow students as the occupants of on-post housing.

6-18. Purpose

The basic purpose of the preceding paragraphs is not to downgrade the importance of getting adequate housing at C&GSC as a matter of urgency. Rather, the purpose is to assure that we recognize the substantial progress made, especially in the leased housing area, in recent years and do not over-react at this time by reducing the input to C&GSC solely because of the housing situation.

Section VI. RECOMMENDATIONS AND GUIDANCE

6-19. Recommendations

The following actions are recommended:

- a. Revise mission statement for C&GSC resident course

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(paragraph 2-4b(2)(a), AR 351-1) by including the following two subparagraphs:

(1) to prepare each officer to function effectively in a high-level staff area.

(2) to provide a foundation for continuing education and intellectual development.⁶ (Recommendation 11)

The resultant mission would read:

to prepare selected officers for duty as commanders and principal staff officers with the Army in the field from division through Army group, and at field Army support command and theater Army support command, to provide these officers with an understanding of the functions of the Army General Staff and of major Army, joint and combined commands, to prepare each officer to function effectively in a high-level staff area, and to provide a foundation for continuing education and intellectual development.

b. Pursuant to adoption of the revision recommended in (1) above, change the curriculum at C&GSC to--

(1) Establish a core curriculum of approximately 5 months duration which would be designed to teach every Leavenworth-qualified student what he ought to know about the Army in the field, especially how it operates and how it is commanded. This would, in essence, be a condensation of the existing course, with special emphasis on command. All students would attend this course.

(2) Institute staff functionalization courses of approximately five months duration. These staff functionalization courses would cover the standard fields of personnel, intelligence, operations, logistics, and force development. Each student would attend one staff functional course. (Recommendation 12)

c. Diversify educational methods by moving to student-centered

⁶ Support for this recommendation is advanced in chapter 3--Roles and Missions of Schools and Gaps in Their Coverage.

techniques for a substantial majority of the instruction; and by full utilization of proven innovations in educational technology. (Support for this recommendation is advanced in chapter 9, Theory of Teaching). (Recommendation 13)

d. Expand electives program and degree-completion program. (Recommendation 14)

e. DA and DOD obtain Congressional approval of MMAS. Institute low-keyed but persistent program to inform officer corps of merits of MMAS, once approved. (Recommendation 15)

f. Establish a C&GSC(LOG) at ALMC. If established, staff functional instruction in logistics (paragraph b above) would be transferred to C&GSC(LOG), consonant with student capacity at ALMC. (Recommendation 16)

6-20. Guidance

It is suggested that:

a. The basic objective be the establishment of C&GSC as the professional university for the Army of the seventies--a university which teaches, as a fundamental, a core curriculum on the Army in the field. This core curriculum is supplemented by a diversified coverage of major high-level staff areas, by MMAS, and by a wide family of electives. This university will have its own degree-granting authority and will support active cooperative degree programs, thereby fostering close and favorable ties with the civilian academic community. (Guidance 11)

b. In providing for continuing education of students, consideration be given to actions such as: a substantial increase and diversification of the guest lecture program; the inclusion of controversial subjects/issues/problems for coverage; a retention and expansion of the existing highly regarded Strategic Studies program; and increased use of military history. (Guidance 12)

c. The points raised about housing at C&GSC (Section V) be given appropriate weight in decisions on this subject. (Guidance 13)

CHAPTER 7

ARMY WAR COLLEGE

7-1. Faculty and Students.

My review of this college indicates that it is in generally excellent shape. The faculty is excellent (73 percent possess Master's Degrees); and an aggressive, comprehensive faculty recruitment program is underway. The student body is well selected, highly motivated, and generally satisfied with their educational experience at the school. The educational attainments of the faculty and students are impressive; but the breadth, intelligence, maturity and objectivity which they display are even more significant.

7-2. Curriculum.

The curriculum appears to be expertly designed and well conducted; it is the result of an indepth, highly professional study which was recently approved by DA.¹ Two points may be made concerning the curriculum. First, looking ahead, it will be necessary to continually reshape the curriculum, particularly in the management sciences area, in order to conform to the increasing level of educational attainments of the student body. Tomorrow's students as a group will be better qualified than today's and capable of undertaking more advanced work. Second, there is a substantial body of professional opinion which holds that the Army War College curriculum should be oriented more toward specific Army concerns and less toward the national strategy and foreign policy themes which comprise its current focus.² While this argument has considerable force, my own belief is that the recently revised War College curriculum is very sound for today's needs. Further, a

¹U.S. Army War College, 1971 Study of Mission and Curriculum, 16 Nov 70.

²This view is strongly expressed by Edward L. Katzenbach, Jr. in "The Demotion of Professionalism at the War Colleges", United States Naval Institute Proceedings, March 1965, pp. 34-41.

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reorientation of the C&GSC curriculum along the staff functionalization lines recommended in the previous chapter will engender a thorough consideration of most important Army issues at the C&GSC level.

7-3 Chairs and Graduate Program.

There are two promising programs underway at AWC which have not yet achieved their full potential. These are the cooperative graduate degree program (which has recently been reinstituted) and the Faculty Chairs Program. Both of these high-potential efforts require continued emphasis and strong support, not only within the College itself, but from the Department of the Army. This requirement is clearly recognized by the commandant, his faculty and Department of the Army; it can be anticipated that these programs will mature steadily and become solid assets at the College.

7-4. Creative Resources.

The co-location of an excellent, mature faculty with an excellent, mature student body constitutes the Army's best single reservoir of senior officer talent. This concentration of talent has recently been directed towards the consideration of long-term, major issues of fundamental importance to the Army as a whole. Specifically, the War College has conducted landmark studies of two such issues, professionalism and leadership, in the last 18 months. The results in both cases can accurately be called impressive. These War College efforts have assisted all elements of the Army to think through these two important issues, and I believe the quality of their end product could not be duplicated by any other agency in the Army. We should, therefore, continue to use the creative resources of the War College faculty and students to focus on such problems of Army-wide importance. Tasks should be assigned only by the Chief of Staff, the Vice Chief, or the DCSPER, and in no sense should the school become a catch-all for DA staff problems. As a related matter, the AWC should remain in the forefront of efforts to cope with Army leadership problems by having the Commandant act as Executive Agent for the Chief of Staff in chairing a Committee on Leadership Education. This committee would consist of representatives of AWC, USMA, and such CONARC schools as CG, CONARC believes appropriate.

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7-5. Nonresident Instruction Course.

One of the most impressive activities at AWC is the nonresident course which was instituted in 1968. The course is expertly designed and imposes a real academic demand on the students (noncompletion rate is about 30 percent). All personnel associated with this course regard it very highly; the students have a real respect for its intellectual demand. It is a distinct asset to our educational program at the senior service level. It merits continued emphasis and support to enhance its already considerable status. One minor policy issue deserves review. Currently a graduate of the nonresident course receives career management credit for attendance at a senior service college, and is apparently considered equivalent to a graduate of the resident course for career management purposes. However, his DA Form 66 carries the indicator AWC (nonresident), and this connotes a small but important degree of second class citizenship. Although this issue is minor, I believe the graduate of this nonresident course has received at least as much educational benefit as the graduate of the resident course. No distinction should be made between them and, specifically, the indicator of nonresident graduation should be eliminated. This recommendation is specifically restricted to graduates of the nonresident course at Carlisle - generally, nonresident status should not be equated to resident status, as stated in DA Pam 600-3.

7-6. Recommendations.

It is recommended that identical entries be made on DA Form 66 for officers completing the U.S. Army War College regular and nonresident courses. (Recommendation 17)

7-7. Guidance.

It is suggested that:

a. Current system for utilization of AWC creative resources be continued. (Guidance 14)

b. Commandant, AWC, act as Executive Agent for the Chief of Staff in chairing a Committee on Leadership Education, with representation from AWC, USMA, and such CONARC schools as CG, CONARC directs. (Guidance 15)

c. Faculty Chairs Program and the Graduate Degree Program
continue to receive full support from DA and other interested agencies
in order to realize the high potential of these programs.
(Guidance 16)

CHAPTER 8

CIVILIAN EDUCATION

Section I. INTRODUCTION

8-1. Current Programs

The Army currently conducts an extensive civilian educational effort involving a number of programs in two major fields: undergraduate education (baccalaureate degree) and postgraduate education (advanced degree). A brief discussion of these programs is at Appendix K.

8-2. New Factors Affecting the Civilian Educational Effort

Each of the existing efforts is impressive; and it appears that from both a policy and performance level, the Army has established civilian educational programs which have adequately supported its requirements to date. However, as indicated in the discussion on environment in chapter 2, there are at least two major factors--the undereducated hump and the educational explosion--which pose new problems for the Army's civilian educational program; therefore, some substantial adjustments may be in order.

Section II. UNDERGRADUATE EDUCATION

8-3. The Undereducated Hump

a. Composition. The undereducated hump is a special issue for the Army's education program, not simply because of its size and urgency, but also because of complex personnel management, career development, and morale considerations. It is infeasible to define precisely the numerical size of this contingent in our officer corps, because the arithmetical number included in the group is completely dependent upon when the appraiser starts and stops counting officers without baccalaureate degrees; what overall size of career force he contemplates, and so on. However, a solid ballpark figure for the size of this group at present includes approximately 20,000 officers. This number is expected to be cut roughly in half by

normal and policy-generated attrition related to reduction in size of the Army. (These figures are derived from the computations at Appendix D.) Aside from the numbers involved, it is important to recognize the composition of this group of officers. The bulk of them were commissioned during the accelerated OCS program for the Vietnamese build-up, most have served in Vietnam at least once (many for several tours) and they are now voluntary indefinites. This group ranges in efficiency and potential from inadequate to the highest. Generally, however, it can be stated that each of these officers served his Nation well (or at least to the limits of his ability) at a time of national need when many individuals who had higher educational qualifications were actively avoiding service. From the standpoint of loyalty down, the Army owes them a lot. And, even if the Army did not owe them a lot, it would be in the Army's best interests to retain the high caliber portion of this group because of their dedication and proven efficiency.

b. Difficulties. Thus, we should conduct a major effort to assure that every deserving officer in this group has an opportunity to acquire a baccalaureate degree. In carrying out such a program, it is unfortunately impossible to delineate any single policy or set of procedures that will accomplish the desired objective. Some of these officers lack only a very few credit hours toward a baccalaureate degree; others have essentially none. The policy that will work for one group will rarely work for the other. This situation poses special problems for OPO and other personnel agencies because it requires a highly specific appraisal of each officer and a determination of what educational experience combined with a professional assignment will best serve his own needs and the Army's. While recognizing these difficulties, I consider the problem of providing an opportunity to obtain a baccalaureate degree for the undereducated hump to be the most urgent, time-dependent issue confronting the officer educational system.

8-4. Recommendations

It is recommended that the Army not only continue its existing program for acquisition of baccalaureate degrees, but expand it substantially along the following lines:

a. All deserving Army career officers, both Regular and Reserve, who do not possess a baccalaureate degree, be afforded the

opportunity to acquire a degree through the OUDP or similar program if they can obtain a degree in 2 years or less. (Recommendation 18)

b. Career officers who cannot obtain a degree in 2 years or less be afforded the opportunity to attain this level (and hence eligibility for OUDP or similar program) through a combination of the College Level Examination Program (CLEP) and off-duty study under the tuition assistance program. (Recommendation 19)

c. Officers within the purview of recommendations a and b to be afforded the opportunity to attain their degrees not later than completion of 8 years of service or when their contemporaries are being considered for selection to C&GSC. (Recommendation 20)

d. OPO institute an educational counseling program that will take into consideration an officer's educational achievements, aspirations, and prospective assignments and advise the officer concerning the program of studies and assignments which will enable him to take best advantage of the opportunities available to achieve his educational aspirations. (Recommendation 21)

e. The program to enable career officers to attain a baccalaureate degree be given top priority over all other civilian educational efforts. (Recommendation 22)

Section III. GRADUATE EDUCATION

8-5. Introduction

The question of what advanced civilian educational program will best meet the Army's needs for the decade is less urgent, but even more important than the undergraduate issue. The analysis of the educational explosion (paragraph 2-8, chapter 2) indicates the magnitude and nature of the situation. The table below outlines current programs and their products. (See Appendix L.)

Table 8-1. CIVILIAN ADVANCED DEGREE PROGRAMS

Type	Army Regulation	Production
Advanced degree program (AERB)	621-1	825 (FY 71 and 72 programmed input)
Advanced degree program for ROTC instructor duty (APRID)	621-5	100 (estimated FY 73 output) 300 (estimated FY 75 output)
Cooperative degree program	621-5	63 (FY 72 output for CGSC) 55 (FY 72 output for AWC)
Degree completion program	621-5	325 (FY 71 output)
Scholarships, fellowships, and grants	621-7	15 to 20 annually
TOTAL		1400/1600 annually

8-6. Advantages and Disadvantages of Advanced Civilian Education

As an initial analysis, it is helpful to develop the advantages and disadvantages of advanced civilian education, without reference to specific programs.

a. The principal advantages include--

- (1) Contributes to more efficient command/management.
- (2) Provides retention factor for high-quality officers (see paragraph 2-8b, chapter 2).
- (3) Increases Army's intellectual and technological stockpile.

6- (4) Avoids educational obsolescence (see paragraph 2-6, chapter 2).

(5) Improves Army's prestige with civilian sector.

(6) Keeps Army abreast of attitudes and developments in academia.

(7) Conforms to national trends (see paragraph 2-8, chapter 2).

b. Disadvantages. Why not advanced degrees? Some of the weaknesses and disadvantages include--

(1) Costs in manpower and money. Manpower costs are the most significant because the Army must forego the services of the officer while he is attending school. An average of about 7,200 officer man-years are currently invested in the civil schooling program.¹ The cost of tuition and related expenses for these officers is about 10 to 12 million dollars² annually.

(2) Split professional interest. Civil schooling causes an officer to divide his interests between professional military education, advanced civilian education, and his family. Pushed to extremes, this could be detrimental. See Appendix M for additional discussion of this point.

(3) Sheepskin sweepstakes. There is always a danger that acquiring an advanced degree can become a ticket-punching exercise and thus detract from professionalism. (However, we cannot blame the officer corps for following the promotion returns; the fact is that in recent selections to general officer, an officer without a master's degree has been the exception rather than the rule--77 percent of the selectees for brigadier general in the 1971 promotion list have a master's, doctoral, or professional degree.)

¹Department of the Army, Deputy Chief of Staff for Personnel, Army Civil Schooling Program Milestone Three Briefing, approved by the Chief of Staff in May 1971, p. 3.

²Ibid.

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(4) Political vulnerability. The civil schooling program has been subject to recurrent challenge by members of Congress and the GAO over the years.

(5) Administrative demand. Proper conduct of a major civil schooling program entails considerable administrative and management effort of a highly personalized nature.

8-7. Value of Advanced Degrees to the Army

The advantages and disadvantages cited above do not directly address the fundamental question: How cost effective is an Army investment in advanced civilian education?

a. Graduate school is distinctly advantageous to the Army when the education results in certification of competence and, as a practical matter, this certification is a prerequisite for certain kinds of work, e.g., an officer with an advanced degree in aeronautical engineering will make a greater contribution toward design of a good aircraft than if he did not have such a degree.

b. When we leave the area of academic preparation for specific jobs, (which is primarily covered by the AERB), the answers become much less clearcut. For example, logical questions arise such as, Will an officer who has an advanced degree in political science or sociology be a better brigade commander than he would be if he did not have it?, or stated more challengingly (as it was advanced by Mr. Roger Kelley, ASD (M&RA)), "Would he be a worse brigade commander than he would be if he did not have the advanced education?"

There is no conclusive statistical proof on either side of this question.³ Each individual derives his own answer based on his own subjective sense of the enormously complex relationships between demonstrated performance on the job and educational achievement. I have raised this question of determining the cost effectiveness of education with a number of people across the educational spectrum. I have found nobody who claimed to have a defensible statistical answer.⁴ Neither educational philosophers nor hard-nosed developers of managerial skills (GE and Caterpillar for example) can put a price tag on the end product.

³Ivar Berg, Education and Jobs: The Great Training Robbery. (New York: Praeger, 1970). The author compared performance in relation to education level. He states, "I considered thousands of jobs at all levels of the occupational structure, from piece workers in Mississippi textile operations to management's best scientists and engineers in the heavy electrical equipment manufacturing industry. I found education and performance to be either uncorrelated or negatively correlated." Remarks delivered at the 54th Annual Meeting, American Council on Education, October 7, 1971. While data from the armed forces was used by Professor Berg in his study, none of the data pertained to officer performance. It would have been interesting to look at such performance in view of the high rate of selection of advanced degree holders for promotion to general officer. For discussion of the methodological issues involved in attributing differences between graduates and nongraduates to the effects of education, see Kenneth Kenniston and Mark Gerzon, "Human and Social Benefits" in Universal Higher Education Costs and Benefits. American Council on Education (Washington: 1971) pp. 44-47.

⁴For results of a recent conference which explored this subject, see Western Interstate Commission for Higher Education, Outputs of Higher Education: Their Identification, Measurement, and Evaluation, papers from a seminar held at Washington, D.C. May 3-5, 1970, conducted by the Western Interstate Commission for Higher Education in cooperation with the American Council on Education and the Center for Research and Development in Higher Education at Berkeley (Boulder, Colorado, July, 1970).

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c. The only compilation of subjective views known to me results from a recent Naval War College survey of their graduates who have attained advanced degrees on a cooperative basis with George Washington University. The Naval War College has conducted an advanced degree program for 10 years. They are the only War College which has a sufficient statistical base to arrive at indicative conclusions at this time. The results of this questionnaire constitute a resounding endorsement of the program. Specifically, 81 percent of the officers who had attained a master's degree on this cooperative basis felt the degree enabled them to more effectively perform their professional duties; 99 percent felt that the program complemented the Naval War College curriculum and recommended participation in the program for future students. Aside from this survey, there is a vast amount of scholarly discussion on this issue. Some typical comments, with my views, are found in Volume II of this report (Appendix K).

d. In my opinion, the principal reason why the Army should conduct an extensive, well-integrated advanced civilian educational program is wrapped up by the simple question, "What are the consequences to the Army of not conducting such a program?" I think that, in just two areas alone, the consequences would be so severe that we really have little alternative. These areas are first, the disappointment and negative motivation which our junior officers, who are highly education conscious, would experience; and second, the Army would tend to fall behind the educational power curve of the nation at large.

8-8. How Advanced Degrees?

a. Leaving the "why" of advanced degrees and considering the "how", I do not believe the requirements/utilization approach centered in the Army Educational Requirements Board (excellent though it is for its purpose) can be expanded sufficiently to meet the Army's future needs.

b. Hence, the proper approach is to diversify the routes an officer can follow to an advanced degree. Primarily, this requires an expansion of our non-fully funded civilian education efforts, specifically, cooperative degree programs at branch schools, C&GSC, and AWC; the degree completion program; and advanced degree program for ROTC instructor duty. In addition, opportunities should be provided to faculty members at service schools to acquire advanced

degrees concurrent with their faculty assignment.

c. As another important route to an advanced degree, OPO should as a matter of policy, in the many situations where the needs of the individual and the Army coincide, assign career officers to duties where they have an opportunity to continue their advanced civilian education and acquire advanced degrees. This is especially significant with respect to assignment subsequent to attendance at service school where the individual was able to work toward, but not complete, an advanced degree.

8-9. Recommendations

It is recommended that:

a. Non-fully funded civilian educational programs, (degree completion program, advanced degree program for ROTC instructor duty, and cooperative degree programs at branch schools, C&GSC, and AWC) be expanded as the principal means of acquiring advanced degrees in the next decade. (Recommendation 23)

b. Opportunities be provided for faculty members at service schools to acquire advanced degrees concurrent with their faculty assignments. (Adoption of this recommendation would entail revision of DA Pam 616-558, Staffing Guide for US Army Service Schools, to include an allowance for the faculty to continue educational and professional development. (Recommendation 24)

c. DA adopt the policy that, when the needs of the service and the desires of the individual can be reconciled, officers will be assigned to duties which will enable them to continue their advanced civilian education and acquire advanced degrees, especially with respect to assignments subsequent to attendance at a service school where the individual was able to work toward but not complete an advanced degree. (Recommendation 25)

d. DA implement the proposed 18-month degree-completion program at the earliest practicable date, with provision for extension to 24 months in individual cases. (Recommendation 26)

e. The Army should examine the possibility of increasing student attendance at AFIT and NPGS, to include limited Army faculty participation in those schools. (Recommendation 27)

CHAPTER 9

THEORY OF TEACHING

9-1. Introduction

Viewed simply, there are at least four major components of any educational system: what is taught (curriculum), how it is taught (theory of teaching), who is teaching (faculty), and who is being taught (students). It is fair to say that the principal focus of the Army educational system has been on what is taught, with the other components receiving less attention. For example, any reviewer will be favorably impressed by the lack of stagnation in our curricula—they do change with the times and sometimes ahead of it. On the other hand, one sees few fundamental changes from the methods of instruction used 20 years ago. Training aids and instructional techniques have been excellently modernized, and there have been some positive advances in the application of diagnostics, validation, programmed texts, and electives; however, the basic methodology remains the same. These methods of instruction are not necessarily wrong or inappropriate, but it is apparent that the Army educational system has not diversified its instructional techniques or taken full advantage of the many opportunities to improve its pedagogy.

9-2. How We Teach

How we teach actually involves the two human factors in the educational system (the teacher and the student). In addition, a third factor is becoming important—the machine. The word "machine" is a single word designator for the entire family of impressive technological advances made in teaching. This third factor is in a stage of dynamic change and its effects can radically restructure the teacher-student relationship. For clarity, this discussion will first address the relationship between the teacher and the student, it will then consider the role of the machine.

9-3. Continuum of Teaching Methods

a. An almost infinite variety of teaching methods exists. It is the basic task of the teacher to pick the method or combination of

methods which best suit a particular educational purpose. The teacher is the mediator between the curriculum and the student; so the techniques or methods he employs are decisive in determining how much learning the student actually accomplishes. The availability of this useful continuum of methods for the modern educator means that instruction can be made timely, pertinent, and motivating if techniques are selected that meet the educational goals. Without becoming too technical about it, this continuum ranges from methods that synthesize and dispense knowledge (instructor-centered) to those that energize and motivate the student to acquire knowledge (student-centered).

b. It is evident that no single technique will be best for all situations. The interplay between techniques, not concentration on any one method, will determine how well we teach our students. In the following over-simplified discussion, the two techniques will be treated almost as a dichotomy, but in actual application, they should be integrated (along with machines) to fit the educational goals. The distinction between the two techniques is illustrated in table 9-1.

