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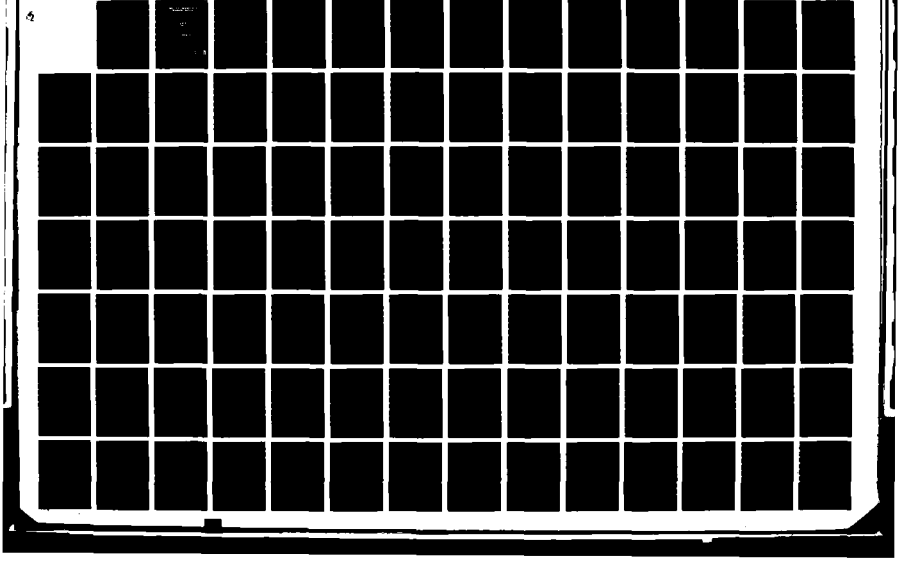

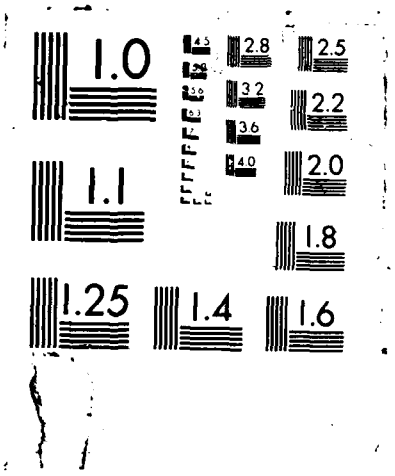
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DEPARTMENT OF DEFENSE

MILITARY MANPOWER TRAINING REPORT

FOR FY 1985

VOLUME IV: FORCE READINESS REPORT

Prepared by

Office of the Assistant Secretary of Defense
(Manpower, Installations and Logistics)

Department of the Army
Department of the Navy
Department of the Air Force

FEBRUARY 1984

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The Military Manpower Training Report of the Secretary of Defense is submitted to the Congress annually. It specifically supports the Department of Defense request for authorization of average military student training loads for each component, active and reserve, of each Service. It recommends the average student load for each category of individual training and education and includes justification for, and explanation of, the average student loads recommended. Keywords: for Fiscal Year 1985.

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INSTITUTIONAL

TRAINING

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EXECUTIVE SUMMARY

The Military Manpower Training Report of the Secretary of Defense is submitted to the Congress in accordance with 10 U.S.C. 138(d)(2), which states:

> The Secretary of Defense shall submit to Congress a written report, not later than March 1 of each fiscal year, recommending the average student load for each category of training for each component of the armed forces for the next three fiscal years, and shall include in that report justification for, and explanation of, the average student loads recommended.

This report specifically supports the Department of Defense request for authorization of average military student training loads for each component, active and reserve, of each Service for Fiscal Year 1985. Requested training loads are shown in the following table.

Requested Training Loads, FY 1985 and FY 1986

	FY 1985	FY 1986
Active Components		
Army	76,940	76,967
Navy	69,116	71,664
Marine Corps	21,186	22,224
Air Force	46,592	52,169
Subtotal	213,834	223,024
Reserve Components		
Army National Guard	18,338	22,642
Army Reserve	15,994	16,883
Naval Reserve	3,389	3,356
Marine Corps Reserve	3,941	4,112
Air National Guard	2,990	2,964
Air Force Reserve	2,099	2,099
Subtotal	46,751	52,056
TOTALS	260,585	275,080

The requested loads are consistent with the President's Budget for FY 1985 and the Department of Defense request for authorization of military manpower strengths, active and reserve, as submitted in February 1984.

Definitions and Explanation of Training Loads

This report discusses the training and education of individuals within the Department of Defense, as opposed to the training within operational mission units. Individual training and education, for purposes of this report, is divided into six categories:

- Recruit Training, given to enlisted entrants to the Services who have not had previous military service.

- One-Station Unit Training, an Army program which combines Recruit Training and training in certain skills into a single course.

