

GAO

Report to the Chairman, Panel on Military
Education, Committee on Armed Services,
House of Representatives

July 1992

MILITARY EDUCATION

Implementation of Recommendations at the Industrial College of the Armed Forces



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**National Security and
International Affairs Division**

B-248635

July 23, 1992

The Honorable Ike Skelton
Chairman, Panel on Military Education
Committee on Armed Services
House of Representatives

Dear Mr. Chairman:

In response to your request, we have examined various issues relating to the professional military education activities at the joint schools of the National Defense University located at Fort McNair in Washington, D.C. This report addresses the Industrial College of the Armed Forces' implementation of 41 recommendations¹ contained in the April 1989 report of the Panel on Military Education.

These recommendations were developed to assist the Department of Defense (DOD) in improving its professional military education programs for officers. This report is the last in a series addressing the nature and extent of actions DOD has taken to improve its officer education at the service and joint schools. (See "Related GAO Products" at the end of this report.)

Background

A primary objective of the Goldwater-Nichols Reorganization Act of 1986 was to strengthen combined and joint operations of the various military services. To fulfill this objective, the House Armed Services Committee established the Panel on Military Education in November 1987 to report its findings and recommendations regarding DOD's ability to develop joint specialty officers through its professional military education systems.

The Chairman, Joint Chiefs of Staff, established policies, programs, guidelines, and procedures concerning joint professional military education. In May 1990, he issued guidance in the "Chairman's Memorandum 344-90, Military Education Policy Document." While Panel recommendations are advisory, military education institutions are required to incorporate the Chairman's guidance into their own education systems. The professional military education system of DOD is composed of eight service schools and three joint schools.

¹These include three recommendations the Panel identified as key and are contained in the executive summary to its report.

The Industrial College of the Armed Forces' mission is to prepare selected military officers and civilians for senior leadership and staff positions dealing with the resource component of national power. It has 63 faculty members. Of these, 30 are military, with representation from the land, sea, and air services. The military faculty members include one from the U.S. Coast Guard and one Canadian officer. However, when the Panel recommendations dealing with military faculty are discussed, only the 28 U.S. military members will be used.

Thirty-three are civilian faculty members, including 8 who are termed "agency chairs."² They are on loan from their respective agencies and are not a part of the College's authorized military or civilian positions. These eight represent their agencies in national security strategy issues and policies and assist the College in formulating them. They also are responsible for encouraging open discussion and debate on these topics as well as assisting other faculty members and students.

The 1991-92 academic year, divided into two semesters, started in August 1991 and ended in June 1992. Total enrollment was 223 students, divided into 14 seminars (classrooms) during the first semester, which ended in January 1992. The second semester, which started in January 1992 with 15 seminars, ended in June 1992. Each seminar accommodates approximately 16 students. Each of the three military departments is represented by senior officers, who account for 78 percent of the student body.

Results in Brief

Of the 41 recommendations pertaining to the College, 23 recommendations (56 percent) have been implemented. These include two key recommendations on establishing a professional military education framework and obtaining quality civilian and military faculty members.³ The remaining 18 recommendations (44 percent) have been partially implemented.

Four of the partially implemented recommendations (including one key recommendation) pertain to letter grades. Instead of letter grades, the College uses a detailed evaluation system to assess students in each of the seminars. The assessment breaks students into four categories—one of top

²They represent the Federal Emergency Management Agency; the Departments of Energy, State, Health and Human Services, Transportation; the Central Intelligence and the Defense Information Systems Agencies; and the Agency for International Development.

³Key recommendations are those the Panel on Military Education deemed the most important.

two students in a seminar, exceeds expectations, meets expectations, and fails to meet expectations.⁴ College officials stated that assigning students a single letter grade does not necessarily meet the standards of rigor. They stated that their students are mature, high achievers who do not need a grading system that assigns letter grades. The adjectival categorizations, they said, achieve the same purpose without the demeaning aspects of letter grades.

The other 14 partially implemented recommendations cover areas that are not fully within the College's control. These areas include faculty and student mixes, faculty and student quality, and student to faculty ratios. As stated earlier, the one military faculty member from the Coast Guard was not included in discussing military faculty recommendations or computing mixes and faculty/student ratios. The President, National Defense University, stated that the Coast Guard, while not included as part of the Navy Department during peacetime, is a part of the Navy during wartime. He believes they could be included in the mixes and ratios since, during peacetime, the schools are preparing for military conflicts.

Appendix I presents the recommendations along with our characterization of their implementation. It also provides additional details on the College's actions for each recommendation.

Force Drawdown May Be Affecting Faculty and the Implementation of Panel Recommendations

During the course of our work, we discussed with College officials the potential effects of the force drawdown on military faculty members and the implementation of the Panel recommendations. The Dean of Faculty and Academic Programs stated that military faculty turbulence has been increased by the drawdown of the services and adverse actions taken by the Selection for Early Retirement Boards. The Dean said that the 20 colonels/captains presently on the faculty are the most vulnerable for being selected for early release. As a result, he believes the morale of this group has suffered.

In addition, he pointed out that some of the Panel recommendations dealing with military faculty members may not be implemented and others will become partially implemented since faculty members may start to retire early to avoid being forced out, while others are actively seeking

⁴The Dean of Faculty and Academic Programs stated that to ensure that the evaluation system is consistently applied and the system's integrity is preserved, raters of students are also rated.

employment outside the military. The consequence of this is that new members may not be found in time to avoid adverse effects upon faculty quality, mixes, and ratios.

Further, the Dean reports that of the 25 military faculty members that retired during academic years 1989-90, 1990-91, and 1991-92, 13 left the College before completing the normal tour (about 3 years). The Dean of Faculty and Academic Programs said that two members had been selected for release by the Boards and speculated that others may have been influenced to retire early to avoid being selected for early release.

Scope and Methodology

We focused on Panel recommendations that dealt with either the College or senior professional military education schools. (The College is typically attended by officers at the colonel/captain level.) We then selected those recommendations that the College was directly responsible for or played a role in implementing.

We determined the status of each recommendation by interviewing appropriate College and other officials, examining pertinent supporting documents, and considering the methodology College officials used in developing the support data. This enabled us to characterize the recommendations as either implemented or partially implemented.

We conducted our review from October 1991 through May 1992 in accordance with generally accepted government auditing standards.

As requested, we did not obtain DOD comments. However, the views of responsible College and other officials were sought during the course of our work and included in the report where appropriate.

We are sending copies of this report to other appropriate congressional committees; the Secretaries of Defense, the Army, the Navy, and the Air Force; the Commandant of the Marine Corps; the President of the National Defense University; the Commandants of the Industrial College of the Armed Forces, National War College, and the Armed Forces Staff College; and the intermediate and senior service schools. Copies will be made available to other interested parties upon request.

Please contact me at (202) 275-3990 if you or your staff have any questions. Major contributors to this report were George E. Breen, Jr.,

Assistant Director; Frank Bowers, Senior Evaluator; and Meeta Sharma,
Staff Evaluator.

Sincerely yours,



Paul L. Jones
Director, Defense Force
Management Issues

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Abbreviations

DOD	Department of Defense
ICAF	Industrial College of the Armed Forces
JCS	Joint Chiefs of Staff
JSO	joint specialty officer
NDU	National Defense University
PME	professional military education

Status of Industrial College of the Armed Forces' Implementation of Panel Recommendations

This appendix details 41 Panel recommendations that pertain to the Industrial College of the Armed Forces (ICAF). It summarizes actions ICAF has taken in response to those recommendations. Table I.1 capsulizes the status of the recommendations.

For purposes of this appendix, we have numbered the Panel recommendations sequentially from 1 to 41. We identify the subject area of the recommendation and use the actual wording of the recommendation and the same sequencing as the Panel report. After each recommendation, we cross-reference to the location of the recommendation in the Panel report. (For example, key 1 is the first recommendation in the executive summary that contains the key recommendations. Chapter 1, recommendation 1 is the first recommendation in chapter 1.) We also provide the page number in the Panel report that the recommendation is on.

In most cases, the recommendation appears exactly as it does in the Panel report, and the entire recommendation is addressed. In recommendations that contain multiple parts, however, we have underlined certain portions to identify the applicable parts that were addressed.

We have characterized each of the 41 recommendations as implemented or partially implemented. None are characterized as not implemented. An elaboration of the characterization is provided in the section marked "status." In addition, cross-references to related recommendations are provided in the "status" when responses are similar.

