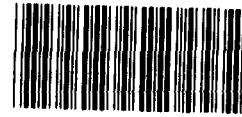


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Review of the Cost and Operations of DOD's
Service Academies

Statement of
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Before the
Subcommittee on Manpower and Personnel
Committee on Armed Services
Senate



Mr. Chairman and Members of the Subcommittee,

I am pleased to be here today to discuss the preliminary results of our on-going review of the cost and operations of the U.S. Military Academy, the U.S. Naval Academy, and the U.S. Air Force Academy. As you requested, we are examining academies' academic and military programs, including organizational structure, staffing patterns, performance of graduates, the cost and financial operations, and program oversight. I will summarize our findings to date and then discuss each of these areas in more detail.

Results in Brief

Although the academies' organizational structures, academic requirements for their faculties, and approaches to educating and training academy students are similar, they still have some significant differences. For example, the faculties at the Military and Air Force Academies are composed almost entirely of military officers, while the Naval Academy faculty is about 50 percent civilian. Although the minimum faculty requirements are generally being met and all of the academies have been accredited, accreditation boards and the visiting professors have questioned the effectiveness of the predominantly military faculties at the Military and Air Force academies.

The education and training philosophies of the three academies are aimed at producing career military officers. The academies currently produce over 3,000 officers per year, compared to about 19,000 from all other sources. As a group, academy graduates tend to stay in the service longer than graduates from the Reserve Officer Training Corps (ROTC) and Officer Candidate/Training School. Academy graduates also appear to progress through the ranks more rapidly and to higher levels than officers from other sources.

Costs at the Military and Air Force academies are comparable, while costs historically have been lower at the Naval Academy. In fiscal year 1988, the reported cost per graduate was \$224,000 for the Military Academy, \$220,000 for the Air Force Academy, and \$150,000 for the Naval Academy. Differences in academy maintenance, faculty training, student dining services, and medical costs account for much of the cost differences.

Our work to date indicates that the academies' financial reports do not include all the costs that are directly related to academy operations. In addition, the academies have recently taken action to exclude two previously included costs, faculty training and academy preparatory school costs. We believe that excluding these costs results in under-reporting of the true cost of academy operations.

With regard to program oversight, the academies have received relatively little external oversight or review. The Board of Visitors, an external advisory group at each academy, can not reasonably be expected to provide in-depth oversight. Also, the academies have generally not received much attention from service audit agencies, except for several audits of nonappropriated fund activities at the Air Force Academy.

THE ACADEMIC, MILITARY, AND PHYSICAL PROGRAMS

The mission of each of the academies is to prepare students to become career military officers. While the mission of the Air Force Academy has remained unchanged, in recent years the missions of the Military and Naval academies were modified to reflect the additional goal of inspiring their graduates to continue to serve the nation as leaders beyond their term in the service.

Students receive a 4-year education consisting of (1) an accredited academic program with a foundation in the humanities, social sciences, basic sciences, and engineering, (2) military training with emphasis on leadership, and (3) physical education intended to instill confidence and competitiveness.

The academies are highly selective. They seek men and women between the ages of 17 and 22 who have above-average high school academic achievement; high college entrance exam scores;

leadership potential shown through athletics and extracurricular activities, and adequate physical aptitude as demonstrated through a physical aptitude examination.

About 12,000 to 16,000 students apply each year for admission to the various academies, out of which each academy accepts about 1,300 to 1,400. Average Scholastic Aptitude Test (SAT) scores for students accepted for admission to the three academies in 1988 ranged from 564 to 588 in verbal and 642 to 668 in math. Average national SAT scores for students entering college in 1988 were 428 for verbal and 476 for math.

Academic Program

The academies have a core curriculum requiring up to 44 courses in the basic sciences, engineering, social sciences, and humanities, leading to a Bachelor of Science degree. Students can choose from among 17 majors at the Military Academy, 18 majors at the Naval Academy, and 25 majors at the Air Force Academy. The academies emphasize the scientific and technological education considered desirable for career military officers, which reflects the academies' goal of producing generalists rather than specialists.