- Officer Acquisition Training, which leads to a commission in one of the Services.

- Specialized Skill Training, needed to prepare military personnel for specific jobs in the Military Services.

- Flight Training, primarily for prospective pilots and navigators before they receive an initial operational assignment.

- Professional Development Education, relating to the advanced professional duties of military personnel or to advanced academic disciplines to meet Service requirements.

"Training loads" are the average number of students and trainees participating in formal individual training and education courses during the fiscal year. For a full fiscal year, training loads are the equivalent of student/trainee manyears for these participants, including both those in temporary duty and permanent change of station status.

The requirement for training in a baseline force is derived from the need to replace losses in each skill required in the military force structure. Losses, through separations, promotions and other causes, are projected at various points in the future and compared to the projected inventory of trained personnel. The deficit between the requirement in each skill and the inventory becomes a demand for an output of trained personnel. A phased input of students to the training establishment is then scheduled so that trained personnel, in each skill and skill level, are available at the proper time to replace the losses in those skills. The resulting workload placed on the training establishment is the basis of the training loads addressed in this report.

The training load for each component is the measure of the amount of training required for the members of that component, although some of the training will be done by other Services, in DoD schools, or in some cases by institutions outside the Department of Defense. The training of members of the Reserve Components included in the report is the formal school training provided by the active training establishment to individual members of the Reserve Components while they are on active duty for training; this is primarily training provided to non-prior service personnel entering the Reserve Components.

An Overview of Training Loads

During FY 1985 and FY 1986, total requested DoD training loads will range between approximately 260,585 and 275,080. About 82 percent of these annual loads is composed of training for members of the active forces; the remaining 18 percent of these loads is training for members of the Reserve Components, while on active duty, conducted by the active training establishment.

The following table displays the percentage of total active force loads and the percentage of total Reserve Component loads attributable to each of the major categories of training in FY 1985.

Percent Distribution of Training Loads, FY 1985

Training Category	Active Forces	Reserve Components
Recruit Training	21%	28%
One-Station Unit Training	6%	21%
Officer Acquisition Training	9%	1%
Specialized Skill Training	57%	48%
Flight Training	3%	1%
Professional Development Education	4%	1%
Total	100%	100%

It will be noted that the preponderant categories of training, in terms of training loads, are Recruit Training and Specialized Skill Training, both of which, along with One-Station Unit Training, are strongly influenced by the number of enlisted non-prior service accessions to the force. Other types of training -- all of Officer Acquisition Training, for example -- are also driven by the number of new accessions to the force. The following table divides the requested training loads for FY 1985 into two parts: training that is primarily accession-related, and is conducted for the purpose of turning a civilian into a qualified servicemember with a usable military skill; and other training, which, for the most part, is conducted for the purpose of preparing members in later stages of their military careers for more demanding duties.

Accession-Related Training and Training Loads, FY 1985
(Thousands)

	Active Forces	Reserve Components	Total Active & Reserve
Accession-Related Loads			
Recruit	45.6	13.1	58.7
One-Station Unit Training	12.7	9.8	22.5
Officer Acquisition	18.7	.3	19.0
Initial Skill (Officer & Enlisted) [a/]	69.2	19.0	88.2
Undergraduate Flight	5.6	.5	6.1
Subtotal	151.8	42.7	194.5
Other Loads			
Other Specialized Skill	51.5	3.6	55.1
Other Flight	0.9	0.1	1.0
Professional Development	9.9	0.3	10.2
Subtotal	62.3	4.0	66.3
Total Load	214.1	46.7	260.8
Accession-Related Loads as Percent of Total Loads	71%	91%	75%

Note: Numbers may not add to due to rounding.

[a/] In some cases, includes some training for prior-service personnel or personnel who receive the training at a later stage in their career.

As the table shows, training primarily related to new accessions amounts to about 71 percent of all training programmed for the active forces in FY 1985; only about 29 percent is for subsequent training. The comparable proportions for the Reserve Components are about 91 and 9 percent. The concentration on accession-related training demonstrates the priority the Services place on training intended to produce new servicemembers who are motivated, amenable to discipline, and capable of productive service as members of military organizations.

The following table shows the trend in training loads.

Active and Reserve Training Load Trends by Service,
FY 1973 - 85
(Thousands)

	FY 73	FY 81	FY 82	FY 83	FY 84	FY 85	Percent Change FY 73-85	Percent Change FY83-85
Active Forces								
Army	109	70	76	71	77	77	-29%	+ 8%
Navy	77	63	64	63	66	69	-10%	+ 9%
Marine Corps	30	20	19	19	21	21	-30%	+ 9%
Air Force	59	43	44	44	44	46	-22%	+ 4%
Total Active	274	196	203	197	208	213	-22%	+ 8%
Reserve Components	25	32	38	33	42	47	+47%	+30%
Total DoD	299	229	241	230	250	260	-13%	+12%

Note: Calculations are affected by rounding.