Table I.1: Summary of ICAF's Implementation of Various Recommendations

No.	Panel report ^a	Subject	Status of recommendations ^b	Page
1	Key 1	Framework for education	I	10
2	Key 2	Faculty quality	I	11
3	Key 9	Frequency of grading of examinations and papers	PI ^c	12
4	I-1	Focus of education framework	I	13
5	II-5	Faculty teaching strategy	I	14
6	III-5	Joint doctrine development	I	15
7	III-6	Military faculty mix	PI ^d	15
8	III-7	Military faculty qualifications	PI ^d	17
9	III-8	Military student mix	PI ^d	19
10	III-9	Prerequisite for joint education	PI ^d	21

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No.	Panel report^a	Subject	Status of recommendations^b	Page
11	III-10	Report on faculty/student selection criteria and policies	I	21
12	III-12	Environment for joint education	I	23
13	III-13	Student/faculty ratios	PI ^d	24
14	IV-7	Standards for joint education	PI ^d	26
15	IV-9	Participants in joint doctrine development	I	27
16	IV-10	Military faculty mix	PI ^d	27
17	IV-12	Recruiting competent military faculty for a joint school	PI ^d	27
18	IV-13	Military student mix	PI ^d	28
19	IV-16	Responsibility for joint education	I	28
20	IV-31	School mission	I	29
21	IV-32	Types of students	PI ^d	30
22	V-1	Recruiting and maintaining quality faculty	I	30
23	V-2	Specialists/career educators	PI ^d	31
24	V-4	Faculty development program	I	32
25	V-5	Cadre of career educators	PI ^d	33
26	V-7	Credit for joint duty assignment	PI ^d	34
27	V-9	Civilian faculty quality/mix	I	35
28	V-10	Advanced degrees required for senior school faculty	I	36
29	V-11	Hiring quality civilian faculty	I	37
30	V-12	Student/faculty ratios	PI ^d	38
31	V-13	Faculty exchange with academies	I	38
32	V-14	Commandant selection	I	39
33	V-15	Commandant's tour length	I	39
34	V-16	Attributes of a commandant	I	40
35	V-17	Commandant involvement in military student selection	I	40
36	V-18	Military student qualifications	I	41
37	V-21	Limitation of professionals attending joint schools	I	41
38	V-23	Active/passive instruction	PI ^c	42
39	V-24	Rigorous performance standard	PI ^c	44
40	V-25	Evaluation of examinations and papers	PI ^c	45
41	V-26	Distinguished graduate program	I	45

^aKey recommendations are those recommendations that the Panel identified as key in the executive summary to its report. Recommendation I-1 appears in chapter I, entitled "Introduction." Recommendation II-5 appears in chapter II, entitled "Educating Strategists." Recommendations III-5 through III-13 appear in chapter III, entitled "An Expanded Role for Joint Education." Recommendations

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IV-7 through IV-32 appear in chapter IV, entitled "Realigning Professional Military Education."
Recommendations V-1 through V-26 appear in chapter V, entitled "Quality."

^bStatus of recommendations:

I = Implemented

PI = Partially implemented.

^cThis recommendation was characterized as partially implemented because ICAF does not have letter grading as the Panel recommended.

^dThis recommendation is beyond ICAF's control to unilaterally implement.

Recommendation 1

Framework for Education

Establish a PME framework for Department of Defense schools that specifies and relates the primary educational objectives at each PME level. (Key 1, Panel Report, p. 2.)

Status:

Implemented.

In May 1990, the Chairman, Joint Chiefs of Staff (JCS), published the Military Education Policy Document. This document defines the Chairman's objectives and policies regarding the schools, colleges, and other educational institutions that make up the military education system of the armed forces. It identifies five levels of military education and portrays the primary focus of each level of education.

ICAF's primary focus is the national security decision-making processes of national security strategy and the management of national resources in support of this strategy.¹ The curriculum has teaching objectives under each area of focus including teaching students to (1) think strategically and (2) understand the economic, political, social, and military dimensions of difficult resource issues confronting national decisionmakers.

¹National security strategy is the art and science of developing and using the political and/or diplomatic, economic, and psychological powers of a nation, together with its armed forces, during peace and war, to secure national objectives.

Recommendation 2

Faculty Quality	Improve the quality of faculty (1) by amending present law to facilitate hiring civilian faculty and (2) through actions by the Chairman, JCS, and the service chiefs to ensure that only high-quality military officers are assigned to faculties. (Key 2, Panel Report, p. 3.)
Status:	Implemented.
Hiring civilian faculty members	The legislative change, made through the National Defense Authorization Act for Fiscal Years 1990 and 1991, provided more hiring flexibility and is being used to hire additional civilian faculty members. Presently, five civilian faculty members hired under the revised authority are at ICAF, including the Dean of Faculty and Academic Programs. Using this authority, ICAF plans to hire an additional five civilian faculty members during the summer of 1992. The Commandant, ICAF, stated that this program has been successful and will continue.
Assignment of military faculty	<p>Potential military faculty members must (1) be a senior school graduate and (2) have at least a master's degree. Additionally, it is desirable that military faculty members have a doctoral or equivalent professional degree, joint staff officer experience, prior teaching experience, and headquarters staff experience. Similar evaluative criteria are also included in the Military Education Policy Document. The usual 3-year tour length may be shortened or extended, if appropriate, for superior performers or to meet operational needs.</p> <p>ICAF had 28 U.S. military faculty members during academic year 1991-92. All had at least a master's degree and were graduates of a senior military or comparable school.</p> <p>Further, some faculty members have acquired additional desirable qualifications. For example, three military faculty members have a doctoral degree. In addition, the Dean of Faculty and Academic Programs stated that six additional members are enrolled in doctoral programs.</p>

Recommendation 3

Frequency of Grading of Examinations and Papers

Require students at both intermediate and senior PME schools to complete frequent essay-type examinations and to write papers and reports that are thoroughly reviewed, critiqued, and graded by faculty. (Key 9, Panel Report, p. 7.)

Status:

Partially implemented.

Essay-type examinations

The faculty handbook provided to all faculty members states that the student evaluation system is designed primarily to help students assess their own progress throughout the school year and gain the greatest benefit from their experience. Although ICAF does not administer essay-type examinations, student evaluation is an integral part of ICAF's program. The Dean of Faculty and Academic Programs stated that the numerous papers required are equivalent to take-home examinations. ICAF officials also state that since students are already successful senior military officers and civilian executives, their evaluations go far beyond normal academic reporting systems.

Student products

The first product is a goals paper (750 to 1,250 words) written by each student to describe the student's individual expectations for the academic year. In addition to functioning as a checkpoint for progress throughout the year, this product is also used by the faculty to assess the student's entry-level writing abilities. Also, students usually write three papers (of about 1,500 words each) in each of two semesters. The first is on national security strategy and the second on management of national resources in support of national security strategy.

In addition, term papers (2,500 to 3,000 words each) are required for the majority of the four advanced studies courses. The papers cover key concepts and themes of the semesters based on faculty-posed questions. Further, students complete a year-long research paper of about 5,000 to 6,000 words demonstrating their understanding of national security issues.

Student evaluation

Faculty evaluate students based on such factors as class participation, oral communication, as well as written products that encompass logical organization, and grammatical/mechanical correctness and appropriateness. Faculty members review products, evaluate students, and periodically provide feedback. Faculty members evaluate students by designating the top two students in each seminar based on their performance and written products. The remaining students are graded as exceeding, meeting, or failing to meet expectations. No letter grades are awarded.

More detailed information on these topics is discussed in recommendations 38 and 39.

Recommendation 4

**Focus of Education
Framework**

The Department of Defense should develop and implement a clear and coherent conceptual framework for the professional military education school system. The framework should have distinct primary teaching objectives. It should clearly distinguish and relate the role of each of the 10 PME schools plus general/flag officer courses. Each level of schooling and each school should have a primary focus that provides students with a foundation for future growth through experiences and operational and staff assignments and through additional education at high-level PME schools. (Chapter I, No. 1, Panel Report, p. 21.)

Status:

Implemented.

The Chairman, JCS, has established a professional military education (PME) framework that incorporates the Panel's recommendation. The framework is described in the Chairman's Memorandum 344-90, Military Education Policy Document, published in May 1990. It defines the Chairman's objectives and policies regarding DOD schools. It also assigns responsibility to major participants in the military education system in carrying out education objectives. Specifically, the document identifies the levels of military education as well as the primary education focus at each level.

ICAF is the nation's only institution concerned with managing national resources to support national security strategy. This is ICAF's primary focus.