9-4. Strengths of Instructor-Centered Method

The bulk of the educational effort at the basic, advanced, and C&GSC level is conducted by the instructor-centered method, which has at least the following substantial strengths:

- a. Homogeneous product.
- b. Develops retention and feed-back
- c. Well understood and recognized
- d. Adaptable to use by inexperienced instructors

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For a comparison of the two systems derived from an extensive digest of the literature, see Michael D. Marien, Alternative Futures for Learning: An Annotated Bibliography of Trends, Forecasts, and Proposals (Syracuse, N. Y.: Educational Policy Research Center, Syracuse University Research Corporation, 1971), p. X. Also of value is Joseph Axelrod, "Teaching Styles in the Humanities," in William H. Morris (ed.) Effective College Teaching (Washington: American Council on Education, 1970).

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Table 9-1. CHARACTERISTICS OF
INSTRUCTOR-CENTERED AND STUDENT-CENTERED
TEACHING IN THE ARMY EDUCATIONAL SYSTEM

Instructor-Centered Instruction

Closely controlled
Lesson-plan directed
Instructor-centered, but little flexibility for instructor
Instructor's role is to transmit knowledge
Same pace of instruction for entire group
Measured by contact hours
Practical exercise oriented--
 Sequential requirements
 Platform-controlled
Exam-motivated
Aimed at lowest common denominator of students

Student-Centered Instruction

Less control
Student bears responsibility for learning
Flexibility for instructor
Learning-objective directed
Instructor's role is to facilitate learning
Learning is self-paced to greater extent
Contact hours reduced
Practical-exercise oriented--
 Requirements solved through individual and group
 study in or out of class
 Individual and group solution discussed in class
Peer-group motivated
Aimed at highest level of effort

- e. Capable of withstanding turbulence and capable of expansion
- f. Statistically manageable
- g. Best for some subjects

9-5. Strengths of Student-Centered Method

Alternatively, the student-centered theory of teaching has the following substantial strengths:

- a. Challenges students
- b. Develops problemsolving ability and communicative skills
- c. Imposes no ceiling on personal endeavor
- d. Permits lower contact hours for instructor
- e. Accommodates to diversity of students and to diversity of Army educational requirements.
- f. Is especially effective for the elements of our curricula that are devoted to "education", as opposed to "training."
- g. Provides an effective educational answer to the existing high level of student dissatisfaction with their educational experiences, especially with respect to providing a sufficient educational challenge. The student in a student-centered learning environment can rarely say that his educational experience lacks challenge, because the degree of challenge and the measure of his living up to it are primarily his responsibility.

9-6. Requirement for Diversification

a. The preceding analysis indicates that a diversification of the theory of teaching in the Army educational system is in order, and that this diversification should be in the direction of a substantial increase in student-centered instruction conducted within the system. (See Appendix N for an expanded discussion of the rationale for greater use of student-centered instruction.)

b. In accomplishing this diversification, the relative proportion of instructor-centered and student-centered education will obviously vary with the level of the school and its educational mission. As broad parameters, the basic course should remain predominantly instructor-centered, with about 75 percent instructor-centered and 25 percent student-centered. The advanced course should be approximately 50-50. C&GSC should be predominantly student-centered with approximately 80 percent student-centered, 20 percent instructor-centered.

9-7. How to Diversify

The move to student-centered teaching will not be easy for most schools because it calls for substantial changes in long-established techniques and procedures. (See Appendix O for an itemization of some important implications.) However, these schools will not be breaking new educational ground. Other military schools (senior Service colleges, Service academies, Air and Navy Command and Staff, etc.) have been employing the student-centered system with marked success for many years and have acquired a tremendous background of experience and competence which they can pass on to the less experienced institutions. This background, plus a careful evaluation of the educational objectives of each unit of instruction should lead to the accurate determination of the most successful methodology. It should, however, be noted that existing experience and research indicate that the small-group discussion method, built around a small class, is often an applicable method. The "small-group discussion" as used in this report includes role-playing, committee problemsolving, case studies, and a variety of other techniques compatible with a small class environment.² Perhaps the

²For a discussion of the basic techniques, see Joseph A. Olmstead, Theory and State of the Art of Small-Group Methods of Instruction, Technical Report 70-3 (Alexandria, VA: Human Resources Research Organization, March 1970).

Olmstead states: "Although some methods may also involve students in other activities (role-playing games, etc.) discussion at some point is almost inevitably a critical part of the instructional procedure." On page 8, Olmstead also defines small group as a collectivity of not more than 20 individuals.

For further discussion of techniques appropriate to small-group instruction, see Department of Social Sciences, USMA, Teaching in the Department of Social Sciences (West Point, 1967).

most promising direction for student-centered instruction is the use of personalized/individualized instructional techniques made possible through mechanizing instruction (use of programmed texts, audio-visual machines, educational television, computer-assisted instruction).

9-8. Criteria for Mechanization

a. An often heard axiom among educators is that no teaching technique is better than a highly qualified instructor standing on a platform and teaching the subject that he knows best. In my opinion, this statement no longer holds true for some learning. Modern technology has added totally new dimensions to our educational capability, so for some subjects in some situations, mechanized instruction is better than either instructor-centered instruction or student-centered instruction of the small-group discussion type.

This report will not attempt to analyze the total spectrum of subjects taught in our school system to determine those which are particularly appropriate for mechanization. It may be helpful though to set forth the general criteria which indicate subjects that are logical targets for mechanization. The following characteristics are suggested:

(1) Constancy of subject matter-as when the same material is given over and over to large numbers of people.

(2) Training rather than education-in training the goals are more specific and easier to identify.

³Source: HUMRRO, Dr. Smith and Mr. Lavisky.

(3) Considerable amount of drill, practice, and repetition- the instructor is acting like a machine anyway.

(4) Sequencing of instruction known or can be learned- when the instructional process is clearcut.

(5) Learning systems skills- when an individual is fitted into a single system and his job can be defined and prerequisite skills and knowledge identified.

b. In application, these criteria might seem to relegate mechanized instruction to a small role in our educational program where it covers the relatively clear-cut, fact-dispensing type of instruction. This is not necessarily true because mechanized instruction, if properly employed, can treat subjects of real depth and complexity and impose severe academic challenge to the students--all of this without benefit of live instructors.

9-9. Basic Approach to Mechanization

a. Recognizing the advantages of mechanized instruction, the question is, What should the Army do about it? This is one of the principal questions facing the educational system--it is comparable in importance to faculty improvement and increased student-centered learning. My instinctive belief is that the proper application of mechanized instructional techniques has the greatest single potential for improving our officer educational system, especially as it applies to students today. In terms of its potential, we are at about the model T stage in utilization. Conversely, I am sure that unless we carefully think through the problems and potential of mechanization, we can waste substantial sums of money and actually damage our educational process.

b. In sum, the question of when? where? and how? we are to apply mechanized instruction is no job for the amateur or casual observer.

9-10. Voice of Experience

a. I have discussed the potential of mechanization with a number of faculty members and educational advisers who spoke with the "voice of experience." This voice has some very sound advice

to give.

b. Summarized, the guidance is:

(1) At any given time, the new developments in hardware are a couple of generations ahead of software developments. Therefore, concentrate on good software, and especially on developing an in-house capability to produce it.

(2) Even if the software is excellent, it will not be used by an instructor unless it is directly related to his subject matter. Thus, a shotgun effort to "apply modern techniques" is useless--it must be directed precisely toward specific units in the curricula if it is to pay off.

(3) Unless you are a real professional, you tend to be a captive of the last salesman you talk to, so the fanciest instructional gadgets merely gather dust after the salesman has left.

9-11. Directions for the Future

a. For the future, CONARC should continue to develop a comprehensive phased program for introducing mechanization into the Army educational program. In this regard, I am well aware that CONARC is already at work on such projects and that, in many instances, they are ahead of the power curve. I feel, however, that the potential of mechanization is so great that it should receive a higher priority in staff consideration and faculty effort than it now occupies.

b. At least initially, the concentration should be on developing a systems approach that relates software, hardware, instructor, and student into a new learning system rather than grafting the use of machines onto traditional instructional methods.

c. In the technical area, the emphasis should be on the low-cost, high-payoff mechanization techniques such as programmed texts and audio-visual capabilities, rather than high-cost techniques such as educational TV and computer-assisted instruction. This does not mean that the Army should abandon the CAI and ETV efforts, for they have high potential. However, CAI should remain in the development phase until we can come up with a total learning system that

not only works in prototype, but is capable of being successfully applied within the constraints of manpower and expertise that the school system must live with.

d. Similarly, there is hardly a school in the system which does not have an extensive TV network. However, the average use of video-tape machines is still quite low, even when expressed as a percentage of the DA standard.⁴ Under these circumstances, it would appear that a reevaluation of the application of TV in the Army officer educational system is in order. Especially, it seems that substantial sums should not be expended on transition to color TV capability for officer education, without first fully evaluating alternative uses of these funds.

The foregoing somewhat critical comments about the use of ETV in officer education are made without recognizing that the ETV capability may have very useful applications outside the officer educational fields on the posts where it is installed. I have seen it only in terms of its use for officer education. Further, as a specific exception, the use of color TV at the Medical Field Service School is a most impressive educational effort. Color TV is "made to order" for graphic and accurate portrayal of the details of medical operations, but MFSS also uses color TV for subjects other than the medical, so the potential for its effective application in other schools certainly exists.

9-12. Organizational Matters

The difficult and continuing nature of the task of modernizing our instructional methods and the fact that this is a function common to all schools argue for the assumption of an expanded role by CONARC, and perhaps for the creation of an organizational entity in CONARC to address these problems. These organizational matters are considered in Chapter 12, Organization.

⁴In a partial survey of school Quarterly Reviews and Analysis for the 1st quarter, F i 71, the highest utilization as a percent of DA standard was 46 percent. The relatively low rate of utilization of TV and audio-visual devices generally was confirmed in an interview with the Chief, Audio-Visual Division, Electronics Directorate, Office of Assistant Chief of Staff for Communications-Electronics, DA, 22 October 1971, and by observation and discussions at the schools.

9-13. Recommendations

It is recommended that--

a. The following general policies be adopted with respect to the theory of teaching employed in our Service schools:

(1) The instructor-centered theory of teaching be employed only where essential.

(2) Student-centered teaching be employed for all other professional military education. (Recommendation 28)

b. CONARC develop and implement a comprehensive phased program for introducing mechanized instructional methods into the Army educational effort. (Recommendation 29)

9-14. Guidance

It is suggested that--

a. The basic course should achieve a balance of approximately 75 percent instructor-centered teaching and 25 percent student-centered teaching. (Guidance 17)

b. The advanced courses should be approximately a 50-50 balance between instructor-centered teaching and student-centered teaching. (Guidance 18)

c. The C&GSC should achieve a balance of approximately 80 percent student-centered teaching and 20 percent instructor-centered teaching. (Guidance 19)

d. CONARC evaluate the cost of the installation of color TV to determine if alternate uses of comparable funds in other areas of mechanization would provide greater benefit to the officer educational program. (Guidance 20)

CHAPTER 10

FACULTY

10-1. Importance

Over the long term, any school is as good as its faculty.

10-2. Faculty at Army War College

At AWC, the faculty picture is bright. The academic accomplishments of the faculty are impressive; recruitment is well thought out; utilization is excellent; and a good balance of seniority and maturity exists. This is a solid situation which augurs well for the future status of the faculty and the college.

10-3. Faculty at C&GSC and Branch Schools

a. Unsatisfactory situation. Unfortunately, the same favorable situation does not exist at C&GSC and the branch schools. This condition is demonstrable both statistically and subjectively. No useful purpose would be served by itemizing the proof here. However, it should be noted that an especially difficult problem confronts the branch schools. On the whole, the positions for colonels and lieutenant colonels are filled by competent officers; so there is substantial strength at the higher echelons of these faculties. However, at the critical captain/major echelon, where the platform work is done and where the teaching is actually carried out, these faculties are weak. This important echelon is undereducated in both civilian and military attainments; underexperienced in terms of seniority and military background; suffers severe grade imbalances wherein the fill of captains and majors is approximately 50 percent and this discrepancy is made up by lieutenants with less than 2 years of service; and is operating under conditions of extreme personnel turbulence with tenures averaging from 11 months to 19 months for captains. The deficiencies at C&GSC and branch schools are further compounded by the fact that the quality of officer assigned to the CDC agencies at most of the schools is as weak as the faculty, or weaker. Thus, both the officers developing the doctrine and the officers teaching the doctrine are, on the whole, not at the quality level desired.

b. Reasons for unfavorable conditions. At least two reasons deserve mention. Overriding priorities for the Vietnam buildup have necessarily drawn on the faculties. However, of greater long term importance is the gradual erosion which has occurred in the prestige of the faculty assignment. For a number of years after World War II, an assignment to the branch school or C&GSC faculty was a professional plum, and such an assignment ranked either second or third in many officers' priorities (with command duty always first). However, over the years, the importance and attractiveness of the faculty assignment has been downgraded, primarily by the appeal of high-level staff duty; and very few high-caliber officers today strive for a faculty assignment. This trend should be reversed and a more equitable balance of quality should be established between staffs and schools.

c. Favorable aspects of faculty at C&GSC/branch schools. First, despite their lack of paper credentials, these faculties are doing a tremendous job under difficult conditions. On the whole, they are dedicated, energetic, able and interested; they deserve total credit for the job they have done and they should receive every encouragement to continue their fine efforts. It is simply that the injection of a higher quality element would do the job better, and the faculty job is important enough to merit this. Second, CONARC and OPO have been working together during recent months to upgrade the quality of officers being assigned to the faculties, and this program is already bearing favorable results.

10-4. Quality Objectives

What is required is a balanced, comprehensive, long-term program to improve faculty quality. It will help little to have a one-time crash effort and then return to old assignment policies. Rather, DA, CONARC, and the commandants, working together, should establish tough but attainable quality goals for the faculties; and then move towards these goals in a rapid but orderly fashion. To this end, suggested faculty quality objectives for combat arms schools are at Appendix P, faculty quality objectives for combat support and combat service support schools are at Appendix Q, and faculty quality objectives for C&GSC are at Appendix R. Attainment of these quality objectives is, in my opinion, the most important single action which could be taken to improve our educational system.

10-5. Diversification of Faculty Sources

a. There are, however, many other actions which can be taken to enhance faculty performance. One of the most important of these is diversification of faculty sources. We currently depend almost exclusively upon commissioned officers for the conduct of our classroom instruction. This ignores the fact that there are many other categories of personnel who can share the faculty load.

(1) Specifically, senior noncommissioned officers and warrant officers are often superb instructors within their specialties. Qualified civilians, allied officers, and officers from the other services are assigned to almost all of our faculties; their increased use on the platform could reduce the workload on the current US Army commissioned faculty and probably provide better instruction.

(2) WAC's, who are the best-educated group in the Army and include many former teachers, could make an important contribution to our schools and should be utilized to a far greater extent than at present.

(3) For the advanced courses in particular, a vigorous expansion of the guest lecturer program is in order.

(4) Lastly, we should diversify our faculty sources by intelligent, but aggressive, employment of qualified students as instructors. The schools are now receiving students who are academically equivalent to the best faculty members in many areas (for example, management, ADP, and the communication arts). This supplementary source should be fully developed and used.

b. Diversification of the faculty will create some administrative problems. Some loss of control of precisely what is taught may occur. Further, diversification cannot be applied uniformly by all schools. Nevertheless, vigorous diversification should relieve the existing faculties of somewhere between 5 percent and 30 percent of their workload and thereby permit their existing competence to be better utilized.

c. Another teaching resource which is almost unutilized is the senior faculty member (lieutenant colonel, colonel, and general). These officers rarely conduct instruction; yet there are many subjects

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in the curricula which demand their expertise, maturity, and military background for the best student learning. Especially for the controversial, difficult, and complex subjects, the senior faculty should get on the platform. It makes no sense to have an inexperienced captain who recently graduated from the Advanced Course try to explain U.S. policy about counterinsurgency to a hostile Basic Course class when you have a number of War College Graduates on the faculty.

10-6. In-House Programs for Faculty Enhancement

a. Schools can substantially improve the teaching results obtained from their current faculties by in-house programs. As a fundamental step, the instructor training courses should be designed to create a technically competent, assured and well-based instructor when he hits the platform. These instructor training courses currently vary widely in length and quality. Under CONARC guidance, instructor training courses which capitalize on the best ideas from the excellent Air Force course and from the many fine existing ones in the Army should be established at all schools. Subsequent to graduation from the instructor training course, there should be a family of personal and professional incentives for the officer to improve as an instructor, and faculty members should be given an opportunity for advanced civilian education concurrent with assignment as a faculty member.

b. Some other possibilities for in-house action which may not be applicable at all schools, but could be very useful for some, include such programs as the development and use of the "Faculty Expert," the use of the instructor team, the conduct of faculty workshops, and the provision of an opportunity to conduct individual research or special studies. A most important and rewarding program results when the junior faculty is given an opportunity to introduce innovations in instruction and their participation in curriculum development is encouraged.

10-7. Personnel Turbulence

A special problem confronting faculties is turbulence, with the average tour length for a captain varying from approximately 11 to 19 months. In the opinion of most commandants, this turbulence factor is even more important than the quality factor; and they would appreciate stabilized tours more than any other single improvement. Certainly, stabilization should be an immediate aim for the personnel

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managers. Taking the long view, however, I hope that the concentration will be on quality of instructor input with a reasonable degree of stability therefore. In the instructional field, there is no substitute for quality, and a faculty which is stabilized at a mediocre level has no potential for rising above that ceiling.

10-8. Duration of Faculty Assignments

a. Under current policies, most senior and mid-grade faculty assignments are for a 3-year period, and a desirable degree of stability is achieved for this important group. However, we could attain a better overall balance in our faculties by adopting a three-tiered approach to faculty assignments.

(1) The first tier would be the large group of officers who experience the "normal" 3-year tour.

(2) The second, much smaller, group would be those exceptionally talented and competent faculty members who have the capability and desire to serve for a longer period. Over time, this group could provide the type of academic leadership and expertise which USMA and similar schools have gained from their associate professors.

(3) The third tier would also be very small but very important: the short-tour faculty member who is an exceptionally versatile and highly regarded officer whose services are in high demand from a number of agencies. Schools can sometimes recruit such officers for a brief tour on an ad hoc basis; properly utilized, they add a degree of flair and expertise which cannot be obtained elsewhere.

b. In operation, the first and third tiers provide an annual influx of new ideas, new blood, and operational experience. The second tier provides continuity, maturity, educational expertise and status.

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10-9. Recommendations

It is recommended that:

a. DA establish quality objectives for the staffs and faculties of all branch schools, Command and General Staff College, USA Missile and Munitions School, US Army Logistics Management Center, US Army Combat Surveillance and Electronic Warfare School, US Army John F. Kennedy Institute for Military Assistance, and US Army Security Agency School; and institute programs to meet these objectives. (Recommendation 30)

b. Pending development of DA-approved quality objectives for the staffs and faculties of the schools per a above, OPO use the objectives contained in Appendixes P-R as interim quality objectives. (Recommendation 31)

c. C&GSC and branch school faculties be diversified through greater use of qualified senior noncommissioned officers and warrant officers, WAC's, civilians, allied officers, officers from other services, and qualified students. (Recommendation 32)

d. Greater use be made of senior officers to teach controversial, sensitive, and complex subjects. (Recommendation 33)

e. A family of personal and professional incentives be established at branch schools and C&GSC to encourage the professional development of faculty members. (Recommendation 34)

f. Individual programs for continuing education of faculty members be developed and supported at all Army schools. (Opportunity for advanced civilian education concurrent with assignment as a faculty member is recommended in chapter 8, section III.) (Recommendation 35)

10-10. Guidance

It is suggested that:

a. DA and OPO concentrate on upgrading the quality of faculty input, assigning this higher priority than improving the stability of faculty assignment. (Guidance 21)

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b. Under CONARC guidance, instructor training courses which capitalize on the best ideas from the 5-week course run by the USAF at the Air University, and on the many fine courses in Army schools, be established at branch schools and C&GSC. (Guidance 22)

c. Guest lecture programs at advanced courses and C&GSC be expanded. (Guidance 23)

d. Branch schools and C&GSC institute in-house faculty improvement programs, using such techniques as--

(1) Designating "faculty experts" for specific areas and supporting the faculty expert through library procurement and attendance at learned society meetings.

(2) Using instructor teams to conduct instruction where expert knowledge in more than one area is involved.

(3) Conducting faculty workshops on such matters as instructional technology, and new developments in learning theory.

(4) Providing opportunity for individual research.

(5) Providing adequate opportunity for innovation in instruction (applies in particular to junior faculty members).

(6) Welcoming participation in curriculum development (applies in particular to junior faculty members). (Guidance 24)

e. OPO, CONARC, and the schools recognize the advantages of the three-tiered approach to the duration of faculty assignments, and adopt this approach where feasible. (Guidance 25)

f. As a corollary (to e above), DA examine the desirability and feasibility of establishing a program of academic tenure for a highly select group of O6 grade personnel who have demonstrated exceptional competence in the educational field. (Guidance 26)

CHAPTER 11

EVALUATION

Section I. GENERAL DISCUSSION

11-1. Variables Affecting Evaluation.

There is almost total unanimity among staffs, faculties and students that our educational effort should incorporate a strong program for evaluation of students¹, but there is almost no consensus on what the program should be. This lack of consensus is not surprising; for it is evident that there is no single evaluation system that will best fit the entire Army school system, from basic course through senior service school. The following variables shape each system:

- a. Age and professional maturity of students.
- b. Age and professional maturity of faculty.
- c. Faculty/student relationship, e. g., is the learning environment student-centered as at the Army War College or instructor-centered as in the basic course.
- d. Faculty/student ratio.
- e. Size of class, e. g., 180 U. S. Army students at AWC compared to 972 U. S. Army students at C&GSC.

¹As used in this portion of the review, "evaluation" includes the whole family of techniques and procedures which can be employed in an academic environment to appraise a student. Thus, "evaluation" includes, and is larger than, "academic examinations," although there is a tendency to consider these two terms as synonymous. In this regard it is interesting to note that the one evaluation program in our system which is generally regarded as the best for its purposes (at the Army War College) includes no formal examinations whatsoever.

f. Length of course.

g. Amount of machine or computer backup to assist in processing reports.

h. Purpose of the evaluation system - the most important, e. g. , is it to determine the "most excellent" from a group of excellent officers as at AWC; or is it to determine not only the "most excellent" officer, but also the distinctly inadequate officer, as in the basic and advanced course .