The following table compares training loads by the major categories of training.

Active and Reserve Training Load Trends by Training Category
FY 1973 - 85
(Thousands)

	FY 73	FY 81	FY 82	FY 83	FY 84	FY 83	Percent Change FY 73-85	Percent Change FY83-85
Recruit	94	52	53	52	57	59	-37%	+12%
Officer Acquisition	20	17	18	19	19	19	- 5%	+ 0%
Specialized Skill	157	121	129	118	135	143	- 9%	+17%
Flight	9	7	7	8	7	7	- 22%	+12%
Professional Development	19	8	9	9	10	10	- 53%	+10%
One-Station Unit Training	-	23	25	24	22	22	-	+ 8%
Total	299	229	241	230	250	260	-13%	+12%

Note: Calculations are affected by rounding.

The training loads reflect shifts in resources and training capacities to complement force plans. Total training loads increase from 229,000 in FY 1981 to 260,000 in FY 1985. The growth in Specialized Skill Training accounts for much of the increase.

Funding for Individual Training

Funds required to support the training in the training load request for FY 1985 total approximately $17.9 billion. This amount includes pay and allowances for the students undergoing training, pay and allowances of military and civilian personnel in support of training, operations and maintenance costs, and training-related procurement and construction funded in FY 1985. The following table displays total training costs for each Service.

Funding of Individual Training
by Service, FY 1985
($ Millions)

Army	Navy	Marine Corps	Air Force	DoD
7,614.2	4,969.8	1,203.7	4,154.4	17,942.1

The same funding is shown below for each of the major categories of training and for related support and travel.

Funding of Individual Training
by Training Category, FY 1985
($ Millions)

Recruit Training	$1,347.1
Army One-Station Unit Training	428.5
Officer Acquisition Training	491.9
Specialized Skill Training	4,463.1
Flight Training	2,308.7
Professional Development Education	727.9
Medical Training	599.4
BOS and Direct Training Support	4,345.0
Management Headquarters	158.4
PCS Cost for Training	626.4
TDY and Reserve Component Pay and Allowances	2,445.6
Total	$17,942.1

Note: Numbers may not add due to rounding.

Funding estimates are based on data contained in DoD's Five Year Defense Program (FYDP). This report is consistent with resource estimates in the President's budget, the justification material submitted to the Congress, the Five Year Defense Program and other internal DoD management reports.

Manpower for Individual Training

Individual training requires manpower to conduct and support instruction, manage military schools and training centers, maintain training bases and provide support to students, military staff members and their dependents. Chapter IX of this report provides an analysis of military and civilian manpower in individual training. Manpower in support of individual training for FY 1985, by the general functions it performs, is shown in the following table.

DoD Manpower in Support of Individual Training, FY 1985
(End Strength, Thousands)

	Military	Civilian	Total
Training and Direct Training Support a/	99.8	21.2	121.0
Base Operating Support	30.2	38.1	68.3
Major Training Headquarters	1.8	1.8	3.6
Total	131.8	61.1	192.9

a/ Includes instructors, instructional support, school/training center administration, student supervision.

The following summary shows that the total amount of manpower in support of individual training is the same in FY 1985 as in FY 1982. Base Operating Support has been reduced in prior years and continues a gradual decline between FY 1982 and FY 1985, down 8 percent. Manpower at major training headquarters remains unchanged. Overall, the total manpower declines show reductions in manpower for Base Operating Support which are offset by the increases in manpower for Training and Direct Training Support.

Trends, Manpower in Support of Training, FY 1977-85
(Combined Military and Civilian End Strengths, Thousands)

				Percent Change	
	FY 77	FY 82	FY 85	FY 77-85	FY 82-85
Training and Direct Training Support	130	115	121	- 7%	+ 5%
Base Operating Support	81	74	68	-16%	- 8%
Major Training Headquarters	4	4	4	-	-
Total	215	193	193	-10%	+ 0%

Training workloads -- that is, all students trained including DoD military students, foreign students and students from other U.S. agencies -- have increased as the following table shows.

Training Workloads, FY 1977-85
(Thousands)

FY 77	FY 82	FY 84	FY 85	Percent Changes FY 77-84	Percent Changes FY 82-84
238	256	266	269	+ 12%	+ 5%

The stability in training manpower with the increase in training workload shows a productivity improvement in the Service training establishments. This is consistent with DoD's general emphasis on increased efficiency in support areas.

The Necessity for Good Training

The objective of individual training is to provide the operational forces with personnel adequately trained to assume jobs in military units. Without effective training and education programs, the operational forces would be manned with personnel who are less than fully qualified for their jobs. Since the nation cannot predict when or where war may break out or count on an extended period for mobilization, we must have effective individual training conducted in training institutions to assure that our operational units are capable of carrying out national security missions in peace or war.