Our analysis indicates that the academies' major course requirements in engineering are comparable to several prominent civilian universities. However, beyond the majors area, the

academies also require a significant amount of military and physical training and offer fewer electives than civilian universities.

Faculty Staffing and Credentials

The academic faculties at the Military and Air Force academies are predominantly military personnel with only about 2 to 3 percent of the faculty positions being filled by civilians, primarily visiting faculty members from other institutions. In contrast, the Naval Academy's faculty is split about evenly between military and civilian personnel.

For the most part, the academies require a doctorate degree for tenured faculty and at least a master's degree for other faculty positions. At the Military Academy, 16 percent are tenured and 26 percent have doctorates, while at the Air Force Academy 11 percent are tenured and 38 percent have doctorates. At the Naval Academy, about 42 percent of the faculty are tenured and about 50 percent have doctorates.

The rationale behind the virtually all-military faculties at the Military and Air Force academies is that military officers serve as role models, provide motivation toward a military career, relate course material to military concerns, and emphasize teaching rather than research and publication. Military and Air

Force Academy officials told us that the military faculty also assists in providing military training and that the officers themselves gain valuable experience.

Naval Academy officials have indicated that having a mix of civilians and military personnel is beneficial because the civilians provide continuity, a higher level of academic expertise, and a continuum of professional learning for the academic program. They told us that having half the faculty made up of military officers is sufficient to provide role models and exposure to current Navy practices.

Accreditation

The academies are subject to accreditation reviews by regional associations every 10 years. The Military Academy and the Naval Academy were accredited by the Middle States Association of Colleges and Secondary Schools in 1989 and 1986, respectively. The Air Force Academy was accredited in 1989 by the North Central Association of Colleges and Schools. In addition, the Accreditation Board for Engineering and Technology has accredited the engineering programs at each academy.

Although all the academies meet accreditation requirements, the most recent accreditation reports raise some concerns about specific aspects of the academic programs at the Military Academy

and the Air Force Academy. For example, in its 1989 accreditation report on the Military Academy, the Middle States Association stated that "the large number of rotating faculty places a major burden on the fewer permanent faculty in providing continuity in the academic programs." The Association recommended that the Military Academy "consider increasing its civilian faculty, particularly in fields . . . such as the humanities."

The Military Academy's visiting professors reported in 1989 that at civilian colleges, juniors and seniors are taught by faculty with doctorates, while most of the curriculum at the Military Academy is taught by faculty with master's degrees through all 4 years. They recommended that the percentage of permanent associate professors with doctorates at the academy be increased from 15 to 25 percent of the faculty.

The 1989 accreditation report on the Air Force Academy by the North Central Association states that "the intellectual vitality and depth of the faculty as a whole are adversely affected by the relative lack of Ph.D.s among the faculty."

Military Training

The military instruction program consists of both classroom and hands-on training. The program is intended to provide each student with the basic knowledge, skills, and attitudes believed

to be essential for effective performance as a commissioned officer. Courses in military training cover the organization, operation, and role of the academy's parent service. In addition, some of the academic courses have a particular military orientation, like the History of Technology and Warfare. Academy officials also said that other courses such as psychology, while part of the academic program, also enhance leadership ability.

Naval Academy midshipmen must pass a comprehensive professional competency exam prior to graduation. The other academies test cadet military knowledge on a course-by-course basis.

Hands-on training is the primary focus during the summer months at all three academies. In their first summer, students receive basic training as a transition from civilian to service academy life. The following summers generally expose the students to the operations of their service and to leadership development.

Midshipmen act as crew aboard Navy vessels and advance to assume the duties and responsibilities of junior officers. Air Force cadets attend survival training, receive training in aviation, and field training at Air Force bases throughout the world. Military Academy cadets receive field training, serve as platoon leaders with active Army units, and attend specialty training, such as Airborne or Northern Warfare training.

Throughout their 4 years, cadets and midshipmen are exposed to military experience through their student command structures. Within these structures, the students are given the opportunity to function in leadership positions, and administer or enforce the standards of conduct. Commissioned officers supervise the students' command structures and provide individual counseling.