11-2. Academic Examinations.

a. Since our schools are primarily educational institutions, an academic evaluation is clearly in order. For this purpose, all schools in the system except the Army War College conduct formal examinations. These are normally objective-type examinations, although some are expertly constructed to cover extremely complex problems. (There is a recent, and most promising, move towards performance-type, hands-on examinations at some schools.) These examinations tend, understandably, to concentrate on questions for which there is a demonstrably right or wrong answer, and thereby emphasize factual recall and test factual knowledge, rather than the student's ability to handle concepts, think independently, or innovate.

b. The forced-choice/objective test does permit a precise academic ranking which in turn permits designation of the distinguished graduate, the four honor graduates, and the top 20 percent of the class, in accordance with CONARC regulations; but there is a large question as to whether such rankings are significant as measures of overall potential, or stimulate the type of learning required in the face of rapid technological change.

11-3. Significance of Academic Examinations.

According to all experts with whom I have discussed this question, and examination of the available research, there is no statistically significant correlation between an officer's performance on academic tests and his subsequent performance of duty. This same lack of correlation, or inability to identify a significant correlation, exists at all levels from West Point to senior service college. This does not necessarily mean that our examinations are

invalid and it certainly does not mean that we should abandon examinations; it merely raises a basic question as to what we are trying to measure with examinations and what we are trying to do with the results. It certainly raises a further question as to the significance of the relative rank of the graduates under existing examination programs and regulations. In this regard, a special problem inherent in any examination system is that too much may be demanded of it. It is natural, but I think it is a grave error, for personnel managers to place undue weight on academic evaluations at professional military schools. This stretches the academic evaluation system far beyond its capabilities.

11-4. Alternatives.

An alternative to the current emphasis on forced-choice, objective-type examination as the principal evaluation instrument is a move to the "whole-man" type of evaluation. Such an evaluation, when fully developed, employs a battery of separate evaluation instruments, each highly professional in itself and each integrated with others to develop a comprehensive, valid, and reliable appraisal of an individual.² Although the problems inherent in the design and execution of a whole-man evaluation program are imposing, I believe these difficulties can be surmounted and substantially greater use can be made of "whole-man" evaluation at Army service schools. As a minimum, we should move to decrease our current heavy dependence on the forced-choice objective test as the principal discriminator. A number of alternative techniques exist; each has some utility, and our system should be flexible enough to capitalize wisely on them.

²Perhaps the outstanding example of the whole-man evaluation system is found in the Aptitude for the Service system developed at the US Military Academy. The best description of this system, which is based on peer and tactical officer ratings, is contained in a 1967 study by the Office of Military Psychology and Leadership, USMA. See MAJ Daniel J. Tobin and MAJ Robert H. Marcum, Leadership Evaluation, (USMA, Office of Military Psychology and Leadership, West Point, December, 1967).

Section II. WHOLE-MAN EVALUATION

11-5. Desired System.

As an objective, the evaluation system should include the following components:

- a. A battery of diagnostic tests.
- b. A battery of validation tests.
- c. A battery of academic tests/evaluation instruments which measure academic achievement.
- d. A battery of independent appraisals, largely subjective in nature, which reflect the performance of students in those important areas not covered by academic tests.

As previously noted, the relative emphasis on, and relation between each of these components will vary radically at different schools.

11-6. Diagnostic Tests.

We should initiate evaluation at the basic, advanced and C&GSC levels with a battery of diagnostic tests designed primarily to isolate the academic weaknesses of the individual. These tests should be directed at the general areas of ability to read and write, and also at areas of specific academic competence demanded for the course (e.g., mathematics for engineers). Diagnostic tests are the best, albeit only partial, answer to the problem of glaring inadequacies in academic background and competence which occur in our diverse student groups. Diagnostic tests are of greatest importance at the basic courses, but the brevity of the course prevents full capitalization on them. They are probably of greatest overall utility at the advanced courses, and of decreased but still considerable significance in measuring the more experienced student at C&GSC.

11-7. Validation Tests.

Validation recognizes past student academic and professional accomplishments, avoids repetitive and unnecessary instruction, individualizes and personalizes instruction, and rewards the high

achiever for past accomplishments without penalizing the low achiever. There are, however, deep seated problems and some very complex academic obstacles to establishing good validation programs.

a. One problem is essentially psychological in nature: our school system has operated on the basis of treating all students identically for so long that it is almost a psychological wrench to break the "lockstep".

b. Another problem is that the student must perceive a distinct advantage in validating a particular portion of the course. Two factors influence this perception.

(1) First, some students who are fully capable of validating portions of a course do not choose to do so now because they think they can make a higher grade by taking the regular curriculum, and thereby stand higher in the overall academic rankings.

(2) The second aspect is that the validated student should be given an attractive series of academic options for use during the course time he has validated. These options could take many forms, e.g., conduct of a special study or individual research effort, acting as assistant instructor in the validated area, or permission to play golf or spend some time with his family.

11-8. Academic Evaluation.

In addition to improved diagnostic and validation programs, an academic evaluation program of the highest caliber should be developed. This program should incorporate a variety of tests, to include "pop" quizzes to determine accomplishment of study assignments and fact retention; a few forced-choice objective tests of the formal, scheduled variety; a few essay-type examinations; and possibly an end-of-course comprehensive examination, oral or written. Other evaluation instruments, such as term papers and research reports, may also be included in the academic evaluation program. Balance between these types of tests and the weights given to each should be determined by the commandant concerned.

11-9. Subjective Evaluations.

a. This component is the most difficult to structure and use, yet it is the essential ingredient needed to balance the primarily academic instruments. The depth and scope of this subjective appraisal must be carefully tailored at each school. A system which works well at a small, closely knit school cannot be transferred in toto to a large, disparate school. The evaluation system currently employed at the Army War College (see Annex A, Good Programs) could well serve as a model, but it is not attainable by all schools.

b. An especially controversial element of any subjective evaluation system is peer ratings. Strong, almost emotional, views are normally advanced in favor or in opposition to them and a variety of statistical and subjective support can be advanced either pro or con. My personal view is that peer ratings could be a useful and important element of the officer evaluation system in educational programs provided the ratings are carefully developed and use valid, professional techniques. Some considerations are outlined in Appendix S.

c. The design and employment of a subjective evaluation system is no mean task. This is an area where the operators (the commandants, staffs, and faculties) should work closely with the professionals (educational advisors, behavioral scientists and statisticians). For this purpose, the Army already has major resources in its fine corps of educational advisors and in BESRL and HUMRRO. The operators and the professionals, under CONARC guidance, should be charged with the early development of these subjective evaluation systems.

Section III. EVALUATION OF COURSES OF INSTRUCTION

11-10. Methods of Evaluating the Course of Instruction.

A totally different aspect of evaluation from that discussed above concerns the evaluation of the course of instruction³ - e.g.

³The term "course of instruction" includes curriculum, organization, instructional methods and support, faculty performance, extracurricular activities; in sum, the entire educational process.

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Not, "how well are the students doing?"; but, "how well is the school doing?" Most schools now conduct extensive programs to determine how well they are doing; and many important improvements stem from them. One area which could be more profitably pursued is the acquisition and use of junior faculty and student views. These are the two groups who actually work with and know best the curricula. Although they may not have the advantage of the perspective which more senior officers possess, they certainly have the advantage of knowing precisely what goes on in the classroom. Furthermore, they have a highly personal and professional interest in getting the maximum out of their military education, because they are the people who must apply what they have learned. Thus, their evaluations have a unique validity and if properly utilized they can make a tremendous contribution.

11-11. Obtaining Junior Faculty and Student Views.

Student views can be obtained by a variety of techniques and procedures. An immediate, short-term reaction to each day's instruction can be obtained by an IBM punchcard type of evaluation, as employed at ICAF and AFSC (see Annex A, Good Programs). This type of computer-assisted evaluation can easily be extended to whole units or blocks of instruction, if desired. Of probably greater benefit are the written subjective appraisals, obtained from selected students, concerning specific units or blocks; and end-of-course subjective evaluations, which can be especially helpful. Student study groups should be formally established only when a major review of the course is desired; but the use of small student study groups on a less ambitious, ad hoc basis can provide interesting and useful input for the solution of lesser academic issues. The views of the junior faculty are especially important in isolating the "good" units of instruction and the "poor" units of instruction, in suggesting pragmatic educational innovations (see Annex A, Good Programs), and in reflecting the day-to-day status of the all important student/faculty interface.

Section IV. RECOMMENDATIONS AND GUIDANCE

11-12. Recommendations.

It is recommended that:

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- a. The student evaluation programs at our schools⁴ be composed of at least four components: diagnostic tests, validation tests, academic evaluation, and subjective appraisals. (Recommendation 36)
- b. The relative role and importance now given to academic tests be de-emphasized. (Recommendation 37)
- c. The relative role and importance of diagnostic tests, validation tests, and subjective appraisals be increased. (Recommendation 38)
- d. Operators (commandants, staffs, and faculties) work with professionals (educational advisors, HUMRRO, BESRL) to develop a family of subjective evaluation programs for use at appropriate levels. (Recommendation 39)
- e. The subjective evaluation programs include the use of peer ratings, at least on a trial basis. (Recommendation 40)

11-13. Guidance.

Schools establish programs to develop and incorporate the views of the junior faculties and students in order to improve the evaluation of curricula. (Guidance 27)

⁴These recommendations pertain only to the branch schools and C&GSC. No change is recommended in the current evaluation program at the Army War College.

CHAPTER 12

ORGANIZATION

Section I. COMMAND AND CONTROL

12-1. The subject of command and control is important because the relationships that exist between Department of the Army, Continental Army Command, Combat Developments Command, and the schools themselves have a fundamental impact on how effectively the schools do their job. I conducted a pragmatic review of the existing system--this appraisal indicated almost total support for the current command and organizational relationships and, conversely, almost total opposition to any major change in them. General satisfaction with the existing situation pertained at all levels and with all ranks of personnel that I interviewed. Under these circumstances, I conclude that there should be no basic change in these organizational relationships. Admittedly, the existing system is not perfect, but in the opinion of the experienced officers operating it and living under it, it is the best that we have had and is better than any of the alternatives proposed. Especially when one considers the necessity for establishing tough priorities in attacking the important problems that confront our educational system, there is no logic in attempting basic changes in the command and control structure at this time.

Section II. ROLE OF CONARC

12-2. Within the existing organization, the role of CONARC is dominant and, as indicated above, should remain so. Looking toward the future, there are new and promising areas in which CONARC can play an even more important role in helping the school system meet its novel challenges.

a. An inescapable characteristic of the educational future is the demand for change and the rapid pace of it. A literally overwhelming melange of literature, ideas, hardware, software, salesmen, hucksters, theorists, and professional associations now operate for change in the educational field. It is patently beyond the competence of even the best of academic staffs at any single school to stay abreast of this tidal wave of information, ideas, and projects. So CONARC should act

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as the clearinghouse for these educational inputs (specific suggested tasks are indicated in paragraph c.)

b. Some of the most important educational problems we face are endemic--all schools under CONARC are seized with the same problems to some degree. As examples, I would cite evaluation, the theory of teaching, and the application of machines. In view of the continuing nature and prevalence of these problems, there would be merit in formally concentrating the addressal of them (or decision as to how they will be addressed) at CONARC.

In performing this role, CONARC would conduct, or direct the conduct of, the necessary studies and would provide decisions and guidance on those major educational issues that are beyond the purview and competence of individual schools. This role does not require total centralization at CONARC. It simply recognizes that there are some educational issues that are bigger than any single school, and the corporate competence of the Army's educational system should be directed at their solution.

c. To assist in this effort, we should concentrate at least a part of our expertise in the educational area and should provide ready input of that expertise to the decisionmakers at CONARC. These problems are beyond the competence of even the finest of nontechnical staffs. This suggests the establishment of a CONARC Center for Research in Education and Instructional Methods, with the following broad functions:

(1) Survey of literature in the field of learning and teaching, and digest of material for dissemination to all Army schools. A listing of typical educational research agencies with whom CONARC should remain in contact are contained in Appendixes T, U, and V.

(2) Application of research findings in the field of learning and teaching to the development of improved instructional methods.

(3) Evaluation of mechanized instructional systems and development of software and guidelines for their application and use.

(4) Evaluation of latest developments in instructional technology.

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(5) Specification and evaluation of alternative instructional strategies.

(6) Studies and tests, with a view to the application of knowledge gained from the foregoing actions throughout the Army school system.

(7) Acting as professional consultant to all Army schools in the field of learning and teaching and stimulating interest in improved learning and instructional methods.

Such a center would not require elaborate staffing. At the outset it should be limited to a handful of talented people. If possible, the first director should be a noted civilian educator or scholar who is broadly familiar with research in the field of learning and teaching. Quality of personnel assigned is the paramount consideration. In this regard, HUMRRO and DESRL could make a contribution.

In advancing these recommendations, I am aware that CONARC is already active in some areas, but it seems certain that increased activity will be necessary in the future. I also recognize that the execution of these functions requires a lot of competent staff officers who will not be available in the numbers required. In that case, I can only urge that priority be given to the new role and that lesser effort be directed to the more routine and traditional staff activities.

Section III. JURISDICTIONAL ISSUES

12-3. It is imperative that CONARC continue to carry out its dominant role in the command and control of our educational system. However, this review has advanced at least two major recommendations which, if approved, will actively involve other major headquarters in the educational program. These recommendations concern the expansion of the mission of the CS and CSS advanced courses into higher levels of logistics instruction (including AMC), and the expansion of the mission of C&GSC into the conduct of concentrated instruction in staff functions.

As a minimum, these recommendations will require a new involvement of AMC and the major DA staff agencies in these courses of instruction. This may be considered as an encroachment on, or

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dilution of, CONARC's role--this should not, and need not, be the case. CONARC should retain its command and control of the schools and the courses of instruction. For those portions of the courses which are of direct interest to AMC and the DA staff agencies, CONARC should obtain the recommended curriculum input from these agencies and coordinate with them in establishing the courses. This jurisdictional relationship should assure that the instruction has the highest degree of pertinence, timeliness, and realism. As for the AWC, DCSPER should continue to control that college.

Section IV. STAFF MONITORSHIP OF THE SCHOOLS

12-4. To do the most effective job in today's competition for resources and talent, each school needs a strong staff sponsor and a clear voice in the decisionmaking councils. On the whole, the existing level of staff monitorship and support is fine. However, two small schools do not yet benefit from the interest and support that a staff sponsor can provide.

These schools are the Institute for Military Assistance at Fort Bragg and the Combat Surveillance and Electronic Warfare School at Fort Huachuca. Although these schools are small, the functions they teach are certainly two of the most important, if not the most important, to the success of the Army in the seventies. In this light, it would be wise to assure that each of these schools receives a special measure of attention and support. The specific actions to provide the needed support for these schools are many and diverse, but the first requirement is an awareness of the current situation and an agreement at higher echelons to give them a special measure of sponsorship.

Section V. MANNING OF CONARC/DA AGENCIES

12-5. A review of the records of the officers currently assigned to DCSPER-DIT and to CONARC-DCSIT indicate that of the total 133 officers assigned to them only 32 percent have had previous experience as faculty members or staff officers at the schools whose activities they are now controlling and monitoring. (All officers with prior Service school experience are at CONARC; none are DA.) With the large backlog of qualified ex-faculty members who are available, it should be possible to assign a substantial number to these high level

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staff positions. All positions should not be filled by former faculty members, because this would lead to narrowness and professional tunnel vision; however, a reasonable objective of not less than 50 percent seems both desirable and feasible.

Section VI. ORGANIZATION FOR CIVILIAN EDUCATION

12-6. This review has given me an opportunity to observe, at least shallowly, the organizations our sister Services have developed for their educational systems. As would be expected, these organizational structures vary widely, according to the traditions, philosophies, and requirements of the individual Service, and I feel that there are few areas where the Army can profit by adoption of other practices.

There is one program, however, which is highly impressive and which may be adaptable in part to Army needs. This is the Air Force program for the management of their civilian educational effort, developed by the Directorate for Civilian Institutions at AFIT, Wright-Patterson Air Force Base. Recognizing that there may be substantial--perhaps insurmountable--impediments to adopting this program for the Army, it does deserve intensive examination to determine what aspects, if any, can be adopted to our advantage.

Section VII. RECOMMENDATIONS AND GUIDANCE

12-7. Recommendations

It is recommended that--

a. No change be made in the basic organizational relationships that now exist between DA, CONARC, and CDC for the conduct of our officer educational program. (Recommendation 41)

b. CONARC, in carrying out its dominant role, should:

(1) Address major educational issues that are beyond the scope or purview of individual schools.

(2) Establish a CONARC Center for Research in Education and Instructional Methods. (Recommendation 42)

c. Where agencies other than CONARC have a direct interest in a course of instruction (e.g. AMC in the recommended CS and CSS advanced courses, DA staff agencies and AMC in the recommended staff functionalization at C&GSC) CONARC retain command and control and coordinate actively with the other agencies in development of the curricula. (Recommendation 43)

d. OPO initiate a program to assign officers with previous faculty experience to HQ, DA, and CONARC staff positions related to officer education, with an objective of assigning these officers to approximately 50 percent of these positions. (Recommendation 44)

e. Senior officers and staffs direct special attention to the IMA at Fort Bragg, NC and the SEWS at Fort Huachuca, in recognition of the importance of the missions of these two schools and the fact that they lack staff sponsors. (Recommendation 45)

12-8. Guidance

DA should evaluate the system developed by the Air Force for the management of their civilian educational program to determine what aspects of the program, if any, the Army can adopt to its advantage. (Guidance 28)

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CHAPTER 13

AREAS OF SPECIAL INTEREST

Section I. LEADERSHIP

13-1. CONARC Leadership Board

While this review was in progress, a CONARC Leadership Board was established to examine the subject of leadership in the Army. This Board, under chairmanship of Brigadier General H. A. Emerson, conducted its important study on a priority basis and submitted its report, entitled Leadership for Professionals, on 30 July 1971.

13-2. Views on the Board Report

In my opinion, the CONARC Leadership Board turned in a hard hitting, highly professional appraisal which deserves the support of all elements of the Army. Based upon my own review (which consistently concentrated on the leadership area because it was the area of weakness most often raised by students and faculty), I find no facets of this problem which were not treated adequately by the CONARC Leadership Board. It is especially significant that the CONARC Board placed heavy responsibilities upon the Army school system for improving our instruction and capabilities in leadership. This is where a large measure of the responsibility ought to rest, for the schools are the institutions where this subject can best be taught. In summary, I fully support these pertinent recommendations of the CONARC Leadership Board, and recommend their early execution. (Recommendation 46) (The pertinent findings and recommendations of the CONARC Leadership Board are at Appendix W of Volume II.)

Section II. STUDY OF HISTORY

13-3. Committee Report on Army Need for Study of Military History

During the period February-April, 1971, a Department of the Army Ad Hoc Committee was constituted to prepare a report on the Army Need for the Study of Military History. The committee report,

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under the chairmanship of Colonel Thomas E. Griess, Chairman, Department of History, USMA, was submitted in May, 1971. I support the report and its recommendations; it is a landmark effort and one which deserves full backing in carrying out its recommendations. (Pertinent recommendations of the report are repeated in Appendix X of Volume II.) Aside from my general endorsement, I have only two comments directly pertinent to the recommendations of this Ad Hoc Committee:

a. After the basic tactical and/or strategic principles have been developed in an artificial situation (normally by a single problem), I believe the objective should be that not less than 40 percent of other problems in the curriculum dealing with these same principles should be historically based.

b. Our goal should be to initially establish a solid nucleus of historically expert officers on the faculties of the advanced courses and C&GSC; then to build on this nucleus and expand to the proper utilization of history throughout the course. I believe it essential to establish this nucleus of historical expertise before we try to establish a full-blown historical program. I urge that we move as expeditiously as possible to establish this nucleus, but that we not wait until it is complete before we begin to build on it.

13-4. Use of Military History

a. Curriculum Input. On the general subject of the use of military history, some additional points are pertinent. First, I believe the inadequate exploitation of history is the biggest single weakness in our curricula. We have fought three major wars in the last 30 years (excluding the Dominican Republic) and these wars are the most accurately and comprehensively documented actions in military history; yet we have failed to utilize this resource in our schools. The net result is that many instructors spend countless hours conjuring up artificial situations and writing artificial problems when the lessons they want to teach have been demonstrated realistically by vivid, useful historical examples. If for no other reason than conservation of faculty time, it would be wise to capitalize on the historical resources now available.

b. Study of Unsuccessful Operations. A special value of properly utilized history is the identification of mistakes and errors made in strategic and tactical operations. One of the most consistent

student comments about curriculum content is that the synthetic operational problems are generally euphoric in nature--the U. S. Army always wins with relative ease. Students today are at least realistic, if not cynical, and they know the real world is not the way the artificial problems portray it. A strong element of every curriculum should be historical studies which frankly analyze unsuccessful American military efforts. This should not be a "head-hunting expedition" or invidious to any individual, but it should involve an objective discussion of what we did, what went wrong, and why. This single action would do more to establish credibility for our instruction than any other known to me.

13-5. Recommendation

It is recommended that the pertinent recommendations of the Department of the Army Ad Hoc Committee on the Army Need for the Study of Military History be implemented. (Recommendation 47)

13-6. Guidance

It is suggested that:

a. Specific objectives be established for the extent of historical example usage, e. g., once basic principles have been developed, not less than 40 percent of other problems in the curriculum dealing with the same basic principles be historically oriented. (Guidance 29)

b. The Army move as expeditiously as possible to establish a solid nucleus of expert officer historians on the faculties of the branch schools and C&GSC, and commence at once to build upon this nucleus toward proper utilization of history in the advanced and C&GSC courses. (Guidance 30)

c. A portion of the historical studies in our curricula be analyses of unsuccessful U. S. operations. (Guidance 31)

Section III. INTERBRANCH AND INTERSERVICE EDUCATION

13-7. Mutual Respect Between Army and Other Services

One of the most favorable legacies of the U. S. military experience in Vietnam is the genuine respect, understanding, and confidence which has been established between the branches of the Army, and between the Army and the other Services. This attitude of mutual respect is not derived from the classroom, rather it results from thousands of Army officers observing and working with

each other and with officers of their sister Services during the conduct of this most complex and difficult war. Although no statistical proof exists or could be produced, I believe the strength and degree of this mutual confidence is substantially higher than it was at the conclusion of other wars. For example, the combat arms officer today has a much higher opinion of his logistical counterpart than he held after WW II and Korea (and vice versa); and the performance of the Air Force close support role in Vietnam has gained for that Service a degree of professional respect which it did not previously have. Now, with the winding down of that war, the Army and the other Services will tend to concentrate on their own problems; and we stand to lose much of this vital intangible.