MILITARY MANPOWER TRAINING REPORT FOR FY 1985

I

INTRODUCTION

Training Requirements and Manpower Requirements

Requirements for training and education of military personnel are derived ultimately from basic national security objectives. This Report, the Report of the Secretary of Defense to the Congress on the FY 1985 Budget, and the Defense Manpower Requirements Report, describe the progression from national security objectives to training load requirements. The Report of the Secretary of Defense explains the relationship between the threat and the forces designed to cope with the threat. The Manpower Requirements Report relates these forces to the requirement for trained manpower to man the forces. The Military Manpower Training Report takes as a starting point the requirement for trained military manpower described in the Manpower Requirements Report. It then describes how these requirements relate to the demand placed on the military training establishment to supply this trained manpower, and how this demand leads to the DoD request for military student training load authorizations for each component of the Military Services. The Manpower Requirements Report and this Report are mutually supportive; however, the data in the two reports are not interchangeable or directly comparable. The principal reason for this difference is that the main focus of the Manpower Requirements Report is upon requested strength on the last day of fiscal years (that is, end strength), whereas the main focus of this Military Manpower Training Report is upon requested student loads, a concept more comparable to average strength, or man-years, than to end strength.

Definition of "Individual Training and Education"

This report addresses the "individual training and education" activities of the Department of Defense. These involve the training of individual military members in formal courses conducted by organizations whose predominant mission is training; this training is to be differentiated from training activities conducted by operational units incidental to their primary combat, combat support, or combat service support missions. Training conducted in the unit environment, the training of organized crews and operational units for the performance of specific missions, is not included in the training loads discussed in this report, but is discussed in the Manpower Requirements Report. In certain categories of training, on-the-job training (OJT) in units supplements or substitutes to some extent for all or part of formal course training requirements; OJT is also not included in the training loads discussed in this Report.

The purpose of individual training and education is to give the individual servicemember the skills and knowledge that will qualify him or her to perform effectively in subsequent assignments as a member of

an operational military organization. "Individual training and education" includes all formal military and technical training and professional education conducted under centralized control, generally under the supervision of a Service training command or similar organization. The trainees and students undergoing the training or education addressed in the report include the following categories of personnel:

1. Active Force: officers, enlisted personnel, and Service Academy cadets and midshipmen.

2. Reserve Components: officers and enlisted members on active duty for training in formal school courses.

Training of some civilian students, prior to their entry into the Services, in such programs as ROTC, is also discussed in the report. However, training loads are properly requested only for training and education of personnel received while they are in active military status.

In general, the training discussed in this report is conducted under Major Defense Program VIII, "Training, Medical and Other General Personnel Activities," as presented in the Defense budget. Exceptions to these general rules are pointed out, where appropriate, in the body of the report.

Personnel undergoing individual training and education are classified, for manpower accounting purposes, as either trainees, students, or cadets, unless they are undergoing training while on temporary duty or temporary additional duty from their unit of assignment, or unless they are being trained while en route to new stations as transients. The term "trainees" is generally used for all enlisted personnel in Recruit Training and Initial Skill Training. "Cadets" (or "midshipmen" in the case of the Naval Academy) are members being educated at one of the Service Academies. All others receiving individual training and education are identified as "students". The distinction is not important for the purposes of this report, and the term "student" will be used where appropriate to describe members of all three classifications as well as temporary duty and transient personnel being trained.

The term "training" generally refers to instruction in military subjects either at a basic level, as in Recruit Training, or in a military or job-related technical specialty, such as pilot training or training in radar repair. "Education" generally refers to study either in more advanced subjects or in military subjects which apply to an entire Service or to the broad mission of national security, as, for example, the curriculum at the National War College. The term "training" will be used in this report to refer to individual training and education as a whole.

FY 1985 Training Report and the FY 1985 Budget

It is important to emphasize that this report, while consistent with the Department of Defense Budget for FY 1985, differs in structure from the budget justification in two major respects. Budget justifications are focused on explaining how, by whom, and why money is to be spent; budgets for training and their justifications, therefore, are prepared by the Service which conducts the training programs and must obtain funds to train personnel from other Services in addition to its own. By contrast, this report details and emphasizes the training loads of the components of the parent Service whose members are undergoing the training, and deals in less detail with resources and funds required by the Service which conducts the training. For example, Navy personnel being trained by the Air Force are treated in this report as part of the Navy military student training load, since they are being trained to fill Navy requirements. However, in budget documents, funds to conduct training for these students, who are a part of the Air Force training workload, are included in Air Force appropriation requests.

Definitions of Major Training Categories

The portion of this report which discusses training loads in detail is organized into five chapters (Chapters III through VII), each of which addresses one of the major categories of training. These major categories are briefly defined below. Each chapter will more fully describe the training category and its sub-categories, the requested training loads, and the training methodology.