Physical Training

The academies have physical development programs consisting of required physical education courses, required participation in intramural, intercollegiate, or club sports, and physical fitness tests. The programs are designed to ensure that graduates are fit, and possess the stamina to meet emergencies and endure hardship. Academy officials state that the programs also instill competitiveness and physical courage, and provide further leadership training.

Attrition

The academies define attrition as any student loss before graduation. Although students may be separated for a variety of reasons, including academic deficiencies and honor violations, most attrition results from resignations. Recent data indicate that about 82 percent of attrition occurs during the first 2

years. Students who are separated or resign before the start of their third year do not incur an active duty obligation.

From 1979 to 1989, attrition at the service academies has declined. During this period, attrition dropped from about 30 percent to 22 percent at the Naval Academy, 38 percent to 25 percent at the Military Academy, and about 39 percent to 27 percent at the Air Force Academy. Academy officials attribute this reduction in attrition to better screening in the admissions process and greater numbers of qualified candidates.

PERFORMANCE AND RETENTION OF ACADEMY GRADUATES

To date, we have obtained only limited information on the performance of academy graduates relative to officers commissioned through other programs. We were able to obtain some data in the areas of career progression and retention. Our preliminary analysis of progression data indicates that academy graduates are promoted at a higher rate than officers from other commissioning sources. Although academy graduates constitute about 14 percent of all active duty officers, they comprised approximately 31 percent of the officers selected for general officer rank in 1988. We are currently obtaining additional information on progression through the ranks, including the universe of eligible officers from each of the accession sources.

Care should be taken to avoid reading too much into these statistics. There are several factors related to career progression which can confound a straight comparison of academy graduates with officers from other commissioning sources. For example, academy graduates receive a regular commission whereas most other newly commissioned officers receive a reserve commission. This means that academy graduates are protected from reductions-in-force. Also, academy graduates have generally received a larger allocation of combat-related line officer positions which traditionally have been the main route to senior leadership positions. It is difficult to determine whether the greater success of academy graduates is due to the quality of the academies' programs or other factors associated to a greater or lesser degree with various sources of commissioning.

An Air Force Academy study found that its graduates have been more likely to complete undergraduate pilot training than Air Force officers from other commissioning sources. In fiscal years 1979 through 1988, Air Force Academy graduate attrition from undergraduate pilot training was 18 percent, compared to 24 percent for total Air Force pilot training attrition. Academy officials attribute the lower pilot training attrition to the greater exposure to flight training that Air Force Academy cadets receive.

The mission of the academies is to provide instruction and motivation for graduates to make the military a career. By law, academy graduates are now required to serve at least 5 years on active duty. This obligation will increase to 6 years starting with the class of 1996. Graduates can also incur additional active duty service commitments for high cost training, such as pilot training.

Approximately 34 percent of the graduates from all three academies have resigned during their first 8 years of service. This period generally covers the completion of the academy graduates' initial service commitment.

Academy graduates have historically remained in the service longer than officers from other sources: 46 percent remaining on active duty longer than 15 years, compared to 28 percent of officers from other sources. Again, however, we need to caution against drawing a firm conclusion regarding these raw statistics because of the impact that factors such as type of commission and length of obligated term of service can have on retention. Among the academies, the Air Force Academy's retention rate after 15 years is the highest at 50 percent, compared to 44 percent for graduates of the Military Academy, and 42 percent for the Naval Academy.

FINANCIAL OPERATIONS AND COST TRENDS

Reported operating costs for fiscal year 1988 were about \$243 million for the Military Academy, \$239 million for the Air Force Academy, and \$168 million for the Naval Academy.

The academies' reported operating costs in constant 1989 dollars increased between fiscal years 1979 and 1988 at an average annual rate of 1.7 to 2.6 percent. Over this period, the academies' costs in constant 1989 dollars rose by about 33 percent at the Military Academy, about 17 percent at the Naval Academy, and about 37 percent at the Air Force Academy. During this same period, the academies' cost per graduate rose in constant 1989 dollars by about 19 percent at the Military Academy, about 5 percent at the Naval Academy, and almost 29 percent at the Air Force Academy.