Recommendation 5

Faculty Teaching Strategy

The faculty teaching strategy should consist of civilian educators, active duty and retired military specialists, and former senior military officers. To ensure that students have access to the depth of knowledge that only a career of scholarship in a particular area can produce, respected civilian educators who are recognized experts in specific disciplines related to the teaching of strategy should be faculty members at senior schools. Active duty and retired military officers with actual experience in the strategic arena are also needed for strategy instruction. Finally, a few carefully selected retired three- and four-star officers can contribute significantly to the teaching of operational art, campaign analysis, national military strategy, and national security strategy. (Chapter II, No. 5, Panel Report, p. 41.)

Status:

Implemented.

ICAF's Strategy Department is composed of civilians, active-duty officers, retired military specialists, and former senior officers. Civilian educators have specific disciplines related to national security strategy including expertise in history, economics, and political science. Several active-duty and retired military officers serving as faculty members have actual experience in the strategic arena. In addition, ICAF officials supplied a list of over 40 former senior flag and general officers and other officials who have provided input, primarily as guest speakers, to the teaching of strategy over the last several academic years.

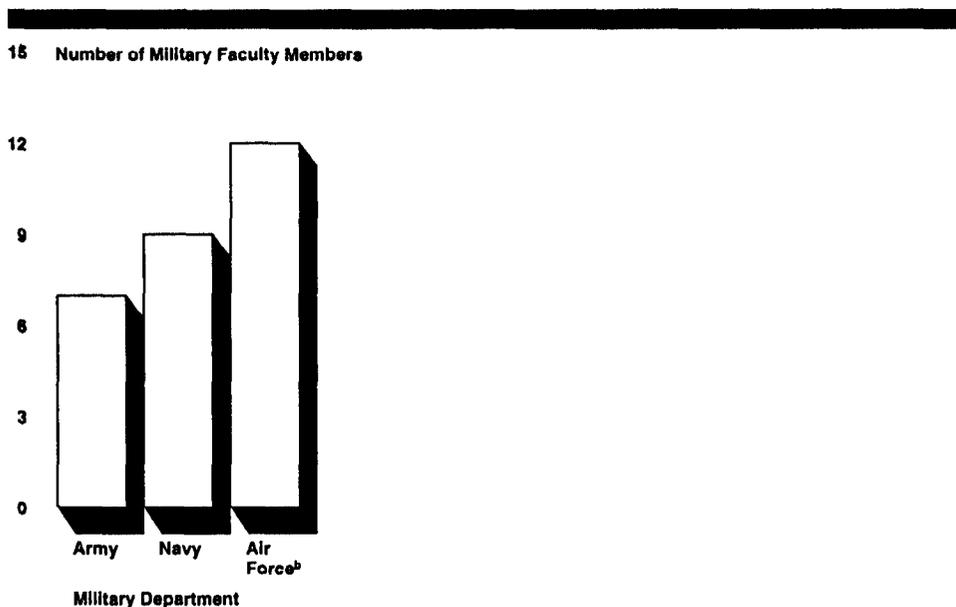
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ICAF officials stated that they use the Military Education Policy Document's definition to determine who is a faculty member. Under the document's definition, faculty are those individuals who conduct research, teach, or prepare or design curricula. As figure I.1 shows, ICAF does not meet the Panel's goal or the Document's requirement to have its U.S. military faculty consist of an equal or, as the Document states, an approximately equal number from the three military departments.

The President, National Defense University (NDU), stated that he believes that the U.S. Coast Guard faculty member could have been included when we computed the military faculty mix. Coast Guard personnel are included under the Department of Transportation during peacetime. However, during wartime, they are a part of the Navy Department. Education at the schools, he said, is primarily directed toward preparation for military conflicts during peacetime; therefore, U.S. Coast Guard faculty members could be added to the Navy total.

The Panel's recommendations apply to personnel in the Army, Navy, and Air Force only and we have included them in discussing the recommendations. For our computations, we have excluded all other military personnel.

**Figure I.1: Military Faculty Composition
for Academic Year 1991-92^a**



^aThis figure does not include one faculty member from the U.S. Coast Guard or one Canadian officer faculty member.

^bThis includes two overstrength officers that were assigned to ICAF.

The Dean of Faculty and Academic Programs said that three Army officers will be added in academic year 1992-93. ICAF officials cannot implement this recommendation independently since ICAF does not control military faculty assignments to ICAF. It advises the military departments on selection, but the departments have final assignment authority.

Recommendation 8

Military Faculty Qualifications

Ideally, each military member of a joint faculty should have completed the intermediate service and joint schools and have had joint duty experience. In future years, joint specialist education should be increasingly taught by fully qualified JSOs. The faculties at the joint schools should be at least comparable to those at the best service schools in terms of experience, educational background, promotion opportunity, academic stature, and student/faculty ratio. (Chapter III, No. 7, Panel Report, p. 82.)

Status:

Partially implemented.

Military faculty educational experience

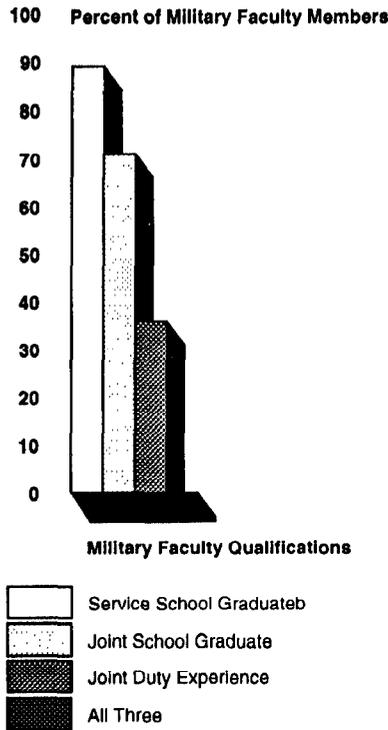
The Military Education Policy Document outlines criteria to be considered when selecting military faculty. These criteria, which are consistent with the Panel's, include recent relevant operational experience, functional area and subject matter expertise, joint experience, strong academic credentials, and prior teaching experience.

No U.S. military faculty member had all three qualifications. However, ICAF officials stated that 10 of the military faculty members should meet all the factors by the end of their normal tour. Figure I.2 shows the percentage of the 28 U.S. military faculty members that have the following:

- attended intermediate or senior service school, 25 faculty members;
- attended one of the joint schools (Armed Forces Staff College, Industrial College of the Armed Forces, and the National War College), 20 faculty members; and
- joint duty experience, 10 faculty members. (Some of the military faculty members have more than one of these qualifications.)

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Figure I.2: Percentage of Military Faculty Members Who Are Graduates of Service and Joint Schools and Have Had Joint Duty Experience^a



^aOne U.S. Coast Guard and one Canadian faculty members are excluded.

^bWe included senior service school graduates in our computation since attending a senior service school is at least as significant in an officer's career as attendance at the intermediate level.

Joint specialty officers

For academic year 1991-92, 10 (36 percent) of the military faculty members were fully qualified joint specialty officers.

Comparability with service school faculty members

All military faculty members have comparable experiences to those at the senior service schools. All 28 members have at least a master's degree and 3 (11 percent) also have doctorates.

In academic years 1989-90 to 1991-92, the Director of Administration stated that eight lieutenant colonels/commanders on the military faculty were promoted to colonel/captain. Only one faculty member eligible for promotion was not promoted. However, during the same period, no colonels/captains were promoted.

ICAF officials stated that military faculty members have comparable academic stature to the service schools in terms of research, publications, books, and the like. For academic years 1989-90 to 1991-92, military faculty members had over 20 various publications. These publications included books as well as articles in professional journals.

Student/faculty ratio

Presently, the ICAF student/faculty ratio meets the Military Education Policy Document ratio but does not meet the Panel's recommended ratio. (Additional detailed information on this topic is discussed in recommendation 30.)

Recommendation 9

Military Student Mix

The mix of students from each military department is another key factor in joint education. In schools that educate joint specialists, the standard should be equal representation from each of the three military departments. For other schools, representation from each department in the entire student body should eventually be substantially higher than today. In addition, the student body mix should consist of students of equally high caliber from each military department. Finally, each service should provide a representative mix of students from all combat arms branches and warfare specialties. (Chapter III, No. 8, Panel Report, p. 82.)

Status:

Partially implemented.