13-8. Requirement to Maintain Respect and Confidence

The educational system offers the best hope of maintaining this hard won attitude because it can offer a meeting ground for officers of all branches and military Services, and provide an environment where branch and interservice attitudes and achievements can be surfaced, analyzed and explained. Hence, the educational system should assume, as a special challenge, the requirement to maintain and enhance this existing high level of respect and confidence. While recognizing that the classroom can never substitute for combat, there are some specific educational programs which can be especially effective for this purpose:

- a. Use guest lecturers who are effective exponents of their own branches and services to explain the roles, philosophies, and attitudes which characterize their branch or service. (These lecturers need not be senior officers.)
- b. Conduct units of instruction specifically designed to create confidence. For this, historical examples are best, e.g., Air Force and Navy close support of specified ground units in Vietnam, the creation of the logistical base while fighting, etc.
- c. Conduct units of instruction which are designed to familiarize officers with the problems of other branches and Services, e.g., require combat arms officers to solve abbreviated versions of CS/CSS problems, and vice versa.
- d. Exploit resident faculty members and students from other branches and Services, and give them an adequate forum.
- e. Continue current policy of assigning only high quality U. S. Army officers as students and faculty at interbranch and interservice schools.

f. Take advantage of all opportunities to expand Army representation at interservice schools and branch representation at interbranch schools.

13-9. Guidance

The Army school system assume, as a special challenge, the requirement to maintain and enhance the high level of confidence and respect which currently exists between the branches and military Services as a result of their common experience in Vietnam; and that appropriate actions along the lines of those suggested in para 13- 8 be taken to accomplish this. (Guidance 32)

Section IV. REGULATIONS

13-10. AR 351-1

During this review, I found general satisfaction with the family of regulations governing the educational system, and specifically with AR 351-1 (formerly AR 350-5) which has served as an excellent regulatory base since its development by the Haines Board. No basic revision of that regulation is required, although some changes will be in order to reflect the recommended expansion of the advanced course mission, the reorientation of C&GSC, and the continuing education mission.

13-11. Addition to AR 351-1

One area of our educational effort for the seventies which deserves regulatory recognition is the increase which we should achieve in the overall scope of the educational program. The Haines Board initiated this expansion in scope by its introduction of electives, by its initial recognition of the advanced civilian educational requirement, by its introduction of diagnostic and validation tests, etc. The desirable momentum which resulted from these farsighted programs should be continued and even increased in the future; otherwise we fail to meet legitimate educational goals, and we fall behind the pace of educational progress. To reflect this requirement for continued momentum and increased scope, we should add a paragraph in AR 351-1 to include the following:

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"2-3 Scope.¹ In accomplishing this mission, Army branch schools and colleges will develop and execute educational programs which include the following elements:

a. A core curriculum of professional military subjects designed to accomplish the pertinent educational mission. This component will receive priority in resources and support;

b. A variety of additional educational programs which complement the core curriculum and broaden the educational experience of the student. Such educational programs should include--

(1) A family of military electives.

(2) A family of nonmilitary electives.

(3) A concurrent civilian educational program which provides opportunities for acquisition of baccalaureate and post-graduate level degrees, where feasible.

c. These elements will be integrated into courses of instruction which focus on professional military education as the primary task, while providing a varied educational program which presents intellectual challenge and is adapted to the broad requirements and interests of the students and the Army."

Section V. STAFFING GUIDE

13-12. Instructional Personnel Allowances

Criteria for determining total instructional personnel requirements for all Army schools except C&GSC and AWC are contained in Appendix B, DA Pam 616-558, Staffing Guide for U.S. Army Service Schools, 20 December 1967. In the course of this review three conditions were surfaced that will impact upon, and may require revision of, the factors which form the basis for

¹This paragraph will best be in context if it is inserted between the current para 2-2 Mission and para 2-3 Functions.

computation of instructional personnel requirements as prescribed by the Staffing Guide. These conditions are:

a. The considerable increase in instructor workload associated with preparation of doctrine and literature, resulting from the relatively more rapid obsolescence of current doctrine and the consequent need to speed up the production cycle.

b. The need for substantial increase in student-centered instruction.

c. The need to provide additional time for faculty continuing education and professional development.

13-13. Doctrine and Literature

The current Staffing Guide includes preparation of doctrine and literature among the "research and analysis" category of duties, for which a supplemental allowance factor over and above the allowance for preparation and presentation of instruction is prescribed. It is the adequacy of this supplemental allowance factor, which ranges from .3 to .8 depending upon the department and school, that is called into question by the condition of accelerating obsolescence of doctrine and the concomitant need to speed up the doctrinal production cycle. Consequently, DA should review these factors to determine whether a readjustment is required. This review should take into consideration the actual faculty workload data accumulated by CONARC and the schools in conjunction with annual manpower surveys.

13-14. Student-Centered Learning

The move to greater student-centered learning as discussed in Chapter 9 will impact upon computation of manpower requirements in at least the following ways:

a. Hours of Instruction. The Staffing Guide recognizes hours of instruction in both POI course and authorized non-POI instruction. Student-centered learning requires increased emphasis on diagnostic tests to determine student weaknesses and remedial instruction to correct those weaknesses. It may also involve more frequent instructor-student conferences, similar to a tutorial in nature, that are properly considered in the realm of instruction rather than counseling. Such student-centered instructional techniques as these,

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when introduced into the school system, will tend to increase the number of non-POI hours for which instructional manpower is required. However, if the number of POI contact hours is reduced as anticipated in this review, the number of formal POI hours of instruction can be expected to decline. At this time, it is impossible to state quantitatively whether the expected increase in non-POI hours of instruction will be offset by the expected decline in POI hours of instruction.

b. Size of Teaching Unit. This factor evidently is important in determining overall faculty requirements. As the size of teaching unit decreases, faculty requirements will increase. However, as noted above, a decline in POI hours and a decline in contact hours may compensate wholly or in part for this factor.

13-15. Faculty Continuing Education and Professional Development

No allowance is currently made by the Staffing Guide for faculty continuing education and professional development. Such activities as background reading, research, professional writing, and taking courses leading to a baccalaureate or advanced degree are carried on by the faculty members, but essentially all such activities must be conducted during off-duty hours at the expense of the time an officer can spend with his family.

a. Comparison of Civilian and Service School Faculty Teaching Load. In this connection, it is interesting to compare the teaching loads of instructors in civilian colleges and universities with teaching loads of the faculty at our service schools. The teaching load is relevant because it influences the amount of the faculty member's time available for professional development. Recent data for all faculty in all civilian higher educational institutions in 1969 indicates that 77.5 percent had teaching loads of 12 hours per week or less (in universities 88 percent has such a teaching load). Comparable standards for the service school faculty may be derived from the platform capability factors contained in the Staffing Guide. These platform capability factors range from 700 platform man-hours per year for an instructor in the Command and Staff Department of a branch school, to 1,550 man-hours per year in the Basic Communications Department of the Southeastern Signal School. This computes to a standard teaching load for service school faculty of roughly 14-20 hours per week. The lower range of expected

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service school faculty workload is in the vicinity of the upper limit of the teaching load of close to 90 percent of comparable "instructor" personnel in civilian colleges and universities, and is above the 12 hours per week for undergraduate level courses and 9 hours per week for graduate level courses recommended by the American Association of University Professors as the maximum teaching load for maintenance of a high level of faculty effectiveness.

b. Need for Improvement of Qualification in School Faculty.

In chapter 10 a program for upgrading faculty qualifications was recommended. This proposes a program for continuing education of faculty members, including opportunity to obtain a baccalaureate or advanced degree, and a program for faculty professional development. If such programs are to work in practice, they must be supported manpower-wise. The time for such programs cannot be expected to come wholly from the officers' off-duty time. Consequently, a supplemental allowance for faculty continuing education and professional development is required and should be authorized.

13-16. Recommendations

It is recommended that:

a. DA review adequacy of the supplemental allowance factor for instructional personnel contained in Appendix B, DA Pam 616-558, Staffing Guide for U. S. Army Service Schools, for the change in instructor workload associated with the rapid obsolescence of doctrine and need to speed-up the doctrine production cycle. (Recommendation 48)

b. DA determine and authorize an allowance for faculty continuing education and professional development through appropriate revision of the manpower staffing factors contained in Appendix B, DA Pam 616-558, Staffing Guide for U. S. Army Service Schools. (Recommendation 49)

Section VI. ACADEMIC FACILITIES

13-17. Review of Status of Academic Facilities

Adequate facilities are an essential ingredient of a modern, effective educational program. My review of the status of facilities at our schools indicates that, with three specific exceptions, the

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facilities are generally adequate to support such a program. These three exceptions are the facilities for the MP School at Fort Gordon, Georgia; for the Military Intelligence and the Combat Surveillance/Electronic Warfare School (considered as one facility) at Fort Huachuca, Arizona; and for the Army Security Agency Training Center and School at Fort Devens, Massachusetts. These facilities are so poor that the caliber of the education the students receive does suffer therefrom. In my opinion, priority should be given to a building program to improve them. This should not be a passive priority; it should involve a positive and unremitting effort until approval and funds are obtained for the necessary construction.

13-18. Recommendation

It is recommended that priority support be given to a construction program to improve the academic facilities of the Military Police School at Fort Gordon, Georgia; the Military Intelligence School and Combat Surveillance/Electronic Warfare School at Fort Huachuca, Arizona; and the Army Security Agency Training Center and School at Fort Devens, Massachusetts. (Recommendation 50)

Section VII. EDUCATIONAL INNOVATIONS
IN SOCIETY AT LARGE OF VALUE TO THE ARMY

13-19. Toward a Learning Society

a. Educators are engaged in a vigorous reassessment of postsecondary education in America. Though this reassessment has been ongoing for some time, it has accelerated in recent years and many of the new ideas have begun to influence civilian practice. Some of the principal themes of this reassessment are:

(1) Rapid technological progress has created a compelling social need for continuing education, and in response we are rapidly on our way to becoming what Robert Hutchins has called a "learning society."

(2) The concept of education should be broadened to recognizing that a good deal of learning takes place outside of school, i. e., through work, travel, radio and TV, etc.

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(3) Modern communications, especially TV, should be exploited to bring education into the home.

(4) The paths to an education should be diversified and broadened to accommodate the needs of the mass of adult Americans and not solely the needs of the young.²

b. In sum, the concept of education as the monopoly of the campus, with its associated degree and residence requirements, is breaking down and the concept of multiple paths to an education is rapidly becoming the norm.

c. These themes in a above have led to active consideration by educators of a variety of educational forms that would better meet society's needs. They include:

(1) Proposals for an "open university," a degree-granting institution with no admission requirements, whose principal medium would be TV.

(2) Various forms of "credit by examination," which would assess and award credit for learning no matter how acquired, either through existing institutions or state or national examining agencies.

(3) College or university "external degree" programs which reduce or eliminate residence requirements.

d. These developments hold great promise for the Army. The Army can help speed-up the rate of progress by actively supporting educational innovations in society that would be beneficial for our people. Some of the most significant developments deserving our support are discussed in the following paragraphs.

² These themes are forcefully stated in Carnegie Commission for Higher Education, Less Time, More Options (New York: McGraw Hill, 1971); and Report on Higher Education by a Task Force appointed by the Secretary of Health, Education and Welfare (Newman Report) (Washington: GPO, 1971).

13-20. The Open University

a. The purpose of the Open University is continuing education of adults. While "Open University" is a catch-all term that can take a variety of forms, its principal ingredients typically include encouragement of learning in a variety of settings, such as work-study programs, field investigations, and internships; award of credit by examination; use of a wide range of instructional media such as radio, TV, programmed instruction, and audio-visual devices; and award of a degree at the baccalaureate or higher level.

b. A U.S. version of the Open University is under development, using grants from the Ford Foundation and the U. S. Office of Education; but the most highly developed form of the Open University is that instituted by the United Kingdom in 1969. It may be viewed as a model of what an Open University may become as a result of full-fledged national commitment to continuing education. The University was chartered by the United Kingdom government as an autonomous body authorized to award its own degrees. It seeks to use radio, television, specially written correspondence material, audio-visual aids, residential summer schools, and local study centers in a fully integrated way to bring university teaching to its students.

c. The Open University concept holds great promise for increasing the educational opportunities available to military personnel. Its further expansion and development beyond the single experiment now ongoing in this country should be actively encouraged by the Army and DOD.

13-21. Examining Universities

The Newman Report has proposed establishment of Regional Examining Universities, which would administer equivalency examinations through which individuals could receive credit for skills and knowledge acquired in a variety of ways, and would also grant college degrees.³ The Carnegie Commission for Higher Education has urged that the Educational Testing Service (ETS) and

³Report on Higher Education, p. 69.

the American College Testing Program (ACT) give more of their attention to achievement testing as the basis for certificates that will take the place of degrees. The advantages of such arrangements for military personnel, whose learning experiences encompass a variety of jobs and parts of the globe, is obvious. Here is another educational innovation whose development should be actively encourage by DA and OSD.

13-22. External Degrees

Independent study, sometimes in combination with tutorials, followed by comprehensive examinations, has long been used by the University of London in its external degree program. Several American insitutions, such as The University of Oklahoma, Syracuse University, Goddard College, and The University of South Florida, have similar programs.⁴ These promising trends toward reduction of residence requirements, which are a major limitation on acquisition of degrees by military personnel, should be taken advantage of and encouraged.

13-23. Growth of Community Colleges

As more and more students go to college, much of the increased enrollment has been taken up by 2-year institutions and local community or junior colleges, which today are one of the fastest growing elements in higher education. In 1964-65 there were 720 2-year colleges, both public and private; it has been predicted that by 1975 there will be 1,500.⁵ These institutions offer both college

⁴ Less Time, More Options, op cit, pp. 20, 43.

⁵ Charting Student Needs, 1970-71 Annual Report of the American College Testing Program. (Iowa City, Iowa: ACT, 1971) p. 23.

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transfer and terminal occupational programs⁶ and aim to provide a curriculum geared to community needs. They are readily adaptable to military needs and in some instances can be utilized to conduct some of the formal education or training of military personnel.

13-24. The Army's Response

The Army has not been slow to respond to educational innovations that benefit its personnel. When the College-Level Examination Program was introduced in 1965 to "enable individuals who have acquired their education in nontraditional ways to demonstrate their academic achievement," the program was quickly adopted and today it is a principal steppingstone to the acquisition of baccalaureate degrees by military personnel. No doubt the same energetic response will be made to other educational innovations in society at large as they occur. To this end, we should take such actions as the following:

a. Urge Army faculty officers (especially school commandants) to work with civilian educators at all echelons in diversifying the routes to an education, and support such innovations as the open university and an examining university.

b. Establish cooperative relationships at an early stage in the development of new institutions, such as community colleges, and lend support in design of curricula, exchange of faculty, use of facilities.

⁶The U.S. Office of Education defines "terminal occupational program" as follows: "A program, extending not more than 3 years beyond high school, designed to prepare students for immediate employment in an occupation or cluster of occupations. It is not designed as the equivalent of the first 2 or 3 years of a baccalaureate degree program. Two levels of terminal occupational programs are recognized: (1) the technical semi-professional level preparing technicians or semi-professional personnel in engineering or nonengineering fields; and (2) the craftsman/clerical level training artisans, skilled operators, and clerical workers. Programs of the first type generally require 2 to 3 years and programs of the second type are of somewhat shorter duration."

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c. Stimulate positive attitudes on the part of all supervisors toward participation by their personnel in educational programs, and ensure that work arrangements favorably accommodate such participation, especially of innovative learning experiences and new programs.

d. Provide positive incentives for off-duty study, including recognition of educational achievements through entry in personnel records and appropriate instructions to promotion boards.

e. Review the use of Armed Forces Radio and Television, both current and programmed, to determine whether maximum educational value is being gained from these media, and whether there is a possibility of experimenting, in conjunction with the U. S. Office of Education and one or more civilian institutions, with a radio/video-based open university for military personnel.

13-25. Guidance

It is suggested that the Army develop a comprehensive action program for support of high payoff educational innovations in society at large through such measures as those listed in paragraph 13-24. (Guidance 33)

Chapter	Recommendations	Guidance
	3. The length of the Basic Course for the combat support and combat service support branches be variable but not less than 9 weeks, with the length of course for each school determined by CG, CONARC. 4. A package of instruction on company administration and management be prepared under the supervision of CG, CONARC, and presented by a variety of instructional means, e.g., mobile teams; at major command, installation, and unit schools; and orientation at branch schools. 5. An evaluation system be instituted and executed to support the elimination or decommissioning of unfit or unsuitable basic officers.	3. Although the field for validation in the Basic Course is relatively limited, it should be used wherever practical. 4. Each school develop and execute a junior officer retention program which recognizes the characteristics of the basic officer (paragraph 4-1) and capitalizes on existing programs (see Annex A, Good Programs).

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Chapter	Recommendations	Guidance
5 ADVANCED COURSE 14.3	6. A battery of diagnostic tests be utilized to determine the strengths and weaknesses of basic officers, especially focused on potential weaknesses in literacy (writing ability), and on technical weaknesses (mathematics for Engineer officers). 7. The current mission statement be revised to-- a. Include a statement comparable to "and to provide a foundation for continuing education and further professional development." b. Include a statement comparable to "Combat support and combat service support branch schools will include instruction designed specifically to prepare officers for performing branch-related staff duties at major headquarters."	5. The Advanced Course education program be composed of a core of professional military subjects, and a broad family of military and nonmilitary electives. It should have a concurrent civilian educational effort, consisting of both on duty and off duty study that could be meshed with the degree completion and officer undergraduate degree programs so that students can pursue either a baccalaureate or advanced degree.

Chapter	Recommendations	Guidance
	8. OPO establish standards and institute procedures for tougher prescreening of officers prior to attending the Advanced Course, to weed out unfit and unmotivated officers. 9. Under DA and CONARC guidance, school commandants develop and execute an evaluation system to support the elimination of unfit or unsuitable officers. 10. Validation and diagnostic testing be used extensively in the Advanced Course to adjust to the diversity of the students.	6. An explicit objective of the Advanced Course be to provide the student and his family a full, rewarding and happy year to enhance his career satisfaction and develop his professionalism. 7. Where feasible, the academic program be personalized and individualized in accordance with the student's aptitudes, interests and experiences; the student be allowed greater scope for self-directed and self-paced learning. 8. The programs and techniques indicated in paragraph 5-4, chapter 5 be adopted where pertinent, in dealing with the condition of terminal education.

Chapter	Recommendations	Guidance
14-5 6 C&GSC	11. Revise mission statement for C&GSC resident course (paragraph 2-4b(2)(a), AR 351-1) by including the following two subparagraphs: a. To prepare each officer to function effectively in a high-level staff area. b. To provide a foundation for continuing education and intellectual development.	9. The types of coverage indicated in paragraph 5-6, chapter 5 be adopted, where pertinent, in expanding the scope of the curricula of the CS and CSS schools. 10. The academic program should cogently address contemporary issues. It should be of a quality that reflects the maturity and interests of the students.

Chapter	Recommendations	Guidance
	12. Pursuant to adoption of the revision recommended in 11 above, change the curriculum at C&GSC to-- a. Establish a core curriculum of approximately 5 months duration which would be designed to teach every Leavenworth-qualified student what he ought to know about the Army in the field, especially how it operates and how it is commanded. This would, in essence, be a condensation of the existing course, with special emphasis on command. All students would attend this course. b. Institute staff functionalization courses of approximately 5 months duration. These staff functionalization courses would cover the standard fields of personnel, intelligence, operations, logistics, and force development. Each student would attend one staff functional course.	11. The basic objective be the establishment of C&GSC as the professional university for the Army of the seventies-- a university which teaches, as a fundamental, a core curriculum on the Army in the field. This core curriculum is supplemented by a diversified coverage of major high-level staff areas, by MMAS, and by a wide family of electives. This university will have its own degree-granting authority and will support active cooperative degree programs, thereby fostering close and favorable ties with the civilian academic community.

Chapter	Recommendations	Guidance
	13. Diversify educational methods by moving to student-centered techniques for a substantial majority of the instruction; and by full utilization of proven innovations in educational technology. 14. Expand electives program and degree completion program. 15. DA and DOD obtain congressional approval of MMAS. Institute low-keyed but persistent program to inform officer corps of merits of MMAS, once approved.	12. In providing for continuing education of students, consideration be given to actions such as: a substantial increase and diversification of the guest lecture program; the inclusion of controversial subjects/issues/problems for coverage; a retention and expansion of the existing highly regarded Strategic Studies Program and increased use of military history. 13. The points raised about housing at C&GSC (Section X) be given appropriate weight in decisions on this subject.

Chapter	Recommendations	Guidance
7 ARMY WAR COLLEGE 418	16. Establish a C&GSC (LOG) at ALMC. If established, staff functional instruction in logistics (12 above) would be transferred to C&GSC (LOG), consonant with student capacity at ALMC. 17. Identical entries be made on DA Form 66 for officers completing the U.S. Army War College regular and nonresident courses.	14. The current system for utilization of AWC creative resources be continued. 15. Commandant, AWC, act as Executive Agent for the Chief of Staff in chairing a Committee on Leadership Education. This committee will consist of representatives of AWC, USMA, and such CONARC schools as CG, CONARC considers appropriate.

Chapter	Recommendations	Guidance
8 CIVILIAN EDUCATION	18. All deserving career officers, both regular and reserve, who do not possess a baccalaureate degree be afforded the opportunity to acquire a degree through the OUDP or similar program if they can obtain a degree in 2 years or less. 19. Career officers who cannot obtain a degree in 2 years or less be afforded the opportunity to attain this level (and hence eligibility for OUDP or similar program) through a combination of CLEP (College Level Examination Program) Examinations and off-duty study under the tuition assistance program.	16. The Faculty Chairs Program and the Graduate Degree Program continue to receive full support from DA and other interested agencies in order to realize the high potential of these programs.

Chapter	Recommendations	Guidance
	20. Officers within the purview of recommendations 18 and 19 be afforded the opportunity to attain their degree not later than completion of 8 years of service or when their contemporaries are being considered for selection to C&GSC. 21. OPO institute an educational counseling program that will take into consideration an officer's educational achievements, aspirations, and prospective assignments and advise the officer concerning the program of studies and assignments which will enable him to take best advantage of the opportunities available to achieve his educational aspirations. 22. The program to enable career officers to attain a baccalaureate degree be given top priority over all other civilian educational efforts.	