The academies report costs using 38 common categories divided into 3 broad categories: Institutional Support, Instructional Activities, and Student Related Activities.

The fiscal year 1988 cost for Naval Academy operations is over \$70 million less than the other two academies. Differences in Institutional Support costs were responsible for over \$47 million of the cost difference. The smaller physical size of the Naval Academy is one factor in the difference. Although the Military and Air Force academies maintain over 16,000 and 19,000 acres,

respectively, the Naval Academy only has 338 acres. Further, the Military and Air Force academies have to maintain about 11.4 and 7.8 million square feet of building area, respectively, whereas the Naval Academy has 4.3 million square feet to maintain. Another factor is that the Military Academy and Air Force Academy have hospitals while the Naval Academy only has a clinic, requiring more serious medical cases to be transferred to a local civilian hospital or to the Bethesda Naval Hospital. As a result, no hospital care costs were reported as a Naval Academy expense in fiscal year 1988.

Differences in Instructional Activities costs accounted for over \$15 million. One cause of these differences is associated with the academies' policies regarding faculty training. The Military and Air Force academies sponsor officers in obtaining advanced degrees. The Naval Academy, however, does not sponsor faculty training because their faculty members, including military officers, obtain their master's degrees prior to being selected as instructors. In 1988, faculty training costs amounted to \$14.7 million for the Army and \$7.9 million for the Air Force.

Differences in the Student Related Activities costs accounted for over \$6 million in fiscal year 1988. The biggest difference involved the costs of the academies' student dining services: \$9.2 million at the Air Force, \$9.0 million at the Military Academy, and \$6.4 million at the Naval Academy. The Naval Academy and the

Military Academy contract out some cadet dining services, while the Air Force Academy uses government personnel. We are in the process of obtaining additional information on the dining services.

In August 1989, the academies decided to change their basis for reporting certain Institutional and Instructional costs. In fiscal year 1989, the academies began excluding preparatory school costs, reported as \$15.7 million in the previous year. Their rationale for this change was that preparatory school operations are separate from academy operations. Also starting in fiscal year 1989, the Air Force Academy began reporting only 33 percent of their faculty training costs, while the Military Academy began reporting only 24 percent of these costs. The full faculty training cost for the 2 academies totaled \$22.6 million in fiscal year 1988. Their rationale for this change is that the officers' advanced degrees provide benefits during the remainder of their military careers.

We do not believe that these changes in their cost reporting are justified. The preparatory schools exist as an adjunct to the academies. If the academies did not exist, the preparatory schools would not exist. Therefore we believe that the preparatory schools should be included as part of the total cost of the academies. Likewise, we believe that the full cost of service-funded graduate education for academy faculty selectees should be associated with the academies because it was the

education requirements of the academy positions which necessitated those officers to be sent to graduate school. In addition, there is no assurance that an officer whose graduate education was funded by the service to qualify for a faculty position would necessarily stay for a full career in the service. For these reasons, we believe that the costs of the preparatory schools and faculty training should continue to be reported as costs properly attributable to the academies.

To date, we have identified a number of other costs that have not been included by the academies. For example, in fiscal year 1989 about \$9.8 million in summer training costs were not reported at the Military Academy. The Military Academy also does not report medical costs for dependents. Although the Naval Academy reported room and board costs in fiscal year 1989, they did not report procedural costs associated with hospitalization of its students, staff, and dependents.

We also found some problems with accounting accuracy. For example, at the Naval Academy we found 67 instances of over- and under-reported costs resulting in about \$6.6 million in cost errors. We need to do additional work to determine the validity of the academies' cost data.

OVERSIGHT AT THE ACADEMIES

The service academies receive management oversight through their respective service chain of command and external oversight from various independent organizations.

Service oversight of the academies is similar to that of any major command. In the Army and the Air Force, staff under the Deputy Chief of Staff for Personnel act as liaisons between the service and its respective academy. These offices coordinate policy changes by forwarding proposals through the chain of command, review personnel actions, such as cadet separations, and serve as the academies' representatives. The Navy introduced a special advocate position in 1988, which reports directly to the Assistant Vice Chief of Naval Operations. The duties of this office are to monitor all the Navy's higher education programs, represent the Naval Academy in the budgeting process, and assess graduate performance. As this office was recently established, we were not able to assess its effectiveness.