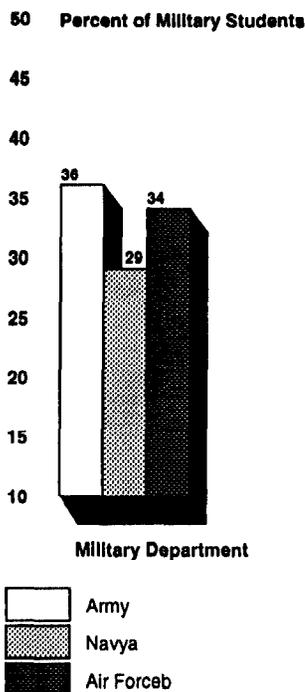
ICAF has 223 students for academic year 1991-92. The officers from the three military departments account for 173,² or 78 percent, of the students. Although the Panel recommended and the Chairman's Document required approximately equal representation from each of the military departments, that mix has not been achieved. Figure I.3 shows the breakdown of military students.

We excluded military students of other organizations attending ICAF as we did for faculty members. Our rationale and the NDU President's disagreement are discussed in recommendation 7.

²Army = 63 students; Navy = 51 students; Air Force = 59 students.

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**Figure I.3: U.S. Military Department
Students for Academic Year 1991-92**



*The U.S. Marine Corps is a part of the Navy Department and its students are included with the Navy; three U.S. Coast Guard students are not.

^bTwo researchers are included. They do not complete all of the requirements as the other students.

In addition, ICAF officials have some input in the selection of the types of students and provided this information to the military departments. ICAF cannot implement this recommendation on its own because it does not select students.

Part of the information furnished to the departments involves identifying a representative mix of combat arms branches and warfare specialties. Additionally, because of its mission, ICAF officials request representatives with other specialties such as economics, history or logistics, to ensure that students receive and share a variety of experiences in resource management. ICAF officials stated this helps them to achieve ICAF's national security strategy objectives.

Recommendation 10

Prerequisite for Joint Education

The Department of Defense should use the following prerequisites as a guide for selecting joint specialist nominees for joint education: top quarter of their year group, competent and experienced in their own service, high intellectual capacity, basic understanding of the mutual interdependence of the services, and broad education. Students attending joint specialist education should have attended a service intermediate school. (Chapter III, No. 9, Panel Report, p. 82.)

Status:

Partially implemented.

For academic year 1991-92, 136 (79 percent) of the U.S. military officers attending ICAF are graduates of an intermediate service school. ICAF cannot implement this recommendation independently because it does not control student selection.

Recommendation 11

Report on Faculty/Student Selection Criteria and Policies

The Chairman, JCS, should control the joint schools and the joint portions of the service schools by Secretary of Defense direction. Schools that educate joint specialists should be responsive to the needs of the Chairman and, through him, to the commanders of the unified and specified commands. Curricula should change if deficiencies in the knowledge or abilities of the schools' graduates are identified. The Chairman, JCS, should revise faculty and student selection criteria and policies as necessary to ensure high quality for joint education. The joint school commandants should periodically report on the effectiveness of the criteria and policies. (Chapter III, No. 10, Panel Report, p. 82.)

Status:

Implemented.

Curriculum review

A curriculum committee meets at least twice annually to review the curriculum to consider possible changes or refinements for the following

academic year.³ The curriculum evolves in part based on the changing national security strategy issues in the U.S. and the world. Changes also come from such sources as the Congress; the Office of the Secretary of Defense; the Chairman, JCS; the commanders of unified or specified combatant commands; the services; and the federal agencies that send students to ICAF.

Changes are usually proposed by the course directors and others, before the committee reviews them. Changes are ultimately approved by the Commandant, ICAF. The two major changes for academic year 1992-93 are (1) development of a senior acquisition course mandated by the Congress and the Secretary of Defense and (2) greater integration of computer-related equipment.

Student critiques of the academic program are also used to evaluate the curriculum. Within the past several years, various surveys were conducted and the results used to assess the curriculum.

Mailings for a periodic survey of graduates (academic years 1987-88 through 1990-91) and their supervisors were completed in May 1992. The survey's purpose was to assess how well the new curriculum is meeting the needs of the customers. However, the Dean of Faculty and Academic Programs said, it was delayed 1 year because the curriculum was completely revised in academic year 1990-91, and ICAF officials said they wanted some of the graduates to have at least 1 year in their present assignment before assessing the new curriculum.

The survey will compare, among other things, the two curricula as well as how the new curriculum incorporated the results of the student evaluations performed at graduation. The Dean of Faculty and Academic Programs expects to continue these periodic surveys of graduates and their supervisors in the future.

³The Curriculum Committee consists of the Dean and Associate Dean of Faculty and Academic Programs, the Department and Deputy Department Chairs, all course directors, and the Associate Dean for Research and Publications. The Dean of Faculty and Academic Programs serves as Committee Chair.

**Faculty and Student Selection
Criteria and Policies**

ICAF officials are generally satisfied with present faculty and student selection criteria and policies and have not identified any major problems in either area.⁴

**Reports on Effectiveness of
Faculty and Student Selection
Criteria and Policies**

The Military Education Policy Document requires the President, NDU, to submit a written annual report to the Chairman, JCS, that includes a profile of ICAF students addressing the Document's selection criteria. The information for this report is provided through the Commandant, ICAF. The Commandant reported that there were no problems associated with these areas in academic years 1989-90 through 1991-92. Problems are also addressed at the Military Education Coordination Conference—composed of members from the Joint Staff and the heads of the PME schools—and NDU is a primary contributor.

Recommendation 12

**Environment for Joint
Education**

Joint specialist education should be conducted in schools that are genuinely "joint;" that is, in an environment in which the military departments are equally represented and service biases minimized, and in which the joint curriculum is taught from a joint perspective — that of the Chairman of the Joint Chiefs of Staff, a commander of a unified command, or a contingency task force commander at the 3-star level. (Chapter III, No. 12, Panel Report, p. 82.)

Status:

Implemented.

ICAF's faculty and student bodies are composed of members from all three military departments as well as civilian and foreign institutions, and we detected no bias toward any one service view. The curriculum is taught from a joint perspective that incorporates requirements of the Chairman, JCS; unified commands; joint task forces; congressional organizations; national security agencies; and civilian agencies.

⁴Faculty and student selection criteria and policies are discussed in more detail in recommendations 2, 5, 8, 17, 22, 24, and 27 for faculty and recommendations 3, 10, 35, 36, 38, 39, 40, and 41 for students.

Recommendation 13

Student/Faculty Ratios

The joint schools of the National Defense University require more attention by the joint institutions they service. The NDU schools essentially meet panel standards for faculty and student mix necessary to educate joint specialty officers. The faculty and student composition at the joint schools is ideal for studying joint operations, national military and national security strategy, and political-military affairs. The joint schools have the potential to fulfill the expectations of those who learned about jointness the hard way in World War II. In comparison with service colleges, however, the joint colleges have small faculties and high student/faculty ratios to permit faculty members to assist in the development of joint doctrine and to create teaching materials on joint subjects for use in both joint and service schools. As a minimum, student/faculty ratios and resources devoted to the joint schools should equal those at the Army, Navy, and Air Force PME colleges. The service chiefs should contribute by providing more high-quality officers with joint, operational and subject-matter expertise. (Chapter III, No. 13, Panel Report, p. 83.)

Status:

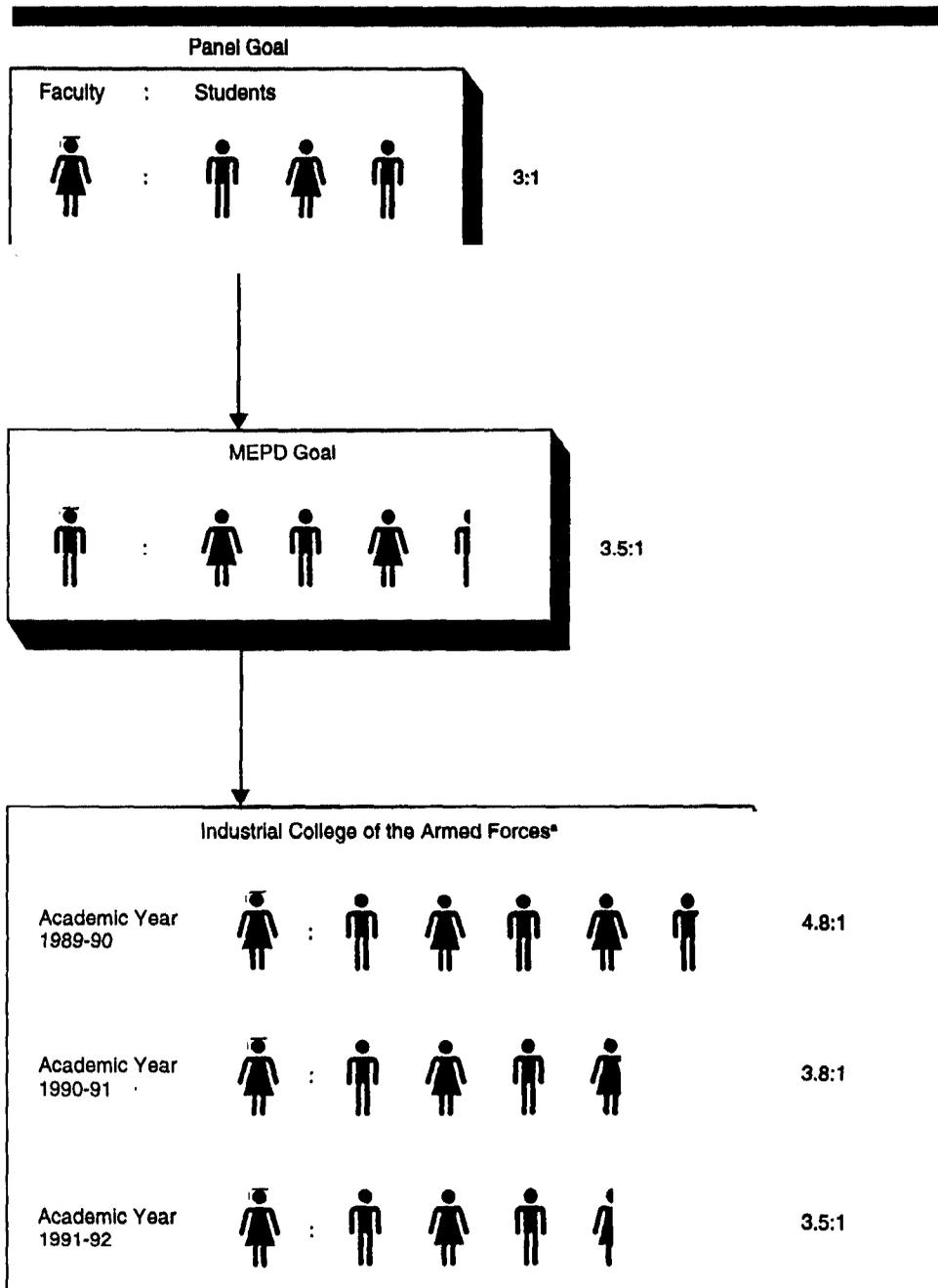
Partially implemented.

In its report, the Panel recommended that student/faculty ratios at the intermediate and senior service schools be between 3 and 4 to 1, with the lower ratio of 3.0 to 1 to be the goal at the senior schools. ICAF is a senior school.

In addition, the Military Education Policy Document requires that the ratio be 3.5 to 1 or lower. Figure I.4 shows that ICAF's ratio has improved since academic year 1989-90.

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**Figure I.4: Student/Faculty Ratios for
 Selected Academic Years**



*The student/faculty ratios are:
 Academic Year 1989-90^b 4.8:1
 Academic Year 1990-91^b 3.8:1
 Academic Year 1991-92 3.5:1

^bSource: Industrial College of the Armed Forces

ICAF officials have implemented the Military Education Policy Document requirements. They expect to meet the Panel's recommended ratio in academic year 1993-94.

Recommendation 14

Standards for Joint Education

Schools that provide joint specialist education should meet four standards:

- (a) A curriculum that focuses on joint matters as defined in Chapter III.
- (b) A faculty with equal representation from each military department.
- (c) A student body with equal representation from each military department.
- (d) Control exercised by the Chairman, JCS. (Chapter IV, No. 7, Panel Report, p. 127.)

Status:

Partially implemented.

ICAF has established a curriculum that focuses on joint matters as discussed in recommendation number 12. The Chairman, JCS, controls ICAF's program through the Military Education Policy Document as addressed in recommendation 1.

ICAF does not have equal military faculty and student representation by military department as covered in recommendations 7 and 9, respectively. It cannot independently implement these parts of the recommendation because it does not ultimately make military faculty authorizations and student selections.

Recommendation 15

Participants in Joint Doctrine Development

The Chairman, JCS, should use the joint schools to help develop and assess joint doctrine and related knowledge. (Chapter IV, No. 9, Panel Report, p. 127.)

Status:

Implemented.

In March 1990, a memorandum of understanding between the Joint Staff and ICAF was approved. This memorandum assigned ICAF a role in joint doctrine development. (See recommendation 6 for additional details.)

Recommendation 16

Military Faculty Mix

The military faculties of the joint schools should continue to have equal representation from each of the three military departments. (Chapter IV, No. 10, Panel Report, p. 127.)

Status:

Partially implemented.

Actions taken under this recommendation are covered in recommendation 7.

Recommendation 17

Recruiting Competent Military Faculty for a Joint School

The most difficult task will be recruiting joint school faculty competent to teach joint matters at a level above that of service intermediate and senior colleges. The faculty should include some relatively senior officers with outstanding records and broad operational and joint experience. Substantial numbers of the military faculty should have potential for further promotion. In time, military instructors would ideally come from the JSO ranks. To be competent the faculty must be large enough to develop joint materials for study and use in the classroom. (Chapter IV, No. 12, Panel Report, p. 128.)

Status: Partially implemented.

None of the 28 U.S. military faculty members is below the rank of lieutenant colonel/commander. The Dean of Faculty and Academic Programs stated that they have outstanding records and broad operational experience. ICAF has 10 military faculty members with joint experience.

As noted in recommendation 8, eight lieutenant colonels/commanders were promoted, while no colonels/captains were selected for flag/general ranks. ICAF officials stated that one faculty member in academic year 1990-91 and two in 1991-92 were selected for command assignments.

For academic year 1991-92, 10 (36 percent) of the military faculty members were fully qualified joint specialty officers.

Recommendation 6 addresses ICAF's joint development and knowledge activities. ICAF officials would like additional faculty members, in part, for increased activity in this area.

Recommendation 18

Military Student Mix

The student bodies of the joint schools should continue to have equal representation from each of the three military departments. (Chapter IV, No. 13, Panel Report, p. 128.)

Status: Partially implemented.

Actions taken under this recommendation are covered in recommendation 9.

Recommendation 19

Responsibility for Joint Education

Under the overall authority of the Secretary of Defense, the Chairman, JCS, should control both the National Defense University (NDU) joint schools and the joint portions of the service schools. Making the Chairman responsible for all joint education should maintain a service-responsive

school system, retain diversity in the overall education system, and yet ensure that officers have an adequate understanding of joint matters and are fully prepared for joint duty. (Chapter IV, No. 16, Panel Report, p. 128.)

Status: Implemented.

Actions taken under this recommendation are covered in recommendation 1.

Recommendation 20

School Mission

ICAF should maintain its original focus on mobilization and joint logistics. Recognizing that there are analytical tools and knowledge shared between these two wartime disciplines and peacetime acquisition matters, the major issue to evaluate is whether the focus on acquisition that has been added to ICAF studies is both appropriate and properly integrated into the curriculum. This issue should be addressed and the panel is pleased to note that the Chairman, JCS, is reviewing the ICAF mission. (Chapter IV, No. 31, Panel Report, pp. 131-2.)

Status: Implemented.

In its 1989 report, the Panel expressed concern that not enough time is being spent on acquisition subjects. It noted the continuing difficulties with both DOD procurement overall and with joint procurement programs in particular. The Panel said there was a need for improving the education and joint perspective of officers and civil servants who work in this area.

ICAF's current mission is to prepare selected military officers and civilians for senior leadership and staff positions dealing with the resource components of national power, with special emphasis on materiel acquisition and its integration into national security strategy. Its mission has evolved since ICAF was established in 1924. In 1948, ICAF's broad mission was developed.

In November 1990, the National Defense Authorization Act for Fiscal Year 1991 required the establishment of a defense acquisition university

structure. On July 1, 1991, the Under Secretary of Defense for Acquisition gave ICAF responsibility for presenting a senior course for acquisition students. The course was planned for integration in ICAF's curriculum in academic year 1992-93. ICAF officials expect to accomplish this added requirement by having acquisition students concentrate their advanced studies selections and their research and writing requirements on subjects related to acquisition. Additionally, these students will be concentrated in seminar groups for specified courses that will enable them to go into greater depth on acquisition topics.

Concurrently, ICAF officials plan to continue their original focus on mobilization and joint logistics by offering areas of concentration for students interested in these functional areas.

Recommendation 21

Types of Students

The traditional proportions of "warfighters" and "war-supporters" in the ICAF student body should not be allowed to change because of Goldwater-Nichols Act considerations. (Chapter IV, No. 32, Panel Report, p. 132.)