Recruit Training includes the basic introductory physical conditioning, military, and indoctrination training given to all new enlisted entrants in each of the Services. One-Station Unit Training (OSUT) is an Army training program which meets the training objectives of both Recruit and Specialized Skill Training in certain skills through a single course for new Service entrants which is conducted by a single training unit. Since it includes elements of two categories of training, it is treated separately in this report.

Officer Acquisition Training, sometimes called pre-commissioning training, includes all types of education and training leading to a commission in one of the Services, such as the programs of the Service Academies and officer candidate schools. Students not in active military status, such as Reserve Officer Training Corps students, are excluded from requested loads in this Report.

Specialized Skill Training provides officers and enlisted personnel with new or higher levels of skill in military specialties or functional areas to match specific job requirements.

This category includes Army Advanced Individual Training and Navy Apprenticeship Training. Certain flight-related training, such as

Disposition of Active Recruit Training Graduates in FY 1984

	Army	Navy a/	Marine Corps	Air Force
To Initial Skill Training	95%	90%	94%	95%
To Duty Assignment (Civilian-Acquired Skill)	1%	*	*	1%
To Duty Assignment (On-the-Job Training)	4%	10%	6%	4%
	100%	100%	100%	100%

*Less than 1/2 percent.

a/ 21% of Navy Recruit Training graduates attend short "Apprenticeship Training" courses (carried under Initial Skill Training in this report) as a preliminary to further training on the job.

As the table indicates, most enlisted personnel receive formal Initial Skill Training to provide them with a basic military skill. The combination of Recruit Training and Initial Skill Training (or Army One-Station Unit Training) is the foundation of the development of enlisted personnel, because it turns civilians into servicemembers who are qualified to fill positions in military units.

Other than for on-the-job training in the work environment, enlisted personnel normally receive no further formal training beyond the training previously described during their initial enlistments. The major exception is Navy training, conducted by fleet training centers, in such shipboard duties as firefighting.

Subsequent to reenlistment, an individual may be selected for attendance at a journeyman level course in his specific occupational area. This training emphasizes the appropriate military applications for the skills being taught. In most cases, however, enlisted personnel advance in their skill areas through experience gained on the job and without extensive additional formal training. Some enlisted personnel are given the opportunity to attend NCO professional development training programs which prepare them for increased supervisory and leadership responsibilities.

Normally, few enlisted personnel attend regularly programmed specialized courses after mid-career. There are instances, of course, where new equipment or systems are introduced into a Service, and senior level enlisted personnel are formally trained in operation and maintenance techniques. Selected senior enlisted personnel attend schools, such as the Army's Sergeants Major Academy, which are, on the NCO level, similar in purpose to the Intermediate and Senior Service Schools in the officer education system.

for a given period is not only a measure of the amount of training to be accomplished; but, adjusted to take account of the Service conducting the training, it becomes a "workload" and thus it is also a basis for establishing the requirement for resources (manpower, funds, materiel and facilities) needed to support the training to be conducted by a Service.

Conceptually, the training load for a given period is the average student strength for the period, and approximates man-years. The total training load is the sum of the loads for all the included individual courses. Training loads for individual courses are determined by the following factors:

1. The length of the training course.

2. The desired number of graduates, or output, of the course.

3. The number of entrants, or inputs, into the course required to obtain the desired output. This, in turn, depends on the pattern of attrition, or failures of entrants to graduate, for the course.

If attrition occurs at a constant rate during a course, the training load is computed by the following formula:

$$\frac{\text{Entrants} + \text{Graduates}}{2} \times \begin{array}{l}\text{Course Length (expressed}\\ \text{as a fraction of a year)}\end{array} = \text{Load}$$

This is the basic method for computing the training loads discussed in this report. However, if attrition does not occur at a uniform rate, as is frequently the case, and the rate and phasing can be specified, more complex formulas and computer simulations are used to estimate training loads.

Accuracy in Projecting Training Loads

In accordance with law, training load authorizations must be requested well in advance of the period when the training is actually conducted. This year, for example, in addition to the more refined estimates of loads needed for FY 1985, load authorizations must be requested for the fiscal year which begins more than a year after the request is submitted -- that is, loads for FY 1986, beginning October 1, 1985, must be requested in the spring of 1984. This statutory requirement implies the capability to predict future training loads with precision. In actuality, while loads for some long-leadtime programs, such as the Service Academies, can be predicted with considerable accuracy, there are many uncertainties in projecting training loads. Some of the causes of uncertainty are:

1. Unpredictability of individual decisions to enlist or reenlist; this factor may lead to unanticipated changes in the skill

inventory, requiring changes in the composition or size of training loads, or to shifts of portions of the training load from one fiscal period to the following period.

2. Unanticipated changes in force structure, requiring a readjustment of the skill inventory and the mix of courses in the training load.