Chapter	Recommendations	Guidance
	23. Non-fully funded civilian education programs, i. e., degree completion program, advanced degree program for ROTC instructor duty, and cooperative degree programs at branch schools, C&GSC and AWC be expanded as the principal means of acquiring advanced degrees in the next decade. 24. Opportunities be provided to enable faculty members at service schools to acquire advanced degrees concurrent with their faculty assignments. (Adoption of this recommendation would entail revision of DA Pam 616-558, <u>Staffing Guide for U.S. Army Service Schools</u>, to include an allowance for faculty continuing education and professional development.)	

Chapter	Recommendations	Guidance
	25. DA adopt the policy that, where the needs of the service and the desires of the individual can be reconciled, officers will be assigned to duties where they will have an opportunity to continue their advanced civilian education and acquire advanced degrees, especially with respect to assignments subsequent to attendance at a service school where the individual was able to work toward but not complete an advanced degree. 26. DA implement the proposed 18-month degree completion program at the earliest practicable date, with provision for extension to 24 months in individual cases. 27. DA should examine the possibility of increasing student attendance at AFIT and NPGS, to include limited Army faculty participation in those schools.	

Chapter	Recommendations	Guidance
9 THEORY OF TEACHING	28. The following general policy be adopted with respect to the theory of teaching employed in our service schools: a. The instructor-centered theory of teaching be employed only where essential. b. Student-centered teaching be employed for all other professional military education. 29. CONARC develop and implement a comprehensive, phased program for introduction of mechanized instructional methods into the Army education effort.	17. The Basic Course should achieve a balance of approximately 75 percent instructor-centered, 25 percent student-centered teaching. 18. The Advanced Courses should be approximately a 50-50 balance between instructor-centered and student-centered teaching. 19. The C&GSC should achieve a balance of approximately 80 percent student-centered and 20 percent instructor-centered teaching. 20. CONARC evaluate the cost of the installation of color TV to determine if alternate uses of comparable funds in other areas of mechanization would provide greater benefit to the officer educational program.

Chapter	Recommendations	Guidance
10 FACULTY	30. DA establish quality objectives for the staffs and faculties of all branch schools, Command and General Staff College, USA Missile and Munitions School, US Army Logistics Management Center, US Army Combat Surveillance and Electronic Warfare School, US Army John F. Kennedy Institute for Military Assistance, and US Army Security Agency School, and institute programs to meet these objectives. 31. Pending development of DA-approved quality objectives for the staffs and faculties of the schools in recommendation 30, OPO use the objectives contained in Appendixes N-P as interim quality objectives.	21. DA and OPO concentrate on upgrading the quality of faculty input, assigning this higher priority than improving the stability of faculty assignment. 22. Under CONARC guidance, instructor-training courses which capitalize on the best ideas from the 5-week course run by the USAF at the Air University, and on the many fine courses in Army schools, be established at branch schools and C&GSC. 23. Guest lecture programs at Advanced Courses and C&GSC be expanded. 24. Branch schools and C&GSC institute in-house faculty improvement programs, using such techniques as --

Chapter	Recommendations	Guidance
	32. C&GSC and branch school faculties be diversified through greater use of qualified senior noncommissioned officers and warrant officers, WAC's, civilians, allied officers, officers from other services, and qualified students. 33. Greater use be made of senior officers to teach controversial, sensitive, and complex subjects. 34. A family of personal and professional incentives be established at branch schools and C&GSC to encourage the professional development of faculty members.	a. Designating "faculty experts" for specific subject areas and supporting the faculty expert through library procurement and attendance at learned society meetings. b. Using instructor teams to conduct instruction where expert knowledge in more than one area is involved. c. Conducting faculty workshops on such matters as instructional technology, and new developments in learning theory. d. Providing opportunity for individual research. e. Providing adequate opportunity for innovation in instruction (applies in particular to junior faculty members).

Chapter	Recommendations	Guidance
	35. Individual programs for continuing education of faculty members be developed and supported at all Army schools. (Opportunity for advanced civilian education concurrent with assignment as a faculty member is recommended in 24 above.)	f. Welcoming participation in curriculum development (applies in particular to junior faculty members). 25. OPO, CONARC, and the schools recognize the advantages of the three-tiered approach to duration of faculty assignments, and adopt this approach where feasible. 26. As a corollary to 25 above, DA examine the desirability and feasibility of establishing a program of academic tenure for a highly select group of 06 grade personnel who have demonstrated exceptional competence in the educational field.

Chapter	Recommendations	Guidance
11 EVALUATION	36. The student evaluation programs at our schools be comprised of at least four components: diagnostic tests, validation tests, academic evaluation, and subjective appraisals. 37. The relative role and importance now given to academic tests be de-emphasized. 38. The relative role and importance of diagnostic tests, validation tests, and subjective appraisals be increased. 39. Operators (commandants, staff, and faculties) work with professionals (educational advisors, HumRRO, BESRL) to develop a family of subjective evaluation programs for use at appropriate levels.	27. Schools establish programs to develop and incorporate the views of the junior faculties and students to improve the evaluation of curricula.

Chapter	Recommendations	Guidance
12 ORGANIZATION 14-18	40. The subjective evaluation programs include the use of peer ratings, at least on a trial basis. 41. No change be made in the basic organizational relationships which now exist between DA, CONARC, and CDC for the conduct of our officer educational program. 42. In carrying out its dominant role, CONARC should: a. Address major educational issues which are beyond the scope or purview of individual schools. b. Establish a CONARC Center for Research in Education and Instructional Methods.	28. DA should evaluate the system developed by the Air Force for the management of their civilian educational program, to determine what aspects, if any, the Army can adopt to its advantage.

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Chapter	Recommendations	Guidance
	43. Where agencies other than CONARC have a direct interest in a course of instruction (e. g. AMC in the recommended CS and CSS advanced courses; DA staff agencies and AMC in the recommended staff functionalization at C&GSC) CONARC retain command and control and coordinate actively with the other agencies in development of the curricula. 44. OPO initiate a program to assign officers with previous faculty experience to HQ, DA and CONARC staff positions related to officer education, with an objective of approximately 50 percent of these positions to be filled by such officers.	

Chapter	Recommendations	Guidance
13 AREAS OF SPECIAL INTEREST	45. Senior officers and staffs direct special attention to the IMA at Fort Bragg, NC and the SEWS at Fort Huachuca, in recognition of the importance of the missions of these two schools and the fact that they lack staff sponsors. 46. That the pertinent recommendations of the CONARC Leadership Board be implemented. 47. That the pertinent recommendations of the Department of the Army Ad Hoc Committee on the Army Need for the Study of Military History be implemented.	29. That specific objectives be established for the extent of historical example usage, e.g., once basic principles have been developed not less than 40 percent of other problems in the curriculum dealing with the same basic principles be historically oriented.

Chapter:	Recommendations	Guidance
	48. DA review adequacy of the supplemental allowance factor for instructional personnel contained in Appendix B, DA Pam 616-558, <u>Staffing Guide for U.S. Army Service Schools</u>, in view of the change in instructor workload associated with the rapid obsolescence of doctrine and need to speed-up the doctrine production cycle.	30. That the Army move as expeditiously as possible to establish a solid nucleus of expert officer historians on the faculties of the branch schools and C&GSC, and commence at once to build upon this nucleus toward proper utilization of history in the Advanced and C&GSC courses.
	49. DA determine and authorize an allowance for faculty continuing education and professional development through appropriate revision of the manpower staffing factors contained in Appendix B, DA Pam 616-558, <u>Staffing Guide for U.S. Army Service Schools</u>.	31. That a portion of the historical studies in our curricula be analyses of unsuccessful US operations.

Chapter	Recommendations	Guidance
	50. Priority support be given to construction programs to improve the academic facilities of the Military Police School at Fort Gordon, Georgia; the Military Intelligence School and the Combat Surveillance and Electronic Warfare School at Fort Huachuca, Arizona; and the US Army Security Agency Training Center and School at Fort Devens, Massachusetts. 51. That AR 351-1 be revised to include the paragraph on increased scope of the officer educational program contained in paragraph 13-17, Section IV.	32. The Army school system assume, as a special challenge, the requirement to maintain and enhance the high level of confidence and respect which currently exists between the branches and military Services as a result of their common experience in Vietnam; and that appropriate actions along the lines of those suggested in paragraph 13-14, Section III be taken to accomplish this. 33. That the Army develop a comprehensive action program for support of high payoff educational innovations in society at large through measures such as those listed in paragraph 13-33, Section VI.

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APPENDIXES

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APPENDIX A

ARMY OFFICER EDUCATION STUDY DIRECTIVE

A-1. The formal directive from the Chief of Staff, Army for conducting this review contains the following guidelines:

a. The officer conducting the review will familiarize himself with the overall Army Officer Education System, its policies and procedures, and will observe local implementation of these policies and procedures.

b. Observations will be conducted at selected Service schools and colleges. Commencing in November 1970, the officer conducting the review will be assigned to the OCSA.

c. The primary task will be to make recommendations and provide trip reports that will assist in developing improved policies for operation of the officer education system. Particular attention should be given to:

- (1) Curriculum
- (2) Instructor and instruction quality
- (3) Thrust of instruction
- (4) Adequacy of faculty
- (5) Any major differences in support for academic operations

d. Upon completion, prepare a report of findings, recommendations, and recommend time phasing for implementing any change through CG, CONARC, to the Chief of Staff, United States Army.

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APPENDIX B

APPROACH TO REVIEW

B-1. The formal directive as received from the Office, Chief of Staff is desirably broad. However, some refinements and increased specifications within the terms of the directive are helpful to establish parameters on my own effort and to avoid confusion on the part of the schools and staffs involved. These refinements are given below. Of special interest is paragraph b, which indicates educational areas not covered in this review.

a. My review will concentrate on the officer educational system, post commissioning. It will not directly address any precommissioning educational experience (USMA, ROTC, OCS). These important areas have been, and remain, under intensive study by highly qualified individuals and agencies. My review of these areas would profit nothing. I shall, however, want to receive short briefings on the OCS and ROTC programs at the headquarters where these are important. These briefings should be designed to give background on the programs involved and to permit me to evaluate the basic course in the light of the OCS, ROTC, and USMA input. I shall also visit USMA for intensive discussions. These will be related primarily to the environmental considerations in the study and not to the USMA cadet or graduate as such.

b. CON Reg 350-1 states that the officer educational program includes eight types of courses: career, warrant officer career, mobilization, specialist, refresher, orientation, functional, and peripheral. I do not plan to review this entire spectrum; rather I shall concentrate primarily upon the career course area, with secondary attention to the specialist area and substantially less attention to the other courses. Specifically, I shall not address warrant officer career courses, mobilization courses, or aviation training. My consideration of refresher courses, orientation courses, functional courses, and peripheral courses will be brief and general. It will be designed primarily to determine the impact of these courses upon the resources of the schools involved and to obtain a perspective on the relative level of effort which these ancillary courses require.

c. A major area of interest at all pertinent echelons will be the civilian educational program, with special attention to the advanced degree element. I expect that civilian education will receive as much attention as professional military education in this review. At least the question of how we can best integrate the two will be a paramount issue.

d. I shall consider primarily the time frame 1971-76, with supplementary consideration of the 1976-81 period. A more ambitious time frame would be beyond my competence and would have little pertinence or convertibility for today's decisionmaker.

e. I plan a submission date of the completed product to the Office, Chief of Staff through CG, CONARC not later than 1 December 1971.

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APPENDIX C

OTHER STUDY EFFORTS

C-1. Army officer education is under continuous study. Eight related actions are mentioned here.

a. Office, Deputy Chief of Staff for Personnel has been developing and staffing a new Officer Personnel Management System (OPMS).

b. General Ralph H. Haines, Commanding General, U.S. Continental Army Command, has been conducting an intensive series of personal visits to each of the schools to study the present Army educational system.

c. Brigadier General Henry Newton, USA (ret.) has been assisting General Haines by visiting the schools.

d. In May 1971, an ad hoc committee, under Colonel T. E. Griess, Chairman, Department of History at the U.S. Military Academy, completed a landmark study on the Army Need for the Study of Military History.

e. A CONARC Leadership Board, under Brigadier General H. E. Emerson, recently conducted a study of Army leadership and has submitted its recommendations in a report entitled Leadership for Professionals, dated 30 July 1971.

f. Office, Deputy Chief of Staff for Personnel, completed a study of The Military Education of Career Officers (MECO) in December 1970.

g. Office, Deputy Chief of Staff for Personnel, completed a study of the Army Civil Schooling Program, incorporating new civilian educational objectives for Army personnel. The study was approved by the Chief of Staff on 22 June 1971.

h. Office of the Special Assistant for the Modern Volunteer Army, under Lieutenant General George I. Forsythe, was

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established as a focal point for Army actions leading to creation of a
Volunteer Army (VOLAR) in the seventies.

APPENDIX D

UNDEREDUCATED HUMP

1. Size of hump:

CIVILIAN EDUCATION LEVEL OF ARMY CAPTAINS AS OF 15 NOV 1970

	RA		OTRA		TOTAL	
	<u>No</u>	<u>%</u>	<u>No</u>	<u>%</u>	<u>No</u>	<u>%</u>
Total Army Captains	9499		34,933		44,437	
Total with Education Level Known	9369	100.0	30,592	100.0	39,961	100.0
BA Degree or Higher	8512	90.86	14,453	47.24	22,965	57.47
Less than BA Degree	857	9.14	16,139	52.76	16,996	42.53
(a) Two or more yrs college	788	8.41	5,406	17.67	6,194	15.50
(b) Less than 2 yrs college	49	.52	5,451	17.82	5,500	13.76
(c) HS graduate	20	.21	5,282	17.27	5,302	13.27

2. The problem is concentrated in the OTRA captains. Percentages without college degrees by grade are:

<u>LT</u> <u>(OTRA)</u>	<u>CPT</u> <u>(OTRA)</u>	<u>MAJ</u> <u>(ALL)</u>	<u>LTC</u> <u>(ALL)</u>	<u>COL</u> <u>(ALL)</u>
25.81	52.76	17.30	17.04	15.12

3. Civilian education level of OTRA captains, OPD branches only, is shown in the following table:

CIVILIAN EDUCATION LEVEL
OTRA CAPTAINS, OPD BRANCHES
AS OF 15 NOV 1970

	<u>Number</u>	<u>Percent</u>
Ph.D Degree	138	
MA Degree	509	
Professional Degree	329	
Post-Graduate College but no Post-Graduate Degree	283	
Baccalaureate Degree	7175	
Sub-Total Baccalaureate Degree and Higher	8434	35.2%
Two Years or more College	4709	(30.4%)
Less than two years College	5449	(35.3%)
High School Graduate	5281	(34.3%)
Sub-Total Less Than Baccalaureate Degree	15,439	64.8%
Total	23,873	100.0%
Education Level Unknown	803	
Grand Total	24,676	

4. The number of voluntary indefinite officers in year groups that provide the bulk of OPD captains (FY 65-69) is shown in the next table. FY70 is included because it is the last year with large OCS input.

OTRA VOLUNTARY INDEFINITE OFFICERS, OPD BRANCHES
FISCAL YEAR GROUPS 65-70 AS OF 31 MAR 71

	<u>FY 65</u>	<u>FY 66</u>	<u>FY 67</u>	<u>FY 68</u>	<u>FY 69</u>	<u>FY 70</u>	<u>Total FY 65-70</u>
ROTC	290	482	699	1067	2640	4362	9540
OCS	804	1657	5576	4601	2509	3445	18,592
Other	224	402	748	618	708	1196	3896
(OCS and Other)	(1028)	(2059)	(6324)	(5219)	(3217)	(4641)	22,488
Total	1318	2541	7123	6286	5857	9003	32,028
Addendum: Inte- grated into RA from original OCS input	242	183	327	100	19	5	876

Source: COP0-91

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5. From para 3, 64.8 percent of OTRA captains in OPD branches do not have college degrees. Allowing for the fact that ROTC officers in fiscal year groups 65-69 have baccalaureate degrees, it can be computed that 90.1 percent of OCS and "other" (direct appointments, voluntary recall, etc) officers do not have a college degree. This yields a total of 20,300 officers in year groups FY65-70 who do not have college degrees, broken out as follows.

Have two years or more college	6170	30.4%
Have less than two years college	7160	35.3%
High school graduate	<u>6970</u>	<u>34.3%</u>
Total	20,300	100.0%

6. Because of reduction in size of the Army associated with VOLAR, it is evident that not all of the voluntary indefinite officers in year groups 66-70 will be able to remain on active duty. The order of magnitude of the normal and forced (policy-generated) attrition that will inevitably take place may be gauged by examining the current size of the year groups comprising the officer structure. This is shown in the next table.

OFFICERS ON ACTIVE DUTY
OPD BRANCHES
FISCAL YEAR GROUPS 42-71
AS OF 31 MAR 71

<u>Fiscal Year Group</u>	<u>OTRA</u>	<u>RA</u>	<u>Total</u>
1942	4	713	717
1943	10	449	459
1944	6	414	420
1945	12	563	575
1946	17	457	474
1947	35	328	363
1948	10	764	774
1949	71	843	914
1950	27	940	967
1951	211	1142	1353
1952	295	1373	1668
1953	518	1298	1816
1954	628	1272	1900
1955	442	1390	1832
1956	453	1344	1797
1957	620	1621	2241
1958	358	1530	1888
1959	468	1681	2149

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<u>Fiscal</u> <u>Year Group</u>	<u>OTRA</u>	<u>RA</u>	<u>Total</u>
1960	638	1740	2378
1961	664	1690	2354
1962	1535	1792	3327
1963	1174	1686	2860
1964	1412	1647	3059
1965	1318	1583	2901
1966	2541	1603	4144
1967	7281	1913	9194
1968	7339	1983	9322
1969	11,718	2097	13,815
1970	23,532	2013	25,545
1971	8702	487	9189

SOURCE: COPO-91

7. By examining the RA and OTRA composition of year groups 58-65, and remembering that the Army has traditionally experienced a shortfall in officers with 3 to 13 years service, it appears that there will probably not be a future requirement for more than 2000 OTRA spaces in each year group of the career structure. Applying this to year groups FY 66-70 (refer to table in para 4), there will probably not be a requirement for retention of a total number of OTRA officers in these year groups much in excess of 10,000. Assuming 1000 of these are ROTC, and 90 percent of the remainder do not have college degrees, this yields a requirement to educate 8100 OTRA officers to the baccalaureate level. Adding 900 officers for FY 65, the total undergraduate education requirement for OTRA officers in year groups 65-70 is approximately 9000.

8. There are two principal programs for educating officers to the baccalaureate degree level: the degree completion program (bootstrap) and the officer undergraduate degree program (OUDP). Under bootstrap the officer must be able to complete his degree within one year (it is expected that this will be changed to two years). Under OUDP he must be able to complete his degree within two years. Officers must have RA potential and 2-7 years AFCS to be selected for OUDP. OPD practice is to program such officers to their branch advanced course first, and then to civil schooling.

9. Actual/projected inputs to these programs are estimated as follows:

	<u>FY 70</u>	<u>FY 71</u>	<u>FY 72*</u>	<u>FY 73*</u>	<u>FY 74*</u>	<u>FY 75*</u>	<u>Total</u> <u>FY 70-75</u>
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*Projected figures

Bootstrap							
(undergraduate)	750	720	720	700	700	700	4290
OUDP	866	762	725	725	725	725	4528
Total	1616	1482	1445	1425	1425	1425	8818

SOURCE: OPD Civil Schools Branch and DCSPER Milestone Three Briefing on Army Civil Schooling Program.

10. Total OPD objective for OUDP is 4500 officers over the 6 years FY 70-75. The recent DCSPER study of the Army Civil Schooling Program phased out the OUDP program in FY 76 and reduced the undergraduate bootstrap input to approximately 500 per year from 1976 on.

11. Thus, according to present plans, a total of 8818 officers will be educated to the baccalaureate level during the six-year period FY 70-75. Reducing this by 650 for the number of RA captains requiring a college degree (they will undoubtedly have priority in attendance), and by 860 to account for approximately 20-percent of the bootstrap quota going to field grade officers, the result is that approximately 7308 OTRA company-grade officers will be educated to the baccalaureate level. This is 81.2 percent of the 9000 requirement computed in paragraph 7.

12. However, from the data presented in paragraph 3, only about 30-40 percent of the officers of OPD branches lacking a baccalaureate degree can complete their degree in two years or less, which is a requirement for eligibility for OUDP (for bootstrap the eligibility requirement is completion of the degree in one year or less). Thus, any program to educate 100 percent of the officers lacking a baccalaureate degree to that level must adopt a variety of techniques to assist the officer in attaining an educational level such that he will be able to complete his degree in a maximum of two years. Such techniques could feasibly include GED testing for two-year college equivalency, and a combination of both on- and off-duty study under the tuition assistance program. In addition, OPD would have to establish a management system to identify the officers involved, evaluate their academic records, ascertain their desires to participate in the program, assign them to posts where adequate educational opportunity exists, and ensure the cooperation of commanders.

13. The goal for completion of the baccalaureate should be no later than the end of the eighth year of service, or roughly the beginning of eligibility for attendance at C&GSC. This is to ensure that the Army does not, in effect, employ a double standard in considering such officers differently from their more educated peers for future advancement.

14. Given the continued expansion of the number of persons with baccalaureate degrees in the next decade, the Army - particularly when it foots the bill - cannot afford to consider all baccalaureates as equal worth but must begin to look behind the degree to the quality of education received. Any program to raise the civilian educational level of our officers should not be simply a matter of progressing through a diploma mill, or getting a ticket punched by taking a smattering of courses, but should be an adjunct to the professional education of the officer concerned. This raises the question of whether any control should be exercised over the field of concentration of an officer acquiring a baccalaureate degree under this program. A relevant consideration is that, from the standpoint of career development, the principal goal of the officer in the first ten years of service is to become a functional expert in his branch or specialty. Assuming that most officers are properly assigned to the branch or special career field in which they are interested, and in which

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they have some aptitude, there would appear to be advantages to requiring an officer's field of concentration while pursuing the baccalaureate to be in a field related to his branch or specialty, provided such criterion were construed liberally to offer a variety of alternative majors to the officers concerned. Taking Engineer Branch as an example, I would envision an officer would be permitted to major not only in any of the principal fields of engineering but also in such branch-related fields as physics and ecology, and in soft skills such as management, OR/SA, and ADP which have value to the branch. This would, however, preclude an Engineer officer from majoring in sociology, history, political science, languages, international relations, and most other social sciences/humanities. Such exclusion would not be without evident disadvantages, but would be completely consistent with the fact that an Engineer officer will be serving throughout much if not most of his career in a professional engineering capacity in Engineer units and districts, and will be collaborating with other professional engineers and expected to maintain professional standards of achievement. We could therefore with reason adopt the position that government-financed education should help the officer acquire the knowledge, skills, and professional standards appropriate to his particular branch or sub-profession of the military profession.