Status:

Partially implemented.

ICAF officials said that the traditional proportions have generally remained constant. In academic year 1991-92, the Dean of Faculty and Academic Programs said ICAF had 30 percent of its students from warfighter specialties. ICAF officials will begin retaining detailed statistical information on proportions this academic year and expect to continue this activity in future academic years.

Recommendation 22

Recruiting and Maintaining Quality Faculty

Faculty is the key element in determining the quality of education in PME schools. To develop an outstanding faculty, the impetus must start at the top. The Chairman, JCS, and the service chiefs must place a very high priority on recruiting and maintaining highly qualified faculty to teach at

both joint and service PME colleges. (Chapter V, No. 1, Panel Report, p. 167.)

Status: Implemented.

The Chairman, JCS, has developed policy through the Military Education Policy Document that is being followed by ICAF to recruit and maintain a highly qualified faculty. Recruiting and maintaining quality faculty are a high priority.⁵

An increase of eight additional civilian faculty members has been requested in future academic years to support the increase in the number of students for the Defense Acquisition University. In addition, five civilian faculty members will be hired during the summer of 1992.

Recommendation 23

Specialists/Career Educators The military faculty should include three groups: officers with current, credible credentials in operations; specialists in important functional areas; and career educators. Incentives must exist to attract outstanding military officers in each of these groups. (Chapter V, No. 2, Panel Report, p. 167.)

Status: Partially implemented.

ICAF has officers who are experts or specialists in their career fields in operations or combat support. However, it has no military career educators.

No upfront incentives are offered for assignment as faculty to ICAF. ICAF officials provided us a list of recommended changes that they believe would enhance and reward military faculty tours including:

- request that the services guarantee key assignments to departing successful military faculty members;

⁵Additional details on improving faculty quality are provided in recommendations 2, 5, 8, 11, 17, 23, 24, 27, and 29.

- guarantee faculty enrollment in advanced management programs such as those at Harvard, University of Pittsburgh, etc; and
- allow military faculty with outstanding educational credentials, e.g., doctorates, to remain on active duty for 30 years, or longer, as they do at the military academies.

ICAF cannot implement the Panel's recommendation since it does not control military occupational specialties designations.

Recommendation 24

Faculty Development Program

The services should develop programs to qualify military faculty members to ensure they are prepared professionally. These programs could include prior graduate education, faculty conferences, and sabbaticals at other institutions. Those military faculty who lack education or teaching experience need the opportunity to participate in a faculty development program to enhance their knowledge and teaching skills prior to assuming responsibilities in the classroom. The panel opposes the widespread practice of retaining graduating officers as faculty for the following year. Graduating students should have additional experience prior to teaching. (Chapter V, No. 4, Panel Report, p. 167.)

Status:

Implemented.

The Military Education Policy Document's guidance on faculty professional development includes opportunities for sabbaticals and continuing education. ICAF has faculty development for new and current faculty members. Programs include

- orientation for new members covering the ICAF's mission and programs, skills in teaching and evaluating adult learners, and responsibilities for teaching, scholarship and research;
- a summer off-site workshop to cover policies, procedures, and other items related to implementing the programs for the new school year, specific curriculum, methodology, and other issues related to the specific academic year;
- a mentorship program;
- self-development efforts, including attending the same courses as the students, observing classes of peers, undergoing classroom observation,

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developing and revising courses, research and writing, and faculty seminars to share educational ideas, the latter usually occurring once each month;

- attendance at professional conferences, workshops, and other professional courses outside ICAF;
- participation in graduate education courses at other institutions and providing educational assistance; and
- long-term professional development at other organizations, normally requiring a 6- to 12-month absence from the college.

ICAF does not plan to offer any sabbatical leaves and faculty exchanges during academic year 1992-93. However, the Dean of Faculty and Academic Programs plans to have three faculty members on reduced teaching loads to allow them more time for research.⁶

ICAF's retention of graduating students is not widespread. It has retained the following graduates:

- four in academic year 1988-89,
- four in academic year 1989-90,
- three in academic year 1990-91, and
- two in academic year 1991-92.

ICAF officials stated that students from the graduating class are evaluated for faculty duty on a case-by-case basis.

Recommendation 25

Cadre of Career Educators

The services should develop a cadre of career educators for PME institutions similar to those at West Point. They should have an academic foundation, preferably a doctorate, in the area they are to teach as well as an exemplary military record based on solid performance. Military educators and functional area specialists should be given the opportunity to strengthen their academic credential, and the careers of the former

⁶The college has three independently funded academic chairs for this purpose. These chairs are different from the agency chairs since the agency chairs are on loan from other agencies. They are the J. Carlton Ward Chair and one chair each for the Departments of Strategy and Resources Management, called the Eisenhower and Marshall Chairs, respectively.

should be managed like those of other "professional" groups in the military. (Chapter V, No. 5, Panel Report, p. 167.)

Status: Partially implemented.

The Military Education Policy Document supports a cadre and contains provisions for indefinite-length tours for certain faculty positions. ICAF does not have career educators in part because no military faculty members have multiple teaching tours. (This is used as a basis by some of the PME schools to determine the availability of career educators.) In addition, the Director, Academic Affairs, NDU, said that the three military departments do not have a career educator specialty that relates to PME.

The strengthening of career educators' academic credentials is discussed in recommendation 24. Their career opportunities are covered in recommendation 23.

Recommendation 26

Credit for Joint Duty Assignment

All military faculty at the National Defense University PME schools who meet the joint tour length requirements and teach subjects dealing with joint matters should get credit for a joint duty assignment. In addition, consideration should be given to awarding credit for a joint tour to all exchange (non-host service) military faculty members at service PME schools who meet the joint tour length requirements. (Chapter V, No. 7, Panel Report, p. 167.)

Status: Partially implemented.

The military departments and JCS determine the total number of joint positions allocated to NDU. Once the total has been established, ICAF has authority to assign individuals to these joint positions. Eighteen military faculty members (64 percent) are serving in joint positions at ICAF.

Recommendation 27

Civilian Faculty Quality/Mix

The PME faculty should have a high-quality civilian component in order for PME schools to attain a genuine "graduate" level of education. The civilian faculty should be a mixture of experienced, well-respected individuals of national stature, who, in combination with outstanding younger Ph.D.s, will provide balance, expertise, and continuity. Civilian professors must continue to research and publish not only to keep themselves in the forefront of their academic field, but also to ensure their academic credibility. The panel believes that civilian faculty are particularly important at senior colleges, where they should make up a substantial portion, perhaps around one-third, of the faculty. (Chapter V, No. 9, Panel Report, p. 168.)

Status:

Implemented.

In academic year 1991-92, the ICAF had 33 (52 percent) civilian faculty members. Civilian faculty members are required by the Military Education Policy Document and ICAF to have a doctoral degree and have prior teaching experience at a college or university although the Commandant, ICAF, has granted exceptions to these requirements. The current civilian faculty encompasses all of the above qualities.

In addition, faculty members are encouraged to

- have prior federal government civil service and/or military experience,
- graduate from an advanced executive development course (e.g., Harvard University), and
- graduate from a senior service school or equivalent federal institute.

ICAF has eight faculty members, called agency chairs, from various other federal agencies. These members are on loan from their respective agencies and are not a part of ICAF's authorized positions. In addition to teaching, these chairs represent their respective agencies and help ICAF formulate national security strategy and policies. They also

- assist in faculty development,
- establish network capabilities in their respective agencies,
- assist faculty and students in research,
- help in curriculum development,

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-
- assist in identifying topics and expertise for conferences and symposia on national security,
 - assist in obtaining guest speakers, and
 - participate in advising students from their respective agencies.

Agency chairs are normally at ICAF for a 2-year period. The Dean of Faculty and Academic Programs said that these faculty members have been invaluable to ICAF.

Evaluation of faculty members is continuous. Performance is perhaps the most critical requirement and responsibility. Civilian faculty members are evaluated based on their (1) teaching success, (2) research and writing, (3) service to NDU community, (4) evidence of credible professional development, and (5) interaction with the national security community. Civilian faculty members are involved in research and publishing activities to maintain their competitiveness, broaden their experiences, and ensure academic credibility.

The Commandant, ICAF, said he expects the percentage of civilian faculty members to increase to 55 percent over the next several academic years.

Recommendation 28

Advanced Degrees Required for Senior School Faculty

As a goal, all members of the faculty at senior schools should have advanced degrees. The panel believes that a doctorate is desirable. (Chapter V, No. 10, Panel Report, p. 168.)