3. Changes in attrition rates and patterns, causing unprogrammed fluctuations in training rates and loads.

Through forecasting training needs as far as possible into the future and continuous review and adjustment of training inputs and loads, the Services are able to adapt the training system to changing conditions. However, it should be clear that extended projections are subject to error; adjustments are inevitable and, in fact, necessary for good management.

Training Load Request by Component and Category

The tables on the following two pages display in category detail the requested training loads for FY 1985 and FY 1986. The loads for each period are displayed by component and by each of the major categories of training.

Military Training Student Loads, Fiscal Year 1985, By Component and Major Training Category

	Recruit Training	One-Station Unit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Active Forces							
Army	13,472	12,673	4,733	41,819	1,237	3,006	76,940
Navy	14,528	-	6,979	43,926	1,663	2,020	69,116
Marine Corps	9,539	-	268	9,944	635	800	21,186
Air Force	8,047	-	6,523	25,017	2,915	4,090	46,592
Sub-Total	45,586	12,673	18,503	120,706	6,450	9,916	213,834
Reserve Components							
Army National Guard	3,628	7,049	34	7,339	232	56	18,338
Army Reserve	4,392	2,720	3	8,730	97	52	15,994
Naval Reserve	1,629	-	-	1,734	-	26	3,389
Marine Corps Reserve	2,285	-	221	1,410	-	25	3,941
Air National Guard	779	-	-	1,909	258	44	2,990
Air Force Reserve	423	-	30	1,469	100	77	2,099
Sub-Total	13,136	9,769	288	22,591	687	280	46,751
Total	58,722	22,442	18,791	143,297	7,137	10,196	260,585

Military Training Student Loads, Fiscal Year 1986, By Component and Major Training Category

	Recruit Training	One-Station Unit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Active Forces							
Army	13,752	12,922	4,817	41,156	1,316	3,004	76,967
Navy	15,386	-	7,369	45,030	1,720	2,159	71,664
Marine Corps	9,777	-	260	10,751	635	801	22,224
Air Force	9,408	-	6,766	28,930	3,099	3,966	52,169
Sub-Total	48,323	12,922	19,212	125,867	6,770	9,930	223,024
Reserve Components							
Army National Guard	4,407	7,947	34	9,981	217	56	22,642
Army Reserve	4,218	2,309	3	10,190	101	62	16,883
Naval Reserve	1,629	-	-	1,701	-	26	3,356
Marine Corps Reserve	2,285	-	252	1,550	-	25	4,112
Air National Guard	779	-	-	1,903	238	44	2,964
Air Force Reserve	423	-	30	1,469	100	77	2,099
Sub-Total	13,741	10,256	319	26,794	656	290	52,056
Total	62,064	23,178	19,531	152,661	7,426	10,220	275,080

II

TRAINING PATTERNS

General Description

The development of servicemembers through formal training and education and practical experience follows a generally common pattern. The new servicemember (or, in the case of some Officer Acquisition Training, the prospective servicemember) first receives training designed to develop the basic attributes of all members of his or her Service. In most cases, the graduate of the initial training is then taught the skills required for a military job at the lowest skill level. Those servicemembers who do not remain beyond their initial enlistments or obligated terms of service do not, in most cases, receive additional formal training. Those who remain, the career members, will further develop their military knowledge and skills through experience in military jobs, interspersed, as required, with training or education needed to prepare them for more responsible positions. During any part of their terms of service, military personnel are also encouraged, as their military assignments may permit, to improve their educational attainments to the benefit of themselves and their Services through off-duty and voluntary education programs that may be available. This combination of job experience, training and education is essential to the development of a military force that is capable of carrying out the national security mission.

Enlisted personnel usually work in relatively specialized skill fields, whereas the duties of officers, particularly of those in the career force, call for broader expertise. For these reasons, the training and education patterns of officers and enlisted personnel differ, and will be discussed separately in the following sections of this chapter.

Officer Training Patterns

Each Service has developed career patterns to prepare its officers to assume progressively higher command and staff responsibilities. These career patterns are composed of operational assignments, during which the officer learns his profession through experience, and periodic individual training and education, which provide the officer with knowledge and skills needed for progressively more demanding subsequent assignments.

Officer training and education can be divided generally into three types. First, each Service maintains a system of professional military education that is progressive in nature. This education is related more to the increasing responsibilities associated with career progression to more senior grades than to the individual's current assignment or specialty. It is primarily the study of officership and the command and staff knowledge required of all professionals. The second type of

education and training includes the many specific skill-producing courses that are conducted to enable the officer to perform immediately upon assignment to a specialized or functional area. These courses vary in length from a few days to several months. They present, for the most part, strictly job-oriented training, and are often in the nature of orientation or refresher courses. Third, the Services also provide selected officers with advanced academic education, either in-house or at civilian institutions, to meet specific requirements for officers educated in technical, scientific, engineering, and managerial fields. Officers also participate in a variety of other educational programs, many on a part-time basis, usually with the student sharing in the cost.