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APPENDIX E

POSSIBLE ADDITIONS TO ADVANCED COURSE CURRICULA

1. Incorporate the excellent, highly-regarded Strategic Studies Program now in the C&GSC curriculum into the advanced course curriculum.
2. Incorporate a few (not less than one nor more than five) orientation-type problems in the curriculum. These problems should consciously go beyond the scope of the course and require the student to think ahead and consider types of military problems which are not routine. For example, the large scale logistics planning problem conducted at the Ordnance School involving a move of major logistics support from Okinawa to Guam; possible use of the Armed Forces Staff College problem "North Flank"; use of some C&GSC-developed problems; etc.
3. Develop comprehensive and interesting guest lecture programs, with approximately 10% of the course being utilized as such.
4. Stress the study and utilization of history (See Chapter 13, Areas of Special Interest).
5. Develop a strong family of broad-gauge military and non-military electives.
6. Develop of seminars on current issues. Make full use of civilian resources (local officials, academicians, professionals) to broaden this area.

APPENDIX F

TYPES OF COVERAGE TO BE INVOLVED IN ENLARGEMENT OF MISSION

1. Study of management problems associated with principal branch functional areas. This should involve going beyond teaching branch functions themselves to the problems of managing and integrating such functions at higher organizational levels. As a general rule, there would be a shift in perspective from support of the Army in the field to such topics as wholesale logistics, management of intelligence resources, etc.
2. Roles of higher headquarters, position of the staff officer within the organization, and typical duties of the branch functional expert on the staff.
3. Information processing, modes of analysis, and problem-solving techniques relevant to performance of branch functions in higher headquarters.
4. Study of branch-related staff functions in military assistance activities, such as international military logistics, allied force development, etc.
5. Study of branch-related staff problems posed in different types of conflict environment, e.g., signal support in limited war versus signal support in counterinsurgency.

Two branch schools, the Ordnance and Quartermaster Schools, have adjusted their curricula to include instruction in branch-related staff duties at major headquarters. Table 5-1 which is based on information supplied by these two schools, indicates the rough order of magnitude of the curriculum changes which resulted from this expansion of scope.

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TABLE 5-1

APPROXIMATE CURRICULUM IMPACT OF EXPANSION OF SCOPE OF
ADVANCED COURSE TO INCLUDE BRANCH-RELATED STAFF DUTIES AT
MAJOR HEADQUARTERS, US ARMY ORDNANCE AND QUARTERMASTER SCHOOLS

<u>Subject Area</u>	<u>Curriculum Hours Before Expansion of Scope</u>	<u>Curriculum Hours After Expansion of Scope</u>
ORDNANCE SCHOOL		
Research, Development, and Procurement	Minor Coverage	100
Supply/Maintenance Management	86	177
Financial Management	25	44
Automatic Data Processing	21	54
Operations Research/ Systems Analysis	Minor Coverage	44
Personnel Management	9	42

APPENDIX G

SCOPE OF STAFF FUNCTIONALIZATION COURSE

1. In general terms, the educational coverage would involve the traditional staff functions of personnel, intelligence, operations, logistics, and force developments. At least initially, no specific courses would be devoted to the eleven recognized career specialist fields (although the relationship between some staff functional courses and some specialist fields would be direct, e.g., logistics). The major focus of the instruction would be on Army forces, and it would encompass the following major professional functions:

- a. Raising Army forces
- b. Training Army forces
- c. Organizing Army forces
- d. Equipping Army forces
- e. Transporting Army forces
- f. Employing Army forces
- g. Maintaining Army forces
- h. Administering Army forces
- i. Communicating between Army forces
- j. Commanding Army forces

The only specific subjects to be covered within each staff area can be developed only by an intensive and expert appraisal, but these would probably follow the detailed functions under current DA organizations.

2. Thus, each of the five staff functionalization courses will address the areas of special interest to them; but a substantial portion of the five months (not less than one or more than two months) should be devoted to the general staff as a whole. The aim should be to create expertise in a staff functional area while providing a working knowledge of how all staff agencies interact. With this balance of academic treatment between the general staff as a whole and a general staff function, we should produce professionally-integrated staff officers. Integration of staff functions, not their separation, should be the goal.

3. The goal of this instruction should be professional education in the best sense; it should not be solely "to teach the students how to operate in the Pentagon". The students should be required not only to think conceptually about the major staff functions in paragraph 1 above, but also to translate these concepts into manageable staff actions. The educational approach should parallel that of the Army War College, but the effort should be tightly focused on the effective accomplishment of the indicated staff functions.

4. The contemplated course length for this instruction would be 4-5 months (after a "core curriculum" of approximately the same length covering the Army in the field). Students would be selected to take one of the five staff functional courses by OPO, with their preferences honored where feasible.

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APPENDIX H

Comparison of C&GSC Educational Programs

1. The following chart indicates a rough appraisal of how well each alternative program meets the four stated criteria. Programs are ranked either 1, 2, or 3 according to the degree they meet individual criteria. When two programs are equally effective, total is split.

Program	First Criterion Support need for profession- ally educated officers	Second Criterion Advance military scholarship MMAS	Third Criterion Support degree completion	Fourth Criterion Exploit diver- sity of students
<u>Program A</u> Status Quo	2½	1½	1½	2
<u>Program B</u> Two short courses	2½	3	3	3
<u>Program C</u> Core curriculum Staff function- alization	1	1½	1½	1

This chart is far from a complete appraisal; for there are many factors which bear on these alternatives. Some of these are indicated in the following paragraphs which briefly display the advantages and disadvantages of Programs B and C not brought out above.

2. The advantages/disadvantages of Program B (two 4-5 months "core" curriculum" annually) are cited below:

a. Advantages:

(1) Can double output of C&GSC graduates

or

(2) Can reduce student input to availability of housing and still produce more C&GSC graduates than at present.

(3) Reduces time of individual officer in school

or

(4) By giving "Leavenworth-credit" to officers in half the time, can release officers earlier for other professional schooling (civilian or military)

(5) Avoids repetitive and/or inapplicable instruction in current course.

b. Disadvantages:

(1) Doesn't teach area of greatest professional weakness

(2) Doesn't diversify student educational experience or provide for continuing education (especially significant because MMAS and cooperative degree programs can't be carried out).

(3) Creates personal turbulence for high caliber officers (and their families) at a period when some stability is especially desirable.

3. The advantages/disadvantages of Program C (core curriculum plus staff functionalization) are cited below:

a. Advantages:

(1) Prepares officers for probable duties

(2) Improves performance of high-level staffs

(3) Addresses areas of greatest professional weakness

(4) Conforms to specialization (OPMS)

(5) Improves faculty

(6) Diversifies student educational experience

b. The disadvantages include:

(1) Decreases emphasis on heart of the Army

(2) Dilutes core curriculum

(3) Poses major administrative/academic management problems in developing and instituting new curricula

(4) Poses possible jurisdictional issue between DA and CONARC regarding staff functional curricula

(5) Poses assignment issue for OPO and student in selecting individual area of staff functionalization

(6) Compartmentalizes student body

4. There is no arithmetic or empirical technique for weighing the factors brought out above; but, on balance, I consider that they strongly support

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Program C over the other two. As between Programs A and B, I believe Program B could do a more efficient job of providing the required military professional education than Program A now does. However, the factors of personnel turbulence, no MMAS, and no cooperative degree weigh heavily against Program B; so Program A is slightly preferred.

APPENDIX I

CASE 1 - STATUS QUO

ADVANTAGES:

1. Assures that mid level logisticians have full understanding of command and operations of the Army in the field (heart of the Army).
2. No division between the logisticians and the rest of the Army.
3. No new costs or personnel management difficulties incurred.
4. Avoids the jurisdictional issue of control of ALMC (CONARC or AMC).

DISADVANTAGES:

1. Doesn't solve the problem.
2. Doesn't fully utilize ALMC facilities.
3. Doesn't ameliorate housing problem at C&GSC.

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CASE 2 - C&GSC (MOVE TO STAFF FUNCTIONALIZATION INSTRUCTION);
ALMC CONTINUE EXISTING CURRICULUM

ADVANTAGES:

1. Contributes to solution of problem by producing approximately 150-250 well-educated, professional logisticians at C&GSC.
2. Concentrates instruction in core curriculum at C&GSC(Leavenworth).
3. Avoids the jurisdictional issue of control of ALMC (CONARC or AMC).
4. Probably a lower faculty requirement than for Case 3 (where ALMC also conducts core curriculum instruction).

DISADVANTAGES:

1. Doesn't fully utilize ALMC facilities or faculty.
2. Possibility of duplication and overlap between the functional logistics instruction at C&GSC (Leavenworth) and the logistics executive development course conducted at ALMC.
3. The ALMC course may be used for the second-class logistical citizen.
4. It doesn't ameliorate the housing problem at C&GSC.

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CASE 3 - C&GSC (STAFF FUNCTIONALIZATION INSTRUCTION WITH THE EXCEPTION OF LOGISTICS INSTRUCTION); ALMC BECOMES C&GSC (LOG) AND CONDUCTS CORE CURRICULUM INSTRUCTION AND LOGISTICS STAFF FUNCTIONALIZATION INSTRUCTION.

ADVANTAGES:

1. Contributes to solution of problem by producing 200 mid-level trained logisticians.
2. Enhances the morale of the combat service support and combat support branches.
3. Optimizes the use of ALMC facilities and faculty.
4. Ameliorates C&GSC housing situation.

DISADVANTAGES:

1. Divides C&GSC instruction in core curriculum.
2. More costly in combat arms faculty.
3. Raises the jurisdictional issue.
4. Could contribute to potential divisiveness (logisticians versus the rest of the Army) and a desire to proliferate specialist C&GSC-level schools (why not C&GSC-PERS and C&GSC-INTELLIGENCE, etc).

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CASE 4 - C&GSC (CONDUCTS STAFF FUNCTIONALIZATION INSTRUCTION WITH EXCEPTION OF LOGISTICS); ALMC (CONDUCTS LOGISTICS FUNCTIONALIZATION INSTRUCTION, BUT NOT THE CORE CURRICULUM) - LOGISTICS STUDENTS TRANSFER TO ALMC AFTER COMPLETING CORE CURRICULUM AT C&GSC

ADVANTAGES:

1. Contributes to solution of problem by producing approximately 150-250 mid-level trained logisticians.
2. Concentrates instruction in core curriculum.
3. Minimum faculty requirements for combat arms officers.
4. Avoids the jurisdictional problem.
5. Minimizes the potential for future divisiveness within the Army.

DISADVANTAGES:

1. Calls for a double PCS for logistics students, thereby incurring heavy costs in personal turbulence, and family separations.
2. Doesn't make maximum use of ALMC facilities on year-round basis.
3. Probably won't ameliorate C&GSC housing problem.
4. Denies an opportunity to logistical students to acquire a concurrent master's degree (MMAS or master's in a civilian discipline).

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CASE 5 - C&GSC (CONDUCTS STAFF FUNCTIONALIZATION COURSE AS IN CASE 2); ALMC (CONCENTRATES FULL RESOURCES ON LOGISTICS MANAGEMENT INSTRUCTION; OBTAINS DEGREE-GRANTING AUTHORITY FOR MASTER'S OF LOGISTICS MANAGEMENT)

ADVANTAGES:

1. Contributes to solution of problem by producing approximately 150-250 well-educated field grade professional logisticians at C&GSC and, in addition, producing approximately 200 MLM's at ALMC (if degree-granting authority is obtained).
2. Concentrates C&GSC-level instruction at C&GSC.
3. Avoids jurisdictional issue.
4. Lower faculty requirement for combat arms officers than Case 3.
5. Minimizes the potential for future divisiveness within the Army.

DISADVANTAGES:

1. Is probably an over-kill of the logistics educational problem.
2. Places logistics in a highly-favored position whereby they have their cake (C&GSC) and eat it too (Master's of Logistics Management granted at ALMC).
3. Does not make maximum use of ALMC.
4. Does not ameliorate the housing situation at C&GSC.
5. Does not offer short term solution, because it will be difficult and time-consuming to obtain degree-granting authority for ALMC (my guess is that about five years of concentrated effort will be required for this).

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APPENDIX J

C&GSC CLASS
HOUSING PROJECTION

		<u>FY 71</u>	<u>FY 72</u>	<u>FY 73</u>
<u>On Post</u>	Adequate	484	584	884
	Substandard	108	108	108
<u>Off Post</u>	Lease (Local)	350	350	179
	Lease (Distant)	149	84	0
	Rent	89	45	0
	Own	<u>6</u>	<u>5</u>	<u>5</u>
		1,186	1,176	1,176
	BOQ	<u>64</u>	<u>74</u>	<u>74</u>
		1,250	1,250	1,250

APPENDIX K

CURRENT ARMY CIVILIAN EDUCATION PROGRAMS

1. The undergraduate degree programs include the following:

a. Officer Undergraduate Degree Program. Under this program, young, career-oriented officers are provided an opportunity to complete baccalaureate degree requirements while serving on active duty. Officers selected may attend an accredited college or university for up to two years while drawing full pay and allowances. Costs of tuition, texts and supplies are borne by DA. Normally, officers will not be placed in school until after completion of combat duty, company command, and branch advanced course. The degree pursued must be generally related to duties the officer will normally perform in his branch.

b. Degree Completion Program. The Degree Completion or "Bootstrap" Program is part of the General Educational Development Program of the Army. The program is designed to enable military personnel to satisfy degree requirements for a baccalaureate or advanced degree at accredited civilian educational institutions. Participants are enrolled in a college or university on a full-time basis and must be able to obtain a baccalaureate or advanced degree in 24 months. First consideration for attendance is given applicants requiring the shortest period of resident study. Presently, applicants requiring one year or less to complete their degree are being selected for this program. Individuals receive full pay and allowances while attending school and are responsible to bear all educational costs incident to this schooling. However, Veterans Benefits may be used to defray expenses under this program.

c. Tuition Assistance Program. This program pays tuition in the amount of seventy-five percent per semester-hour or equivalent for military personnel attending accredited civilian educational institutions during off-duty hours. By acquiring sufficient credits in this manner, an officer can become eligible to obtain a baccalaureate or advanced degree under the Degree Completion Program or a baccalaureate degree under the Officer Undergraduate Degree Program.

2. At the graduate level, the Army currently conducts the following programs:

a. Advanced Degree Program. This program has been the mainstay of the Army's efforts for acquisition of advanced degrees. Under this program the Army Educational Requirements Board meets annually to validate positions which require incumbents with advanced degrees. Selected officers attend civilian educational institutions for a period of 9 to 24 months to obtain either a master's degree or a doctorate. The officer receives full pay and allowances while attending school and tuition costs are borne by DA. Upon completion of schooling, officers receive a utilization assignment which makes use of their newly acquired skills. The explicit objective of the program is to train and maintain an adequate number of officers to fill the Army's continuing requirements in the graduate fields. The advanced civilian education thus provided is justified as "essential training in areas not covered by military training facilities or to augment training."

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b. Advanced Degree Program for ROTC Instructor Duty. Under this program, officers desiring assignments as ROTC instructors may volunteer for such duty in three states of their choice. Officers having master's degrees will, if selected, be assigned to ROTC duty. Officers who do not have master's degrees at the time of selection will be permitted to attend advanced civil schooling for up to two years. Direct schooling costs are borne by the officer; however, if he is eligible, VA benefits will likely cover most of the costs incurred. Upon graduation, the officer will normally be assigned to a two-year tour of ROTC duty.

c. Cooperative Degree Programs. Officers participating in a cooperative degree program earn credit toward a master's degree while in residence at USAWC, USAC&GSC, or branch school, and become eligible to apply for further schooling subsequent to graduation in order to complete degree requirements at the cooperating university or other institution under the provisions of the Degree Completion Program. In the typical case, the military educational institution negotiates agreements with cooperating civilian institutions to offer programs leading to an advanced degree, and courses are conducted for residence credit at either the military school or civilian campus within the framework of the military school's curriculum

d. Degree Completion Program. Same as para 1b above.

e. Tuition Assistance Program. Same as para 1c above.

f. Scholarships, Fellowships and Grants. This program permits military personnel to accept scholarships, fellowships, or grants to further their education or work on a project of value to the United States. The education or training received by the Army member must be designed to qualify him to satisfy a requirement or potential requirement of the Army.

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APPENDIX L

DISCUSSION OF CURRENT ADVANCED CIVILIAN EDUCATION PROGRAMS

1. AERB. Our principal program in advanced civilian educational effort is conducted under the Army Educational Requirements Board (AERB). This program calls for a tight, straight-line relationship between the advanced civilian education received and a specific Army requirement for that education and, generally speaking, a specific assignment which will utilize the education (see AR 621-1 for details on this program). On the whole, this program has served the Army well in carrying out the stated educational policies it is designed to support. Although certain aspects of this effort have come under heavy criticism from the GAO, it remains a sound program which is essential to the officer educational effort. One favorable facet of this system is its demonstrated capability for growth and its flexibility in reflecting qualitative changes in the Army's educational requirements. For example, in 1964 the AERB approved 4,461 positions for advanced degree education; by 1970, this number had increased to 8,550 (an increase of 92 percent in six years). Historical trend data and a comparison of Army requirements with those of the other services are at Inlosures 1 and 2.

2. Advanced Degree Program for ROTC Instructor Duty. A second advanced civilian educational program which has considerable promise is the recently instituted system whereby officers assigned to ROTC duty are given special opportunities to obtain advanced degrees. (See DA Circular 621-7 for details.) This program has not been in effect for sufficient time to evaluate its overall worth but, over the years, it should make a continuing important contribution to the Army's advanced civilian educational program.

3. Cooperative Degree. The third advanced civilian educational program is the cooperative degree program now being conducted at the Army War College and C&GSC. Officers participating in these programs earn credit toward a Master's Degree while in residence at C&GSC or AWC, and become eligible to apply for further schooling subsequent to graduation in order to complete degree requirements at the cooperating university or other institution under the Degree Completion Program. Complementing these C&GSC and AWC efforts are programs for concurrent civilian education, principally for advanced course officers under the advanced course electives program, conducted at most of the branch schools. These programs permit officers to receive resident credit toward an advanced degree from an accredited civilian institution. The concurrent civilian education programs at branch schools vary widely in terms of comprehensiveness, attractiveness, command emphasis, student participation, etc; so it is infeasible to present a general characterization of them. However, most involve an established relationship with one of more civilian institutions to provide graduate-level instruction either on post or on campus; and all are meshed to a greater or less degree with the tuition assistance program for off-duty study, and the degree completion program.

4. Degree Completion Program. The fourth advanced civilian education program is the degree completion program, which currently allows up to one year of full-time study to satisfy degree requirements at an accredited institution. This program is a bulwark of civilian educational efforts because it provides

an incentive for individuals to acquire sufficient credits through the tuition assistance and other programs to achieve a level of education such that a degree can be attained in one year. Utilized in tandem with cooperative efforts at branch and service schools, it provides a flexible means of acquiring an advanced degree with minimum loss of the officer's services. Presently, applicants requiring one year or less to complete their degree are being selected for this program. It has been proposed to extend this period to 18 months commencing in FY 73. I recommend implementation of the 18 month degree completion program at the earliest practicable date.

5. Scholarships, Fellowships, and Grants. Supplementing the other educational programs is the program for acquisition of advanced degrees through scholarships, fellowships, or grants, such as Olmstead, National Science Foundation, and Rhodes scholarships.

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ARMY EDUCATIONAL REQUIREMENTS BOARD
TOTAL VALIDATED REQUIREMENTS

<u>CY</u>	<u>Total Army</u>	<u>Army Less AMEDD</u>
1963	-	3,995
1964	4,461	3,420
1965	5,421	3,357
1966	6,824	4,418
1967	8,628	5,550
1968	8,724	5,716
1969	9,421	6,489
1970	8,550	6,329

Source: OPO

VALIDATED POSITIONS (1971)
(OFFICER PERSONNEL)

	End Strength	Validated Positions	Required to Fill	Available Assets	Shortage	Continued in Training	New Input	Utilization Policy	V.P./END Strength
Army	148,950	9,421	26,379	9,873	16,506	1,770	1,402	V.P. x 2.8	6.3%
Navy	74,560								
Technical									
URL	1,834		4,304	2,710	1,594			V.P. x 2.3	6.5%
RL & SC	1,798		1,798	1,748	50			V.P. x 1	
Non-Technical									
URL	409		949	1,850	(901)*	1,479	1,819	V.P. x 2.3	
RL & SC	803		803	1,002	(199)			V.P. x 1	
Total	4,844		7,854	7,310	1,644				
Air Force	125,919	12,472	14,966	9,774	5,192	1,746	1,304	V P. x 1.2	9.9%
Marine Corps	21,699	471	1,130	713	557	57	68	V.P. x 2.4**	2.2%

*About two-thirds of the surplus are in International Relations. Most officers with P-codes in this curriculum received advanced degrees through a voluntary, non-Navy funded, off-duty course at the Naval War College.

**Includes reduction of 279 (not available due to rank, retirement, overseas assignment, attrition, etc.) and addition of 123 (anticipated graduations). Including reduction of 279, makes utilization policy V.P. x 3.0.

Abbreviations Used:

URL - Unrestricted Line Officers
RL & SC - Restricted Line and Supply Corps
V P - Validated Positions

Source: OSD (M&RA)
Inclosure 2 to Appendix L

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APPENDIX M

THE PROBLEM OF SPLIT INTEREST IN OFFICER EDUCATION

1. A common challenge to concurrent degree programs is that officers participating in such programs will consciously slight the professional military educational effort for the advanced degree program, i.e., if it is a question of devoting more time to their advanced degree effort or to their professional military effort, they will uniformly favor the advanced degree effort. Most observers of the concurrent degree program agree there is validity to this point and that some favoritism towards the advanced degree effort will undoubtedly occur. However, there is an obverse to this. Many students in the advanced degree program make the point that, although they might favor the advanced degree effort, there were many instances where the knowledge and academic experience they were acquiring in their advanced degree effort were helpfully related to the professional military educational curriculum, and they were often able to enrich the class discussion by bringing out fundamental points which would otherwise have been totally missed, simply because of the broadening of their intellectual horizons in the advanced degree effort.

2. Actually, I think this discussion about whether professional military education suffers when an officer enters an advanced degree program really misses the central point. There are at least three competitors for an officer's time when he is in school: the professional military educational effort; the advanced civilian educational effort; and his family (also athletics and recreation). When confronting a tough question on personal priorities for allocation of his time, the average high-caliber officer will allocate his time in the following priority: first, advanced civilian education, second; professional military education, and family last. This, to me, is the principal hidden disadvantage of an intensive advanced degree program; but I see no way to avoid it; and it is not of sufficient weight to overcome the advantages.