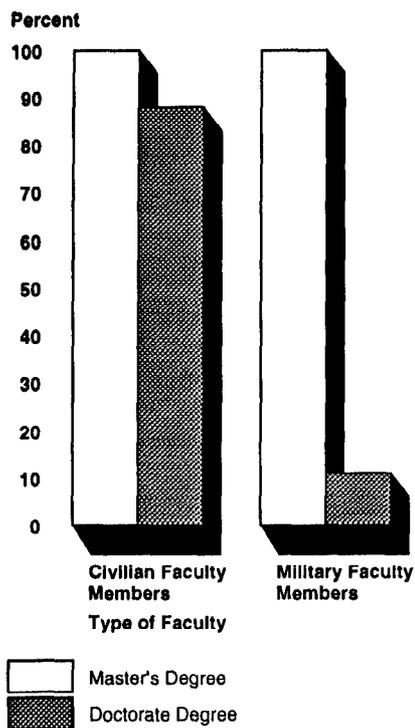
Status:

Implemented.

All of ICAF's faculty members had advanced degrees in academic year 1991-92. Figure I.5 shows the academic degrees of civilian and military faculty members.

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Figure I.5: Percent of Civilian and Military Faculty Members With Advanced Degrees in Academic Year 1991-92



Recommendation 29

Hiring Quality Civilian Faculty

Stronger incentives are also needed to attract a high-quality civilian faculty. The law should be amended to give the Secretary of Defense and each service secretary the same flexibility in employing and compensating civilian faculty that the Secretary of the Navy currently has under 10 USC 7478. (Chapter V, No. 11, Panel Report, p. 168.)

Status:

Implemented.

The Panel emphasized that financial incentives prevail in hiring civilian faculty members. In addition, the 1989 Panel report also stressed that civilian members be provided the opportunities to teach, research, and write while assigned to PME institutions. ICAF presently offers all of these incentives. Further, ICAF officials stated that awards and consideration for

periodic pay increases are offered as additional incentives for attracting high-quality civilian faculty.

Recommendation 30

Student/Faculty Ratios

The student/faculty ratios at the professional military institutions should be sufficiently low to allow time for faculty development programs, research, and writing. The panel envisions a range between 3 and 4 to 1, with the lower ratios at the senior schools. The panel also recommends that additional faculty, principally civilian, be provided to the National Defense University schools and that the Secretary of Defense, with the advice of the Chairman, JCS, assure the comparability of the joint and service school student/faculty ratios. (Chapter V, No. 12, Panel Report, p. 168.)

Status:

Partially implemented.

Actions taken under this recommendation are covered in recommendation 13.

Further, ICAF has faculty development programs for its members, and faculty members are involved in research and publishing. (See recommendations 24 and 27.)

Recommendation 31

Faculty Exchange With Academies

The services should study the feasibility of improving their faculties by using members of the service academy faculties on an exchange basis to teach at PME institutions. (Chapter V, No. 13, Panel Report, p. 168.)

Status:

Implemented.

The Dean of Faculty and Academic Programs said that extensive negotiations were held with the Naval Academy during academic year 1990-91 to exchange faculty members. When this exchange was disapproved, ICAF officials began negotiations with other academies. The

Dean hopes to have a faculty member from West Point during academic year 1993-94.

Recommendation 32

Commandant Selection

The commandant and president positions are so critical that only a service chief or the Chairman, JCS, (for a joint school) should make the selection, including determining the tour length of those selected. (Chapter V, No. 14, Panel Report, p. 168.)

Status:

Implemented.

The Chairman, JCS, approves the service nomination of an active-duty major general or rear admiral (upper half) as Commandant of ICAF. The normal 3-year assignment is rotational among the three military departments. ICAF officials said that the Commandant, for stability's sake, should probably not be rotated in the same calendar year as the Commandant of the National War College, the other major senior school at NDU.

Recommendation 33

Commandant's Tour Length

The commandants or presidents of senior and intermediate PME schools should serve a minimum of 3 academic years. During periods of major change in scope, curricula, or purpose at PME schools, commandants should stay longer, perhaps 4 or 5 years. (Chapter V, No. 15, Panel report, p. 168.)

Status:

Implemented.

The Commandant said that the present tour length of 3 years is appropriate. He informed us that a new commandant from the Navy has been selected. The Commandant, National War College, has retired and his replacement is an Air Force major general. The Commandant, ICAF, pointed

out that a unique situation occurred since both commandants were replaced in the same year, but a joint perspective must be maintained.

Recommendation 34

Attributes of a Commandant

Ideally, the commandants or presidents should be general/flag officers with promotion potential, some expertise in education, and operational knowledge. They should become actively involved in teaching the student body. (Chapter V, No. 16, Panel Report, p. 168.)

Status:

Implemented.

The present commandant is an Air Force major general. A three-star Navy officer heads NDU, of which ICAF is a part. The Commandant stated that although he is not a career educator and has not had multiple teaching tours, he possesses the operational knowledge needed for this assignment. He attends seminars, discusses issues with faculty and students, and is involved in curriculum development. He retired in July 1992.

Recommendation 35

Commandant Involvement in Military Student Selection

The services should establish policies to ensure that highly qualified officers are selected to attend PME schools. Each service should have a formalized selection board process at the intermediate and senior school level to ensure that its most deserving officers with clear future potential are designated to attend PME. Such a board process will ensure that the future military leadership is developed through resident PME. The boards, with general/flag officer membership, should be empowered to recommend officers for specific school attendance. Thus, the leadership of the service should determine who attends PME, not assignment officers or detailers acting independently. Although it may require some restructuring of the selection process, consideration should also be given to making commandants and presidents of the PME schools active participants in the process of designating students for specific institutions. (Chapter V, No. 17, Panel Report, pp. 168-9.)

Status: Implemented.

After consideration, the Commandant stated that he saw no advantage in becoming involved in student selection. He said the present processes used by the services are sufficient. Authority to change the process presently resides with JCS and the military departments.

In addition, the President, NDU, annually submits a report to the Chairman, JCS. This report includes profiles of ICAF students to ensure they meet Military Education Policy Document selection criteria.

Recommendation 36

**Military Student
Qualifications**

The services should ensure that highly qualified officers are selected to attend both joint and sister-service schools. (Chapter V, No. 18, Panel Report, p. 169.)

Status: Implemented.

ICAF officials are not involved in student selection. However, they discuss specialties needed with service representatives to ensure that certain student mixes are achieved. ICAF officials did not identify any student selection problems that hindered education in any of the seminars.

Recommendation 37

**Limitation of Professionals
Attending Joint Schools**

The criterion for officers in the professional category attending joint schools should be based on the limited number of joint billets designated for professionals. (Chapter V, No. 21, Panel Report, p. 169.)

Status: Implemented.

The Dean of Faculty and Academic Programs stated that joint billets are not available for professionals (legal, medical, etc.).

Recommendation 38

Active/Passive Instruction

The Chairman, JCS, and service chiefs should review the current methods of instruction at PME schools to reduce significantly the curriculum that is being taught by passive methods (e.g., lectures, films). PME education should involve study, research, writing, reading, and seminar activity – and, in order to promote academic achievement, students should be graded. The commendably low 10-percent passive education for the Army Command and General Staff College sets a goal for the other schools. (Chapter V, No. 23, Panel Report, p. 169.)