Training and education for career officers, involving one or more of the types of training and education described above, follow the general patterns outlined in the following paragraphs. The patterns vary among the Services to some extent, and not all officers will participate in all of the schooling described. The number of officers participating in schooling becomes progressively smaller, and participation more selective and demanding, as officers move through their careers.

Non-career officers (those who may be expected to serve only an initial tour of active duty) generally receive training only at the entry level. In some cases, they may receive skill-oriented courses such as pilot training, which is lengthy and results in a commensurately longer active duty obligation, or training as maintenance or communications officers.

Entry Level Training. Upon entry, the young officer's initial training is Service-oriented and intended to prepare him or her for duties at the lowest operational level -- company, squadron, or ship. The newly commissioned Army officer will attend a basic course conducted by the particular branch of the Army to which he is assigned, such as infantry, armor or artillery. A Navy ensign is usually assigned to school training based on his warfare specialty. The new Marine officer attends the Officer Basic School. A newly commissioned officer in the Air Force may go to Flight Training or training in a technical specialty.

Career Training. After some operational experience, the career officer requires further schooling to prepare him for service at the next level -- for example, as a unit commander or a headquarters staff officer. In the Army, this entails a return to his branch school for more advanced training. An Air Force officer could be selected for the Squadron Officer School. A Marine Corps officer would normally attend the Amphibious Warfare Course. Navy officers at this stage in their careers may attend a school in a specialty appropriate to their future assignments.

To satisfy Service requirements and as a further step in professional development, some officers are selected for participation in an advanced academic educational program at a civilian institution or one of the two Service technical institutes, the Naval Postgraduate School and the Air Force Institute of Technology.

Intermediate Service Schools. As the officer progresses (between six and 16 years of service, depending on Service criteria) he is ready for the next, or command and staff, level of professional schooling in preparation for assuming higher responsibilities. Attendance is competitive, as not all officers are selected to attend. Each Service has such a course; the Armed Forces Staff College, a joint school, is also conducted at this level. Each Service has its own emphasis with regard to this schooling because of its pattern of missions; these differences are reflected in the school curricula.

Senior Service Schools. Subsequent to the intermediate years, little technical training is provided. The final level of professional military education is that of the Senior Service Schools -- the war colleges --for which attendance is highly selective. The Army, Navy, and Air Force each has a war college. In addition, there is the National Defense University, consisting of the National War College and the Industrial College of the Armed Forces. Officers graduating from the Senior Service Schools have the academic foundation required for command and staff positions at the highest level. The different curricula of these schools reflect the differing patterns of missions among the Services.

Enlisted Training Patterns

An individual entering upon an initial enlistment is provided Recruit Training that introduces him or her to military life. Following this indoctrination training, an individual will follow one of three possible avenues:

1. Initial Skill Training, which prepares the enlistee for an initial duty assignment, or

2. Direct duty assignment on the basis of a skill already acquired in civilian life, or

3. Direct assignment to first duty unit for on-the-job training (OJT).

The Army One-Station Unit Training (OSUT) program is a variation of the first of these three avenues, since it combines Recruit and Initial Skill Training into a single course, followed by assignment to an operational unit. About 38 percent of Active Army entrants to initial enlisted training will be trained under the OSUT in FY 1985. For the Reserve Components, 47 percent of the Army entrants will receive OSUT.

The expected distribution of Active Recruit Training graduates in FY 1984 is as follows:

Disposition of Active Recruit Training Graduates in FY 1984

	Army	Navy a/	Marine Corps	Air Force
To Initial Skill Training	95%	90%	94%	95%
To Duty Assignment (Civilian-Acquired Skill)	1%	*	*	1%
To Duty Assignment (On-the-Job Training)	4%	10%	6%	4%
	100%	100%	100%	100%

*Less than 1/2 percent.

a/ 21% of Navy Recruit Training graduates attend short "Apprenticeship Training" courses (carried under Initial Skill Training in this report) as a preliminary to further training on the job.

As the table indicates, most enlisted personnel receive formal Initial Skill Training to provide them with a basic military skill. The combination of Recruit Training and Initial Skill Training (or Army One-Station Unit Training) is the foundation of the development of enlisted personnel, because it turns civilians into servicemembers who are qualified to fill positions in military units.

Other than for on-the-job training in the work environment, enlisted personnel normally receive no further formal training beyond the training previously described during their initial enlistments. The major exception is Navy training, conducted by fleet training centers, in such shipboard duties as firefighting.

Subsequent to reenlistment, an individual may be selected for attendance at a journeyman level course in his specific occupational area. This training emphasizes the appropriate military applications for the skills being taught. In most cases, however, enlisted personnel advance in their skill areas through experience gained on the job and without extensive additional formal training. Some enlisted personnel are given the opportunity to attend NCO professional development training programs which prepare them for increased supervisory and leadership responsibilities.