The academies all have internal review groups that provide some installation oversight. Military Academy operations are reviewed by its Internal Review Office as well as the Academy's Office of the Inspector General. The Internal Review Office conducts about 30 audits of academy units each year. The Inspector General at the Military Academy reviews complaints and conducts inquiries of

specific academy-related matters, often at the request of the Superintendent.

Although the Naval Academy does not have an Inspector General, it relies on two departments for internal oversight. One department conducts reviews for both appropriated and nonappropriated funds. One function of the other department is to conduct economy and efficiency reviews of commercial activities, such as family services, transportation, supply, and food services.

The Air Force Academy does not have a separate internal review office, relying on program reviews by its service audit agency and the academy's Inspector General. According to the Air Force Academy's Inspector General, his office conducts unit effectiveness, operational readiness, and functional management inspections at the academy and handles complaints.

Normal external oversight of academy operations is the responsibility of the Board of Visitors, the Office of the Secretary of Defense, and the service audit agencies. In addition, oversight of the academic program is provided by the accreditation associations. Also, the academies have occasionally

been the subject of special reviews, such as the ones conducted by us¹ and the DOD Committee on Excellence in Education in the mid-1970s.

The Boards of Visitors of the academies are composed of Members of Congress and private citizens appointed by the President, Vice President, and congressional leaders. By law, the Boards are charged with inquiring into the morale and discipline, curriculum, instruction, physical equipment, fiscal affairs, academic methods, and other academy matters that the Boards decide to consider. The Boards meet at the academies once or twice a year for a few days. They do not have their own staff and rely mainly on academy staff for information and assistance in preparing their reports. Each Board sends a report to the President once a year.

The total reported costs of the Boards of Visitors for fiscal year 1989 was \$4,255 for the Naval Academy, \$9,764 for the Military Academy, and \$26,508 for the Air Force Academy. The cost reported by the Air Force is higher because the cost of round trip military air transportation from Washington to Colorado Springs is reported at approximately \$600 to \$1,800 per flying hour. In addition, the Air Force reported \$74,154 as the cost for the time Academy staff spent in support of the Board of Visitors.

¹ Financial Operations of the Five Service Academies (GAO/FPCD-75-117, Feb. 6, 1975); Academic and Military Programs of the Five Service Academies (GAO/FPCD-76-8, Oct. 31, 1975); Student Attrition at the Five Service Academies (GAO/FPCD-76-12, Mar. 5, 1976); and The Five Service Academies: A Followup Report (GAO/FPCD-77-78)

We have found no DOD reviews of the academies since the Committee on Excellence in Education examined academy operations in the mid-1970s.

All three academies are also subject to audit by their respective service audit agencies. Some of the audits that have been conducted were reviews of nonappropriated funds, while others have occurred as part of servicewide audits. Since January 1988, the Air Force Audit Agency has issued eight audit reports on various academy nonappropriated fund activities, four of which were on the Academy's Athletic Association. Academy officials stated that neither the Army Audit Agency nor the Naval Audit Service have issued an audit report focusing specifically on their respective academy since 1985. Military Academy officials informed us that the Army Audit Agency was conducting two multi-site audits, one on personnel and the other on communications. A Naval Academy official stated that the Navy Audit Service had not conducted any recent multi-site audits involving the Naval Academy.

Given the cost and prominence of the academies, they are receiving relatively little external oversight. The lack of independent staff and the limited time spent at the academies make it unrealistic to expect the Boards of Visitors to provide comprehensive evaluations of academy programs. In addition, the

Army and Navy audit agencies have not been particularly active at their respective academies.

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In closing, Mr. Chairman, our testimony today constitutes a status report on our work at the academies. We will be performing additional work at the academies and expect to produce a final report by the end of this year. This concludes my prepared statement. I will be happy to answer any questions.

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