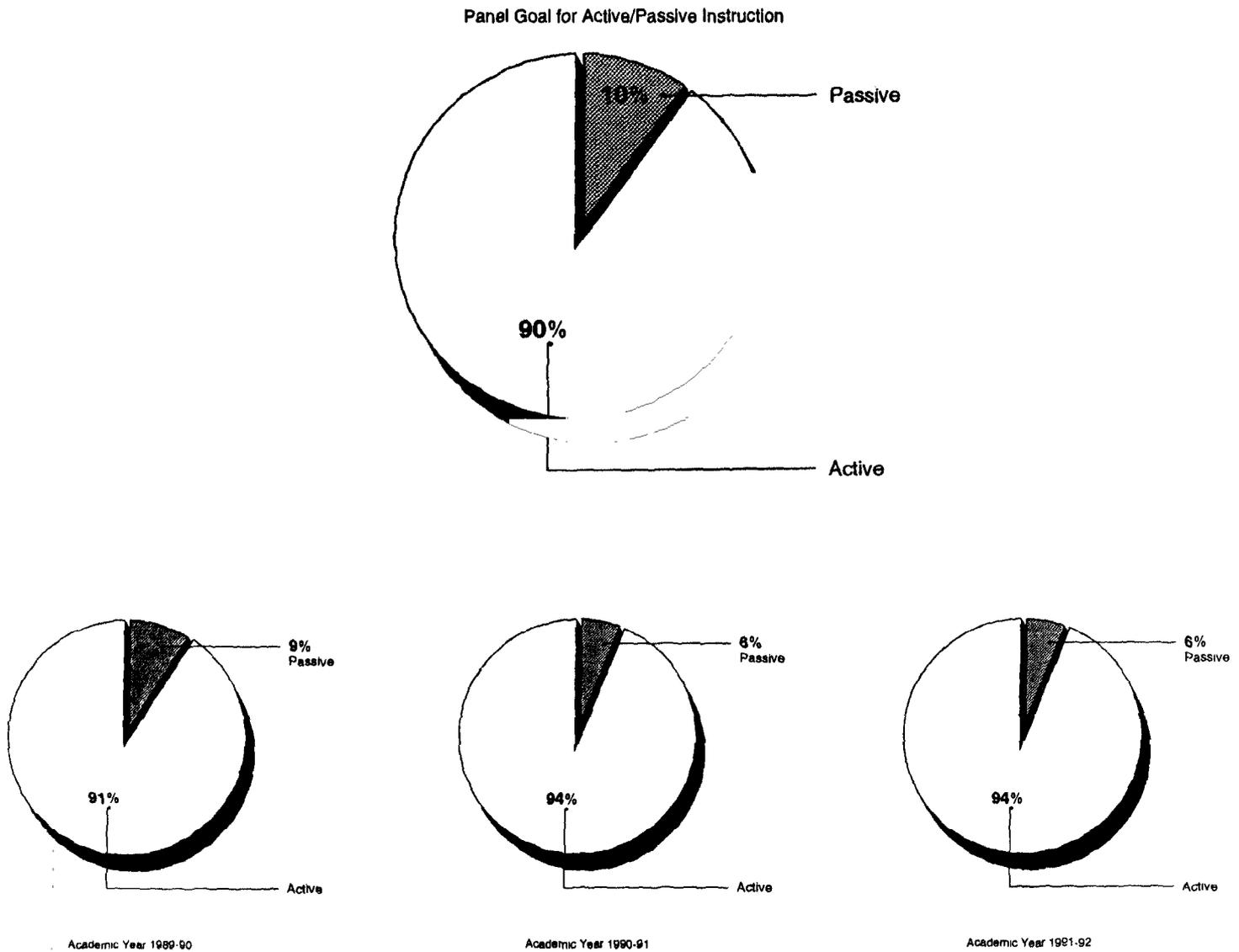
Status:

Partially implemented.

ICAF officials report they have exceeded the Panel's goal for the active/passive instruction composition. Figure I.6 shows the composition.

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Figure I.6: Active/Passive Instruction for Academic Years 1989-90 to 1991-92



Source: Industrial College of the Armed Forces.

ICAF defines active learning to include any academic activity in which the student is reading, writing, or participating in discussions, to include the

question and answer portion after lectures. Passive learning includes any activity in which the student only listens to lectures or watches videos. ICAF officials disagreed with our characterization of this recommendation as it applies to grading. As stated in recommendation 3, ICAF does not use letter grades in its student evaluations. Both the Dean of Faculty and Academic Programs and the Chief of Staff, who is also the Dean of Students, said, however, that the evaluation categories—top two, exceeds, meets, and fails to meet standards—can be equated to Honors, A, B, and C, respectively. They stated that their evaluation system meets the rigorous standards of the better graduate schools. They said that students are mature, high achievers who do not need a grading system with letter grades. The adjectival categorizations, they stated, achieve the same purpose without the demeaning aspects of letter grades.

In addition, the Dean of Faculty and Academic Programs said that computerized profiles are maintained to ensure that faculty members implement the guidance for assigning evaluation categories of top two and exceeded expectations, which constitute about 25 to 30 percent of the seminar participants.

Recommendation 39

Rigorous Performance Standard

The Chairman, JCS, and each service chief should establish rigorous standards of academic performance. The panel defines academic rigor to include a challenging curriculum, student accountability for mastering this curriculum, and established standards against which student performance is measured. (Chapter V, No. 24, Panel Report, p. 169.)

Status:

Partially implemented.

Actions taken under this recommendation are discussed in recommendations 3 and 38. In addition, ICAF officials said no students were forced to withdraw for academic reasons during the past 3 academic years. ICAF faculty members have used counseling to improve student performance. Moreover, they stated that since students undergo an extensive selection process and their careers would be permanently stalled if they were forced to withdraw, a great incentive exists to perform well.

In addition, ICAF officials disagreed with our characterization as it applied to grading. Their rationale was discussed in recommendation 38.

Recommendation 40

Evaluation of Examinations and Papers

All intermediate- and senior-level PME schools should require students to take frequent essay type examinations and to write papers and reports that are thoroughly reviewed, critiqued, and graded by the faculty. Examinations should test the student's knowledge, his ability to think, and how well he can synthesize and articulate solutions, both oral and written. (Chapter V, No. 25, Panel Report, pp. 169-70.)

Status: Partially implemented.

Actions taken under this recommendation are discussed in recommendations 3, 38, and 39. These prior recommendations also include ICAF's disagreement with our characterizations.

Recommendation 41

Distinguished Graduate Program

All PME schools should have distinguished graduate programs. These programs should single out those officers with superior intellectual abilities for positions where they can be best utilized in the service, in the joint system, and in the national command structure. (Chapter V, No. 26, Panel Report, p. 170.)

Status: Implemented.

ICAF's distinguished graduate program was formally initiated during academic year 1989-90. The Dean of Faculty and Academic Programs said that for 3 years prior to academic year 1989-90, the commandants wrote personal notes on the evaluation forms of the top 10 percent of the student body. The formal designation is based on performance in the classroom, field studies, written work and extracurricular activities. Approximately 10

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percent of the students are designated as distinguished graduates under this program.

Glossary

Active Instruction	Teaching method that incorporates such things as reading, researching, writing, and attending seminars, thereby requiring student participation. This is in contrast to passive instruction, which refers to auditorium lectures, panels, symposia, and films.
Joint Professional Military Education	This education encompasses an officer's knowledge of the use of land, sea, and air forces to achieve a military objective. It also includes different aspects of strategic operations and planning, command and control of combat operations under a combined command, communications, intelligence, and campaign planning. Joint education emphasizes the study of these areas and others from the perspectives of the Army, Navy, Air Force, and Marine Corps services.
Joint School	Joint professional military education from a joint perspective is taught at the three schools of the National Defense University. Two are located at Fort McNair in Washington, D.C., and the third is located in Norfolk, Virginia. For the most part, officers attending a joint school will have already attended an intermediate and/or senior service school.
Joint Specialty Officer	An officer who is educated and experienced in the formulation of strategy and combined military operations to achieve national security objectives.
Service School	One of the individual Army, Navy, Air Force, or Marine Corps intermediate or senior professional military education institutions.
Strategy	National military strategy is the art and science of employing the armed forces of a nation to secure the objectives of national policy by applying force or the threat of force. National security strategy is the art and science of developing and using the political, economic, and psychological powers of a nation, together with its armed forces, during peace and war, to secure national objectives.

Related GAO Products

Professional Military Education (GAO/T-NSIAD-91-4, Feb. 5, 1991).

Marine Corps: Status of Recommendations on Officers' Professional Military Education (GAO/NSIAD-91-88FS, Feb. 12, 1991).

Air Force: Status of Recommendations on Officers' Professional Military Education (GAO/NSIAD-91-122BR, Mar. 13, 1991).

Army: Status of Recommendations on Officers' Professional Military Education (GAO/NSIAD-91-121BR, Mar. 21, 1991).

Navy: Status of Recommendations on Officers' Professional Military Education (GAO/NSIAD-91-124BR, Mar. 25, 1991).

Department of Defense: Professional Military Education at the Four Intermediate Service Schools (GAO/NSIAD-91-182, June 13, 1991).

Department of Defense: Professional Military Education at the Three Senior Service Schools (GAO/NSIAD-91-202, June 20, 1991).

Military Education: Curriculum Changes at the Armed Forces Staff College (GAO/NSIAD-91-288, Sept. 19, 1991).

Military Education: Implementation of Recommendations at the Armed Forces Staff College (GAO/NSIAD-92-30, Oct. 21, 1991).

Military Education: Implementation of Recommendations at the National War College (GAO/NSIAD-92-202, June 18, 1992).

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