APPENDIX N

RATIONALE FOR ADOPTING A NEW THEORY OF TEACHING

1. Education and Technology. In a period of rapidly changing technology, skills quickly become obsolete. Therefore, it is not the skills that one learns through the educational system - though skills must certainly be inculcated to a certain extent - but powers of analysis and judgment that permit an innovative response to a changing environment. As Rene Dubos has cogently put it:-

"In a world where everything changes rapidly, the practical facts learned in school become obsolete . . . The only knowledge of permanent value is theoretical knowledge; and the broader it is, the greater the chances that it will prove useful in practice because it will be applicable to a wide range of conditions. The persons most likely to become creative and to act as leaders are not those who enter life with the largest amount of detailed specialized information, but rather those who have enough theoretical knowledge, initial judgment, and the discipline of learning to adapt rapidly to the new situations and problems which constantly arise in the modern world."¹

2. New Emphasis in Education. The consequences of this argument for education are that less emphasis should be placed on subject matter and more on the processes of conceptual thought. This applies equally to professional as to general education. Whereas formerly professional education aimed at mastery of a body of knowledge and transmission of skill and technique, the rapid obsolescence of knowledge requires a shift in emphasis to development of problem-solving ability and the powers of innovation and judgment. This need for a new emphasis in education is a widely accepted view held by many knowledgeable experts. For example, Stanford C. Ericksen, Director of the University of Michigan Center for Research on Learning and Teaching, writes²:

"The uncritical acceptance of chunks of knowledge does not add up to the kind of complete education needed to cope successfully with the wild rush of scientific and technological change and to understand social conflicts and issues. It is the constellation of interests, attitudes, and values the subject matter will help to formulate that will remain with students long after factual information and concept labels are forgotten or found to be obsolete or irrelevant . . . Traditionally education has stressed the assimilation of an established body of information and students were

¹Quoted in Daniel Bell, The Reforming of General Education (New York: Columbia University Press). p. 108.

²Stanford C. Ericksen, "Earning and Learning by the Hour" in William K. Morris (ed) Effective College Teaching, (Washington, American Council on Education, 1970.) Emphasis supplied.

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graded accordingly. But factual information is now rapidly outdated; the more important instructional objective is helping students learn how to learn."

Psychologists Kenneth Kenniston and Mark Gerzon state that all educational experiences can be classified as containing two distinct and sometimes opposing components which they call technical and critical education.³

They go on to say:

"Virtually every observer of the industrialized nations has been impressed with their enormously rapid rates of technological, social, and cultural change. In some highly technical fields, the half-life of methods and bodies of knowledge may be as short as five years; the life span of social institutions and cultural values is often shorter than the life span of an ordinary man or woman. One psychological requirement of rapid historical change is that individuals reorient themselves during their lifetimes to new technologies, new social institutions, and new cultural orientations. In a world that is increasingly unpredictable and out of man's control, the greatest social need is for that kind of critical education which can help the individual develop a capacity to live in a world of rapid flux and to regain mastery over his own technology."⁴

³"The technical component of education focuses primarily on preparing students to become economically productive citizens by training them for established occupational roles in technological, administrative, or industrial enterprises. Its aim is to transmit a body of existing knowledge in order to enable its recipients to apply it productively to a defined range of technical problems. Technical education exists at all degree levels, and throughout all fields of education. The critical component of education, in contrast, attempts to expose students to multiple and conflicting perspectives on themselves and their society in order to test and challenge their previously unexamined assumptions. It strives to create conditions which stimulate students' intellectual, moral, and emotional growth, so that they may ground their skills in a more mature, humane framework of values. Critical education deliberately tries to stimulate the student to reformulate his goals, his cognitive map of the world, the way he thinks, and his view of his role in society." Kenneth Kenniston and Mark Gerzon, "Human and Social Benefits" in Universal Higher Education Costs and Benefits, Background papers for participants in the 54th Annual Meeting of the American Council on Education (Washington, American Council on Education, 1971), pp. 40-41. Emphasis in original.

⁴Ibid, pp. 58-59.

J. Douglas Brown, Provost and Dean of the Faculty Emeritus of Princeton University, writes:

Knowledge is but the means of education and not its end. The end is what happens to the student as a thinking, judging, active person and not as a storehouse of facts . . .

A technician needs, primarily, information, knowledge of techniques, and skill - "know how". A member of a learned profession or an industrial executive needs also to have a firm comprehension of a system of ideas, values, and judgments - "know why" . . .

As education progresses, especially for persons of high potential, there must be an increasing element of education in creativity, supplementing and building upon education in conformity. If the individual is to be an initiating force in his community, profession, or society, he must learn to think for himself, to use language, science, and history and all accumulating knowledge as tools and material for creative thinking and not to be tied down by someone else's thought or convictions . . .

Creativity arises out of intuitive thought supported by, but not limited by, analysis and the accumulation of knowledge. Intuitive thought is stimulated by many things, some closely related to the focus of inquiry and some, apparently, far from it. It is a mysterious power of association of ideas, of bits and pieces of knowledge, of questions, hunches, and imagined premises. Intuitive thought thrives in a freewheeling climate in which sensitivity, clarity, and association work both consciously and unconsciously, and not under the severe restraints of logic or precedent. The enrichment of the mind by diverse sources of association and the stimulation of the mind by diverse approaches to understanding and appreciation seem to produce the greater results . . .

Education (as outlined above) requires sustained interaction between the teacher and student and between the student and fellow student in order to be effective. This, in turn, requires more opportunities for the individual student to participate in discussions with the teacher in small groups or alone. Knowledge can be dispensed in large lecture halls, but ideas and values need to be hammered out in intimate, freewheeling interchange.⁵

⁵J. Douglas Brown, The Liberal University, (New York, McGraw-Hill, 1969), pp. 107-111, 124. Emphasis in original except for the last paragraph, where emphasis has been supplied.

The foregoing views, and many others which could be cited, stress the need for a new emphasis in education in order to accommodate to the impact of rapidly changing technology. The shift in emphasis is away from transmission of knowledge and technique - one of the time-honored hallmarks of professional education - and toward greater stress on problem-solving ability, innovation, and judgment. To this may be added the communicative skills essential to effective functioning in a modern organizational setting. The reasons for this shift are evident in the obsolescence of knowledge and continual change wrought by technology, which places a premium on qualities of adaptability, creativity, and a spirit of inquiry. The need is for persons who, rather than responding to new conditions with a stock set of concepts and methods, instinctively mistrust the standard way of perceiving and solving the problems, and formulate a creative response through development of a totally new approach to the situation. These qualities are to be valued in leaders at all echelons of society, but especially in Army officers who are executives in a technology management organization⁶, concerned with the constant application of technology to military systems and environments in order to enhance the capability to fight.

3. Impact of the New Emphasis in Education. This need for a new emphasis in officer education impacts upon the crucial elements of the educational process: what we teach, how we teach, and how we evaluate our students. According to Daniel Bell, "the curriculum has to be reorganized not so much to teach 'subject matter', as to make fundamental the nature of conceptual innovation and the processes of conceptual thought."⁷ There is no need to repeat the words of Dean Brown, quoted above, on the requirement for sustained interaction between teacher and student and between student and fellow student through participation in small group discussions, in order for education to be effective. This verdict is reinforced by Dr. Ericksen, who adds the additional judgment that "as educational technology grows, independent study and self-instructional facilities will become more generally used, and the discussion group will form the essential supporting base for such arrangements."⁸ That is, students will come together for small group discussions to sharpen the insights gained from self-study and be exposed to a variety of perspectives and opinions. According to Professor Gerald Whitlock of the University of Tennessee, the instructor in such a setting becomes less an imparter of facts and "more and more a source of inspiration for independent inquiry on the one hand and on the

⁶ Howard M. Vollmer, et al, The Role and Career Development of the Scientific and Engineering Officer in the Air Force (AD 668 077) (Menlo Park, Calif., Stanford Research Institute, Jan 1966.) See also "New Directions for Air Force Leadership," Air Force Review, Nov-Dec 1970.

⁷ Bell, op cit, p. 108.

⁸ Ericksen, op cit, pp. 22-23.

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other an expert dispenser of feedback which reinforces the student's own efforts to achieve and to demonstrate competence as an independent scholar."⁹ Lastly, the shift in emphasis in education creates a major problem for student evaluation, for the objectives easiest to test pertain to factual knowledge, whereas tests of intellectual skills such as analysis and synthesis are much harder to devise, and there are no simple means of testing critical judgment and creativity.¹⁰ To quote Professor Whitlock once again, "Most end-of-course examinations sample only course content and leave unmeasured changes in attitude toward inquiry, capacity for independent research and study, heightened intellectual curiosity, tolerance for the tentative, and respect for honest difference of opinion."¹¹

⁹Gerald Whitlock, "Evaluating Instruction: Learning/Perceptions", Teaching-Learning Issues No. 16, Learning Research Center, University of Tennessee, Spring 1971, p. 5.

¹⁰Morris H. Shamos, "The Art of Teaching Science" in Morris, op cit, pp. 75-76.

¹¹Whitlock, op cit, pp. 5-6.

APPENDIX O

IMPLICATIONS OF A MOVE TO STUDENT-CENTERED INSTRUCTION

Implications. There are many implications of moving toward greater use of student-centered instructional methods in the officer educational system. The impact will be considerable; and these implications should be recognized at the outset so that they may be appropriately dealt with in planning. Some of the principal implications are:

a. The role of contact hours as a measure of educational effort would be downgraded. This proceeds from the recognition that learning is not a straight-line function of time spent in class, a point repeatedly confirmed by research.¹ The practice of specifying mandatory subjects in terms of contact hours should be eliminated.

b. In line with the foregoing, classroom contact hours could be reduced as instruction becomes more student-centered. As an indication of the current emphasis on contact hours in the officer educational system, it has been computed that:

-- The average officer in C&GSC/branch school attends class 30-40 hours per week compared to 16 hours per week for the average undergraduate student in a typical state university and 10.5 hours per week for the average graduate student.²

-- An officer completing a 36-week advanced course attending class an average of 30 hours per week puts in the same number of contact hours as the average undergraduate does in two full academic years (4 semesters). He puts in the same number of contact hours as the average graduate student does in three full academic years (6 semesters). Reduction in contact hours would make additional time available to the faculty for counseling; tutorial, remedial, and other personalized instruction; and additional preparation time for their instructional duties.

c. Size of teaching unit would have to be reduced to permit small-group discussion. HUMRRO defines "small-group" as no more than 20. We know that when the class is larger than 30, the instructor is effectively lecturing. Hence optimal class size is less than 20, but certainly no more than 30. This will pose major problems for some schools in terms of the adequacy of classrooms and study halls; and all schools will confront faculty manning and scheduling problems.

¹In one college study comparing the efficacy of different methods of instruction, reduction of time in class varied from 30 to 80 percent. Yet at the end of the term there were no substantive differences in achievement among the students, as measured by content and learning resourcefulness tests. See Ohmer Milton, "Teaching or Learning," American Association for Higher Education, 1971.

²These are average credit hours based on the actual course loads of the 35,000 undergraduates and 7,500 graduate students at Ohio State University.

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d. The student-centered theory of learning should lead to marked reduction in conference methods of instruction, and to a change in the conduct of practical exercises. The "conference," as presently in use in the school system, permits a limited amount of instructor-student interchange, but in reality is little different from a lecture, (especially when class size rises above 30). Time-consuming practical exercises, handed out in piece-meal fashion during class, have been largely responsible for the monotony and boredom in our instruction. Practical exercises can be improved by issuing the entire problem to the student for individual or group study and solution outside of class, followed by classroom presentation and discussion of the individual or group solution. For example, in a typical 4-hour PE today the entire time is spent working requirements in class. In the student-centered theory of learning two-three hours would be given for individual/group study and solution outside of class, followed by one-two hours of presentation and discussion of the individual/group solution in class.

e. Lesson plans, with their set instructional format, would be eliminated for most subjects and lesson notes substituted therefore. These notes would suggest alternative teaching techniques and approaches for each lesson. After teaching the lesson, instructors should fill out a lesson comment sheet summarizing experience with respect to good and bad techniques.

f. There are important faculty implications, namely:

(1) The faculty should be encouraged to experiment and innovate. This can be fostered by allowing instructors latitude to depart from the conventional instructional method of FM 21-6. This "decentralization to the classroom" should result in more challenging and satisfying teaching, and contribute to the development of the faculty officer. Decentralization to the classroom need not involve any loss of control, for the critical function of establishing learning objectives, course organization and content would always remain in the hands of the senior faculty.

(2) Instructor training courses would have to be re-shaped to embrace small-group and personalized/individualized instructional methods, and the new roles mentioned in subparagraphs (3) and (4) below.

(3) The instructor would play a more prominent role in evaluation. With smaller classes, he would be expected to get to know each student and gauge his progress through the caliber of his questions, quality of his writing, stature with his peers, occasional writs, etc. At the end of the course (or sectioning period) he would be expected to produce both an academic grade and a descriptive "whole man" appraisal on each officer.

(4) The instructor's role in teaching would shift from presentor

Data provided by Office of Institutional Research, Ohio State University, and checked against similar data provided by Office of the Registrar, Pennsylvania State University.

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of information to "manager of Learning".³ He should diagnose student difficulties and assist in overcoming them, raise issues, answer questions, bring in historical situations, provide guidance concerning application, problem-solving, further reading and advanced study. His role as collaborator in learning should be accentuated; that of competitor (grader) muted. Resources other than the instructor would be used for presentation of information to a larger extent.

(5) Greater faculty stabilization would be desirable, not only to give an officer time to develop as a teacher through practice and experimentation with small-group and personalized/individualized instructional methods, but also to provide the sustained effort required to make the change-over to the new theory of teaching.

(6) Professorial tenure for a limited number of Department Heads and instructors would be desirable to assure continuity, expertise, and momentum. These officers might eventually comprise the nucleus of a career field in education and training, which in turn would bring greater professionalism to the school system. These positions should not be civilianized as military officers may be more readily sent to the field for up-dating when their knowledge becomes obsolete.

g. The student evaluation program would be recast to provide a "whole man" evaluation of the student (see Chapter 12 Evaluation). Greater emphasis would be placed on validation/diagnostic exams which support personalized/individualized instruction. Instructors would provide subjective appraisals of their students. Peer ratings might be usefully employed.

h. Instructors would be expected to counsel and assist students willing and able to go beyond the course work. In addition, the Director of Instruction should develop special programs for officers capable of working at the post-graduate level, i.e. officers with MA's or PhD's. Alternatives could include programs of reading and research, service on the faculty, ungraded self-study, or combination work-study program that would place the student in a laboratory or agency where he can come to grips with real-life problems.

³"The role of the instructor will change. Instead of being primarily an imparter of information, he will have to become more of a supervisor whose job will be to diagnose or assess continually where the trainee is in the learning process and to make available appropriate material so learning can occur efficiently." Howard H. McFann, "Individualization of Army Training", in Innovations for Training, Professional Paper 6-69 (Alexandria, VA, Human Resources Research Organization, Feb 1969). "The teachers and the instructors have to function effectively as tutors, diagnosticians, remediators, managers, counselors, advisors, conversationalists, and stimulating consultants. These skills are not part of most teacher-training or instructor-training curricula." William A. Deterline, "Applied Accountability" in Educational Technology, Vol XI, No. 1, Jan 1971, p. 19.

i. Full use could be made of students as instructors or assistant instructors in their areas of expertise, thereby better tapping this important resource.

j. Library and information retrieval facilities, such as microfiche readers and copiers, may have to be expanded to meet increased demand.⁴ Multi-media library services and specialized assistance would also have to be provided to instructors for efficient use of mechanized instructional aids.

k. Instructional requirements would be stated in terms of learning objectives or desired learning outcomes, with considerable latitude in determining how these are achieved. Some requirements would be met by formal instruction, others by integration with related instruction, still others by programmed texts, guest lectures, reading assignments, etc.

⁴As an example, when the electives program was introduced in our schools, library utilization increased dramatically, as much as 300 percent in one case.

APPENDIX P
FACULTY QUALITY OBJECTIVES - COMBAT ARMS SCHOOLS

	COMMAND			MILITARY SCHOOLS			CIVILIAN SCHOOLING	
	BDE	DN	CO	AWC	CGSC	ADV CRSE	COLLEGE DEG	ADVANCED DEG
C Instructional Dept	70	100		100			100	65
O Staff Agency	55	100		100			100	85
L Combined Staff & Faculty	65	100		100			100	70
L Instructional Dept		70		20	100		100	25
T Staff Agency		70		0	100		100	55
C Combined Staff & Faculty		70		15	100		100	30
M Instructional Dept			95		50	100	100	20
A Staff Agency			95		50	100	100	45
J Combined Staff & Faculty			95		50	100	100	22
C Instructional Dept			70			45	95	5
P Staff Agency			75			90	100	30
T Combined Staff & Faculty			70			50	95	7
L Instructional Dept			Plt Cmd 100				100	5
T Staff Agency			85				100	20
Combined Staff & Faculty			95				100	8

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APPENDIX Q

FACULTY QUALITY OBJECTIVES - COMBAT SUPPORT AND COMBAT SERVICE SUPPORT SCHOOLS

ACADEMIC DEPARTMENT OFFICERS

<u>COMMAND</u>	<u>COL</u>	<u>LTC</u>	<u>MAJ</u>	<u>CPT</u>
Group	14%	-0-	-0-	-0-
Battalion	100%	37%	-0-	-0-
Company	100%	100%	100%	100%
<u>MILITARY EDUCATION</u>				
War College	28%	-0-	-0-	-0-
C&GSC	100%	74%	42%	-0-
Adv Crs	100%	100%	100%	100%
<u>CIVILIAN SCHOOLING</u>				
Master's Degree	100%	32%	24%	5%
Baccalaureate	100%	100%	100%	95%
<u>STAFF EXPERIENCE</u>				
DA/Joint	43%	32%	13%	-0-
AMC/CDC/Comparable HQ	57%	21%	9%	-0-
Log Cmd, FASCOM, TASCOM, DISCOM, Com- parable HQ	100%	100%	90%	40%
Bn or Bde	100%	100%	100%	100%

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NON-ACADEMIC DEPARTMENT OFFICERS

<u>COMMAND</u>	<u>COL</u>	<u>LTC</u>	<u>MAJ</u>	<u>CPT</u>
Group	40%	-0-	-0-	-0-
Battalion	100%	27%	-0-	-0-
Company	100%	100%	100%	21%
<u>MILITARY EDUCATION</u>				
War College	40%	-0-	-0-	-0-
C&GSC	100%	73%	32%	-0-
Adv Crs	100%	100%	100%	100%
<u>CIVILIAN SCHOOLING</u>				
Master's Degree	40%	18%	41%	-0-
Baccalaureate	100%	100%	100%	100%
<u>STAFF EXPERIENCE</u>				
DA/Joint	60%	18%	9%	-0-
AMC/CDC/Comparable HQ		9%	23%	-0-
Log Cmd, FASCOM TASCOM, DISCOM, Com- parable HQ	100%	100%	73%	7%
Bn or Bde	100%	100%	100%	50%

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TOTAL SCHOOL OFFICERS

<u>COMMAND</u>	<u>COL</u>	<u>LTC</u>	<u>MAJ</u>	<u>CPT</u>
Group	25%	-0-	-0-	-0-
Battalion	100%	33%	-0-	-0-
Company	100%	100%		75%
<u>MILITARY EDUCATION</u>				
War College	33%	-0-	-0-	-0-
C&GSC	100%	73%	40%	-0-
Adv Crs	100%	100%	100%	100%
<u>CIVILIAN SCHOOLING</u>				
Master's Degree	75%	27%	28%	5%
Baccalaureate	100%	100%	100%	95%
<u>STAFF EXPERIENCE</u>				
DA/Joint	50%	27%	12%	-0-
AMC/CDC/Comparable HQ	33%	17%	12%	-0-
Log Cmd, FASCOM TASCOM, DISCOM, Com- parable HQ	100%	100%	86%	30%
Bn or Bde	100%	100%	100%	84%

APPENDIX R

FACULTY QUALITY OBJECTIVES - C&GSC

	Command Level	Staff Level	Military Education	Civilian Education	Special Skill
Department Director					
Resident Instr	BDE	Div (*)	SSC	MA	Education
Nonresident	BDE	DA	SSC	MA	Education
Command	BDE	Div (*)	SSC	MA	
Division Opns	BDE	Div (*)	SSC	MA	Humanities
Larger Unit Opns	BDE	Corps (*)	SSC -	MS	
DJCASO	BDE	DA	SSC		
Grad Studies	BDE	DA	SSC	PhD	
Ed Advisor				PhD	Education
Deputy Directors					
Resident Instr	BN	Div (*)	SSC	MA	Education
Nonresident	BN	DA	CGSC	MA	Education
Command	BDE	Div (*)	SSC	-	
Division Opns	BN	Div (*)	SSC	MA	Humanities
Larger Unit Opns	BDE	Corps (*)	CGSC	-	
DJCASO	BN	DA	CGSC	MA	Pol Sci
Grad Studies	BN	DA	CGSC	MBA	Business
Key Staff Positions					
DRI (4)				MA	ADP (1) Education (3)
DNRI (4)				MA	Education
DCSR				MA	Soc Science
Curriculum Courses					
1 DC Sec Ch, Gen Stf	BN	DA	CGSC	-	-
A/I (4)	BN	Div (*)	CGSC	-	-
A/I	-	-	CGSC	MA	History
A/I	-	-	CGSC	MA	Eng
2 DC Sec Ch, Cmd	BN	DA	CGSC	-	-
A/I (4)	BN	Div (*)	CGSC	-	-
A/I (10)	-	-	CGSC	MA	OR/SA, ADP, Journ, Compt, Law

(*) Principal Staff Experience

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FACULTY QUALITY OBJECTIVES - C&GSC

	Command Level	Staff Level	Military Education	Civilian Education	Special Skill
<u>Curriculum Courses (cont.)</u>					
3 DDO Sec Ch	BDE	Div (*)	SSC	MA	
Sec Ch (2)	BN	Div (*)	CGSC	-	
A/I (6)	BN	-	CGSC	-	-
A/I (9)	-	Div	CGSC	-	
A/I	-	-	CGSC	MA	
4 DLUO Sec Ch	BDE	Corps (*)	CGSC	-	-
Sec Ch	Group	TASCOM, FASCOM	CGSC	-	-
A/I (22)	BN	Corps	CGSC	-	-
A/I (23)	BN	FASCOM, TASCOM	CGSC	-	-
5 DJCASO Sec Ch	BDE	DA	SSC	MA	Soc Sci
A/I (2)	BN	DA	SSC	-	-
A/I (8)	BN	Div	CGSC	MA	Hist, Geog, IR (3), Pol Sci, Econ (2)
A/I (5)	BN	Div	CGSC	-	-
6 DJCASO Sec Ch	BDE	Joint	SSC		
A/I (2)	BN	Joint	CGSC		
A/I (2)	BN	DA	CGSC		
A/I (5)	BN	Div	CGSC		
A/I (6)	-	Div	CGSC		
DJCASO Sec Ch	BDE	Div	SSC	MA	Soc Sci
A/I (2)	-	Joint	CGSC	-	
A/I (2)	-	Joint	CGSC	MA	Econ, IR
A/I (2)	-	Div	CGSC	MA	Econ, Psychology
A/I (5)	-	Div	CGSC	-	
A/I (2)	-	-	CGSC	MS	Pol Sci, Anthropology
A/I (2)	-	-	AF/C	-	

(*) Principal Staff Experience

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APPENDIX S

THE WEST POINT APTITUDE FOR THE SERVICE SYSTEM AND PEER RATINGS

The West Point Aptitude for the Service System has the objective of identifying cadets with outstanding leadership ability to occupy the more responsible chain of command positions, to provide counsel and guidance to those cadets who have demonstrated leadership shortcomings, and to eliminate those cadets who do not possess the necessary leadership potential to become an officer. The system is a composite of peer and supervisory ratings. Each cadet is rated by his tactical officer and by cadets of his own and senior classes within his company. Raters compare the cadet to his classmates and assign him a rank order based on his ability to command a group of men in the accomplishment of an assigned mission while maintaining within the group high standards of discipline, morale and personal morality.

The rankings are scored by computer. Tactical officers' ratings are combined with cadet ratings in a 1:2 ratio and a standard score arrived at for each cadet. This is the aptitude for the service rating (ASR). Standard scores provide a means of combining the ratings of each cadet company and arriving at a class aptitude order of merit. This order of merit list is the principal tool for identifying cadets in carrying out the three basic purposes of the aptitude system. However, final judgments are based on a "whole man" evaluation of a cadet's entire record, including academic grades, physical education scores, participation in extra-curricular activities, and a supplemental leadership evaluation file. The latter contains cadet performance reports for various duties, summer camp and "third lieutenant" performance reports, evaluation of ability to present effective military instruction, and so forth.¹

As stated earlier, ASR ratings are a composite of peer and supervisory (tactical officer) ratings. In explaining the rationale and support for peer ratings, Tobin and Marcum state:

A peer rating is a composite or average of each group member's assessment of every other group member on a recognizable quality such as task performance, popularity, leadership, etc. From his work Leaders, Groups, and Influence, Hollander (1964) states "peer nominations represent a more superior, consistent predictor of performance criteria across situations than any other single variable. This evidence, mainly from military studies, is quite clear on this point." The question may well be asked "Why are peer ratings a superior and consistent predictor of performance?" In general, there appears to be three important reasons that answer this inquiry. First, peer ratings are simply more reliable. The rating being a consensus of the group is less subject to fluctuations and acts to control for variance between raters. Hard raters balance out easy raters and, on the average, the individual is more likely to receive his true rating. In addition, biases, prejudices, personality conflicts, petty

¹Daniel J. Tobin and Robert H. Marcum, Leadership Evaluation. USMA Office of Military Psychology and Leadership, West Point, 1967.

resentments and other personal conflicts involving the rated individual and any one of his raters are certainly less significant. The obtained reliability leads to a greater measure of belief simply because of its repetitive nature. Secondly, peer ratings are made in an atmosphere free of status differential between the rater and the ratee. Often the relationship between superior and subordinate is colored by a degree of artificiality because of their different roles. Simply said, we can expect the subordinate to always be on his "best behavior" when interacting with his boss, but among his contemporaries he is more apt to reveal his true self. Finally, the peer rating is made on the basis of observed behavior across a variety of situations and not just in the context of official relationships. The peer will observe an individual in work, play, social occasions and in moments of emotional stress more often than the supervisor. But again, as with the supervisory rating, one must not carte blanche accept the peer rating as the panacea of performance evaluation. Recent evidence tends to indicate that the peer nomination may well be more a function of the internal group process than it is a function of the total group product or performance. It is quite probable that the peer rating measures an interpersonal competence factor that deals with the ability to make one's self socially acceptable to the work group: the term "socially" encompassing not only the individual's general temperament but also his willingness to abide by the group norms and goals while adhering to the professional values held in esteem by the group members. Thus, an individual receives a high peer rating at the Military Academy probably will receive high officer performance type ratings when the sociometric conditions are demanding of efficient interpersonal behavior - such is often the case in the large bureaucratic, diversified structure of the present Armed Forces. A leading leadership theoretician, Dr. Raymond B. Cattell (1965) suggests that an aspect of leadership that must continue to be related to leadership assessment is the total product or performance of the group when serving under the leader. In summary, it can be stated that although peer ratings contribute a major portion of the leadership evaluation at West Point, they are tempered by other objective measures of performance and the experience and judgment of the tactical officer.²

In their study, Tobin and Marcum digest the results of eighteen studies of the Aptitude for the Service spanning the classes of 1944 through 1967. The following table summarizes the results of several of these studies. It should be noted that the validity co-efficients hold up fairly consistently across diverse criteria of officer success.

²Ibid.

APTITUDE AS A PREDICTOR OF SUCCESS³

<u>Criterion</u>	<u>Class</u>	<u>Validity</u>
Efficiency Reports	1944	.44.
Efficiency Reports	1945	.48
Efficiency Reports	1946	.50
Efficiency Reports	1953	.44
Combat Effectiveness	1945-50	.52
Combat Effectiveness	1944-48	.50
Combat Effectiveness	1949-50	.49
Officer Efficiency Index	1948	.44
Outstanding Promotion	1948	.45
Continues Service	1948	.08
Efficiency Reports	1954-56	.26
Outstanding Promotion	1953	.43
Ranger Performance	1965	.35

In interpreting the validity coefficients in the foregoing table it should be noted that a coefficient of .4 or above is considered quite good in the field of predicting human performance from a test battery, aptitude rating, or similar screening device. Considering that most studies of the predictive ability of ASR are relating measures separated in time by six to ten years, and that graduates perform under highly diverse conditions, obtained correlations of ASR and officer performance are held to be quite significant.⁴

Other noteworthy studies of ASR include the following:⁵

-- A study conducted by the U.S. Army personnel Research Office during the Korean Conflict related combat effectiveness, as measured by a specially designed efficiency report on a sample of graduates from the classes of 1945 through 1950, to ASR. The study found a correlation of .52 (a pretty high correlation in this business) between combat effectiveness and ASR.

-- Another study by USAPRO on the USMA Class of 1948 was conducted to determine whether the predictive superiority of ASR persists for performance at the field grade level. The study found that ASR continued to display superior predictive power than alternative measures (class standing, academic grades, PE) for overall effectiveness and selection for advanced promotion.

-- An MP&L study of officers of the classes of 1953 through 1956 classified FQNS (fully qualified but not selected) for promotion purposes indicated that ASR is related to performance as long as ten years subsequent to graduation.

³ Ibid, p. 23.

⁴ Ibid, pp. 52-53.

⁵ Ibid. 32-50.

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-- An MP&L study of the class of 1967 examined the value of supervisory ratings as a complement to peer ratings. Results indicated that ASR was still the better over-all system but many desirable features of the chain of command rating warranted its use in addition to ASR. This lends support to the value of descriptive supervisory ratings used in conjunction with peer ratings.

-- A study conducted in 1967-68 by the Office of MP&L undertook to assess the validity of the Aptitude System from an examination of the characteristics of those who had been found deficient or marginal performers by the system. The study concluded that those cadets eventually declared deficient in military aptitude are identified by the Aptitude System at the first rating during the Fourth Class Year; and the main failure of cadets dismissed for lack of military aptitude is lack of interpersonal skills, i.e., ability to project an image of himself as a competent individual.⁶

-- An MP&L study of cadets who had experienced substantial shifts in aptitude standing from entrance to graduation tended to show that aptitude standing does change in relation to changes in performance, personality, or attitudes.⁷

-- A study of the Class of 1962 showed that 74 percent of selectees from the secondary zone for major stood in the top half in aptitude as cadets. A special performance report on 114 members of the class serving in Vietnam in 1966-67 showed that those officers who had an aptitude standing above the middle of their class tended to perform better in Vietnam than those who stood below the middle.⁸

-- A MP&L study in 1966 was made to determine the percentage of cadets from the classes of 1960 through 1965 initially rated low in ASR (4th Class Fall Rating) who eventually managed to graduate. The study concluded that even at an early date ASR is an accurate measure of individuals who will fail for all reasons to graduate from the Military Academy.⁹

-- The results of the foregoing study support the findings of an earlier study (1949) at the Signal Corps OCS by Wherry and Fryer. They found

⁶Samuel H. Hays, Robert H. Marcum, James C. Burris, and Ramon A. Nadal. An Evaluation of the Aptitude for the Service System. Office of Military Psychology and Leadership, USMA, West Point, October 1968, p. 9.

⁷Ibid. p. 3.

⁸Ibid. pp. 3, 110.

⁹Tobin and Marcum, p. 42.

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that peer ratings measured the same factors as early as the first month of training as they measured three months later. Moreover, the first month measurement was the same as the rating given by supervisors after four months observation. The evidence was clear that peer rating was the more reliable and that the supervisory rating tended to become more like peer rating rather than vice versa.¹⁰ This study and the previous one, together with the 1967-1968 study by MP&L of deficient or marginal performers already cited, lend support to the validity of peer ratings as student evaluation-instruments in courses as short as the officer basic course.

-- In his book, Leaders, Groups and Influences, E. P. Hollander states that peer ratings are the best personnel measurement system available. He also states, however, that generally the same people will end up at the top and bottom of a peer rating scale regardless of what criterion they are measured against. Basically, this means that peers can make accurate and valid judgments but oftentimes may not be able to identify the reason for their judgment.¹¹ Hollander has also shown that peer groups can predict with some success performance seemingly unrelated to interpersonal skills, i.e., success or failure in flight training.¹² The subject of what precisely is measured by peer ratings is the subject of continuing research.¹³

-- A review of the literature on peer ratings by the Office of MP&L concluded as follows:

"Peer ratings have become a widely accepted system of personnel evaluation, not only in the military services, but in industry and educational institutions as well. A review of pertinent contemporary published research and studies was conducted, seeking to compare the findings from other sources with those previously determined in the workings of the USMA Aptitude System. The primary conclusions of this literature review are that peer ratings are the most valid personnel rating system now available, that this fact is well recognized by psychologists and professional workers, and that current research in this field has gone far past the question of reliability and validity of these measures. Current academic research is primarily concerned with the use of peer ratings as criterion measures against which to validate other measurement instruments and to attempt to isolate the personality factors which peer ratings actually measure.

¹⁰ Ibid, p. 19.

¹¹ E. P. Hollander. Leaders, Groups and Influence. (New York, Oxford University Press, 1964. Cited in Ibid.

¹² Hays, et al, op cit, p. 123.

¹³ Ibid. See the survey of literature, pp. 115-123.

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Although peer ratings have gained wide acceptance within the military and their validity is generally accepted in industry, they have not been widely utilized in operational situations in industry. Their use has been generally concentrated in school situations and basic training centers.¹⁴

-- A peer rating system can probably be administered more effectively in a school environment than most other military environments. They have been administered to ROTC and OCS classes on numerous occasions for research purposes. A paper by USABESRL summarizes seventeen such experiments.¹⁵ Thus, peer ratings seem to be appropriate for use in a service school setting.

-- Concerning the possible use of peer ratings in the basic course, the following considerations are applicable:

a. The research previously mentioned which indicates that peer ratings are valid predictors as early as the first month of training.

b. Peer ratings may have a favorable effect on the professional socialization of new officers - a particularly important task in view of the diverse values and attitudes of today's youth. This conclusion stems from the hypothesis that peer ratings tend to measure conformity with group norms. Peer ratings could also assist in identifying "attitude" cases for elimination.

c. Peer ratings could be usefully supplemented by instructor and/or tactical officer ratings. This is based on the view that since measurement instruments are not perfect, a composite of peer and supervisory ratings is the best approach. The West Point system embodies this approach. At West Point, tactical officer ratings were found to have a much higher validity than academic instructor ratings.¹⁶

-- Based upon West Point experience and the character of the demands made upon Army officers, it appears that leadership is the most valid criterion for peer ratings.

The West Point Aptitude for the Service System was first used in 1943. Thus, we have close to thirty years experience with the system as a predictor of future success. During the period the validity of the Aptitude for the Service Rating has been verified by psychologists and researchers in almost every conceivable way. In each case the ASR has been determined to be a valid, reliable, and significantly more accurate predictor of

¹⁴ Ibid. Emphasis supplied.

¹⁵ USABESRL. School Measures as Indicators of Later Officer Performance - Summary of Research Findings (Washington, 1971).

¹⁶ Tobin and Marcrum, pp. 17, 20, 22.

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future officer performance than any alternative measure, including class standing, academic grades, physical ability, tactics, conduct, instructor training, and a wide range of academic subjects. A skeptical DA staff, by directing review after review of the ASR (the last in 1967), has contributed to the development of an impressive body of evidence in support of peer ratings as predictors of future performance. Since everything a school does aims at retention and transfer of learning to duties performed in future assignments, peer ratings would thus appear to constitute a valid evaluation instrument for use in our schools. The issue is mainly whether the West Point Aptitude for the Service System can be adapted for use in the post-commissioning military schooling system.

APPENDIX T

RESEARCH AND DEVELOPMENT CENTERS

Dr. Robert Glaser, Director
Dr. William Cooley, Co-Director
Learning Research and Development Center
University of Pittsburgh
160 N. Craig Street
Pittsburgh, Pennsylvania 15213
412-683-8841
412-683-8640-1 Dr. Cooley

Dr. Max G. Abbott, Director
Center for the Advanced Study
of Educational Administration
University of Oregon
147B Hendricks Hall
Eugene, Oregon 97403
503-686-5172

Dr. Herbert J. Klausmeier, Director
Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
1404 Regent Street
Madison, Wisconsin 53706
608-262-4858

Dr. Robert F. Peck, Co-Director
Dr. Oliver H. Bown, Co-Director
Research and Development Center
for Teacher Education
University of Texas
Education Annex
Austin, Texas 78712
512-471-1343

Dr. Nathaniel L. Gage, Acting Director
Stanford Center for Research and
Development in Teaching
Stanford University
770 Welch Road
Palo Alto, California 94304
415-321-2300, Ext. 4724

Educational Policy Research Center
216 Ostrom Avenue
Syracuse, New York 13210

Dr. Leland L. Medsker, Director
Center for Research and Development
in Higher Education
University of California
2150 Shattuck Avenue
Berkeley, California 94704
415-642-5769

Dr. Marvin C. Alkin, Director
Center for the Study of Evaluation
University of California
405 Hilgard Avenue
145 Moore Hall
Los Angeles, California 90024
213-825-4711, Ext. 28

Dr. John Holland, Director
Center for the Study of Social
Organization of Schools
The Johns Hopkins University
3505 North Charles Street
Baltimore, Maryland 21218
301-366-3582

Dr. Ohmer Milton, Director
Learning Research Center
University of Tennessee
Knoxville, Tennessee 37916

Dr. Stanford C. Erickson, Director
Center for Research on Learning
and Teaching
University of Michigan
Ann Arbor, Michigan 48104

Center to Improve Learning and
Instruction
University of Utah
Salt Lake City, Utah

Center for Studies in Vocational
and Technical Education
University of Wisconsin
Madison, Wisconsin 53706

Center for Research and Leadership Development
in Vocational and Technical Education
Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

Center for Creative Leadership
Greensboro, North Carolina

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APPENDIX U

June 1971

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ERIC CLEARINGHOUSES: BRIEF SCOPE NOTES

ERIC Clearinghouse on Adult Education
Syracuse University
107 Roney Lane
Syracuse, New York 13210
Telephone: (315) 476-5541 X 3493

Adult education in public schools, colleges, and universities; activities carried on by national or community voluntary and service agencies; all areas of inservice training; fundamental and literary education for adults; correspondence study; continuing education in the professions.

ERIC Clearinghouse on Counseling and Personnel Services
Information Center
611 Church Street, Room 3056
Ann Arbor, Michigan 48104
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings; theoretical development of counseling and guidance; use and results of personnel procedures such as testing, interviewing, disseminating, and analyzing such information; group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

ERIC Clearinghouse on Early Childhood Education
University of Illinois
805 W. Pennsylvania Avenue
Urbana, Illinois 61801
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research, and practice related to the development of young children.

ERIC Clearinghouse on Educational Management
University of Oregon
Eugene, Oregon 97403
Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks, and processes of administration; methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

ERIC Clearinghouse on Educational Media and Technology
Institute for Communication Research
Cypress Hall, Stanford University
Stanford, California 94305
Telephone: (415) 321-2300 X 3345

Individualized instruction, systems approaches, film, television, radio, programmed instruction, computers in education, and miscellaneous audiovisual means of teaching. Technology in instruction and technology in society when clearly relevant to education.

ERIC Clearinghouse on Exceptional Children
Council for Exceptional Children
 1411 South Jefferson Davis Highway
 Suite 900
 Arlington, Virginia 22202
 Telephone: (703) 521-8820

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of professional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

ERIC Clearinghouse on Higher Education
George Washington University
 One Dupont Circle, Suite 630
 Washington, D.C. 20036
 Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs. Curricular and instructional problems and programs, faculty, institutional research, Federal programs, professional education (medical, law, etc.), graduate education, university extension programs, teaching-learning, planning, governance, finance, evaluation, interinstitutional arrangements, and management of higher educational institutions.

ERIC Clearinghouse for Junior Colleges
 Room 96, Powell Library
 University of California
 405 Hilgard Avenue
 Los Angeles, California 90024
 Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curriculums, programs, libraries, and community services.

ERIC Clearinghouse on Languages and Linguistics
Modern Language Association of America
 62 Fifth Avenue
 New York, New York 10011
 Telephone: (212) 691-3200

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycho-linguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly and uncommonly taught languages including English for speakers of other languages.

ERIC Clearinghouse on Library and Information Sciences
American Society for Information Science
 1140 Connecticut Avenue, N.W.
 Suite 804
 Washington, D.C. 20036
 Telephone: (202) 659-3778

Various detailed aspects of information retrieval, library and information processing, library and information sciences, library services, library and information systems, information utilization, publishing industry, terminology, library facilities and information centers, library materials and equipment, librarian and information science personnel, library organizations, and library education.

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ERIC Clearinghouse on Reading
200 Pine Hall
School of Education
Indiana University
Bloomington, Indiana 47401
Telephone: (812) 337-9101

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

ERIC Clearinghouse on Rural Education and Small Schools
Box 3 AP
New Mexico State University
Las Cruces, New Mexico 88001
Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

ERIC Clearinghouse on Science and Mathematics Education
Ohio State University
1460 West Lane Avenue
Columbus, Ohio 43221
Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of interest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.

ERIC Clearinghouse for Social Science Education
835 Broadway
Boulder, Colorado 80302
Telephone: (303) 443-2211 X8434

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

ERIC Clearinghouse on Teacher Education
One Dupont Circle
Suite 616
Washington, D.C. 20036
Telephone: (202) 293-7280

School personnel at all levels; all issues from selection through preservice and inservice preparation and training to retirement; curricula; educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject specialty in other ERIC Clearinghouses.

ERIC Clearinghouse on the Teaching of English
1111 Kenyon Road
Urbana, Illinois 61801
Telephone: (217) 328-3870

Skills of English, including speaking, listening, writing, and reading (as it relates to English instruction); content of English, including composition, literature, and linguistics; methodology of English teaching; speech and public speaking; teaching of English at all levels; preparation of English teachers; preparation of specialists in English education and teaching of English; teaching of English to speakers of nonstandard dialects.

ERIC Clearinghouse on Tests, Measurement, and Evaluation
 Educational Testing Service
 Princeton, New Jersey 08540
 Telephone: (609) 921-9000 X 2691

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects or programs.

ERIC Clearinghouse on the Disadvantaged
 Information Retrieval Center on the Disadvantaged
 Teachers College
 Columbia University
 Box 40
 525 West 120th Street
 New York, New York 10027
 Telephone: (212) 870-4808

Effects of disadvantaged experiences and environments, from birth onward; academic, intellectual, and social performance of disadvantaged children and youth from grade 3 through college entrance; programs and practices which provide learning experiences designed to compensate for special problems of disadvantaged; issues, programs, and practices related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

ERIC Clearinghouse on Vocational and Technical Education
 Ohio State University
 1900 Kenny Road
 Columbus, Ohio 43210
 Telephone: (614) 486-3655

Agricultural education, business and office occupations education, distributive education, health occupations education, home economics education, technical education, trade and industrial education, subprofessional fields, industrial arts education, manpower economics, occupational psychology, occupational sociology, and all matters related to the foregoing.

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APPENDIX V

EDUCATIONAL RESEARCH AGENCIES AND PROFESSIONAL ASSOCIATIONS

Carnegie Commission on Higher Education
1947 Center Street
Berkeley, California 94704

Institute for Social Science Research
1200 17th Street N.W.
Washington, D.C. 20036

Educational Policy Research Center
Stanford Research Institute
Menlo Park, California 94025

Dr. Christopher Jencks
Institute for Policy Studies
1520 New Hampshire Avenue N.W.
Washington, D.C. 20036

Dr. Amitai Etzioni
Center for Policy Research
423 West 118th Street
New York, New York 10027

American Association of University
Professors
One Dupont Circle N.W.
Washington, D.C. 20036

American College Testing Program
P.O. Box 168
Iowa City, Iowa 52240

American Association for Higher
Education
One Dupont Circle N.W.
Suite 780
Washington, D.C. 20036

The Brookings Institution
1775 Massachusetts Avenue N.W.
Washington, D.C. 20036

National Planning Association
1606 New Hampshire Avenue N.W.
Washington, D.C. 20036

American Council on Education
One Dupont Circle N.W.
Washington, D.C. 20036

American Society for Training and
Development
P.O. Box 5307
Madison, Wisconsin 53705

Educational Technology Publications,
Incorporated
140 Sylvan Avenue
Englewood Cliffs, New Jersey 07632

Western Interstate Commission for
Higher Education
P.O. Drawer P
Boulder, Colorado 80302

Educational Testing Service
Princeton, New Jersey 08540

National Association of State
Universities and Land-Grant
Colleges
Suite 710
One Dupont Circle N.W.
Washington, D.C. 20036

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