Normally, few enlisted personnel attend regularly programmed specialized courses after mid-career. There are instances, of course, where new equipment or systems are introduced into a Service, and senior level enlisted personnel are formally trained in operation and maintenance techniques. Selected senior enlisted personnel attend schools, such as the Army's Sergeants Major Academy, which are, on the NCO level, similar in purpose to the Intermediate and Senior Service Schools in the officer education system.

III

RECRUIT TRAINING AND ARMY ONE-STATION UNIT TRAINING

General Description

Recruit Training is the basic introductory and indoctrination training given to enlisted personnel of each Service upon their initial entry into military service. Recruit Training provides an orderly transition from civilian to military life, motivation to become a dedicated and productive member of the service, and instruction in the basic skills that are required by all members of the Military Service involved. Training in each of the Services emphasizes discipline, observance of military rules, social conduct, physical conditioning and the building of self-confidence and pride in being a member of the service. Beyond these common objectives, Recruit Training in each Service is designed to meet the particular training requirements of that Service which are a reflection of the Service mission. The graduate of Recruit Training has the basic knowledge and skills required to qualify him or her, after formal or on-the-job training in a particular skill, for service in an operational unit of the parent Service.

Army One-Station Unit Training (OSUT) is unique in that it combines Recruit Training and Initial Skill Training in certain skills into a single course conducted by a single training unit at a single training installation. OSUT therefore includes elements of two major training categories; consequently, it is treated separately at the end of this chapter. OSUT training loads are not included within the Recruit Training loads displayed in this chapter.

Recruit Training Loads

The training loads for FY 1976 through FY 1985 for each component of each Military Service are in the table on the following page.

RECRUIT TRAINING LOADS, FY 1976-85[a/]

Service Component	FY 76	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
Army[b/]										
Active	23,611	20,823	12,957	9,141	10,453	9,831	10,533	12,726	13,600	13,472
Natl Guard	3,864	4,140	3,884	2,707	2,661	2,835	3,590	3,687	4,162	4,392
Reserve	1,548	1,529	1,620	2,062	2,339	2,959	4,378	3,184	4,310	3,628
Navy										
Active	17,642	17,407	14,199	12,440	13,597	14,288	13,315	12,816	13,259	14,528
Reserve	281	338	361	294	290	339	312	305	1,591	1,629
Marine Corps										
Active	12,350	11,288	9,652	9,859	10,166	9,691	9,434	8,555	9,293	9,539
Reserve	1,694	1,801	1,935	1,446	1,623	2,013	2,031	1,977	2,169	2,285
Air Force										
Active	9,348	8,666	8,151	7,712	8,872	9,423	8,361	7,411	7,428	8,047
Natl Guard	475	404	459	426	677	740	749	376	397	423
Reserve	280	291	301	249	297	368	397	575	688	779
DoD										
Active	62,951	58,184	44,959	39,152	43,088	43,233	41,643	41,508	43,580	45,586
Gd/Res Tot	8,142	8,503	8,560	7,184	7,887	9,254	11,457	10,104	13,317	13,136
DoD Total	71,093	66,687	53,519	46,336	50,975	52,487	53,100	51,612	56,897	58,722

a/ In this table and in all subsequent tables in this report, training loads for the years prior to and including FY 1983 data are actual, FY 1984 and subsequent year data are estimated.

b/ Data do not include Army One-Station Unit Training loads.

The changes in Recruit Training loads from FY 1983 to FY 1985 are the result of changes in the number of non-prior service accessions.

Recruit Training

The following table displays for Recruit Training the average training loads for each year from FY 1983 to 1985 and, for FY 1985, the number of entrants (input) and number of graduates (output). Data are shown separately for each component of each Service.

Training Inputs, Outputs, Loads, Recruit Training
FY 1983 - 1985

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	12,726	13,600	87,986	80,418	13,472
Reserve	3,687	4,162	29,208	25,702	4,392
Natl Guard	3,184	4,310	23,995	21,355	3,628
Navy					
Active	12,816	13,259	98,085	91,255	14,528
Reserve	305	1,519	10,000	9,500	1,629
Marine Corps					
Active	8,555	9,293	40,420	34,561	9,539
Reserve	1,977	2,169	9,652	8,221	2,285
Air Force					
Active	7,411	7,428	65,000	61,100	8,047
Reserve	376	397	3,530	3,290	423
Natl Guard	575	688	6,305	5,895	779
DoD					
Active	41,508	43,580	291,491	267,334	45,586
Res/Gd Tot	10,104	13,317	82,690	73,963	13,136
DoD Total	51,612	56,897	374,181	341,297	58,722

Each of the Services conducts training for women recruits that is similar in concept to Recruit Training for males. The training syllabi are essentially the same for males and females. In the Navy and Marine Corps, male and female Recruit Training is collocated but not integrated. The major difference between these male and female courses is that women recruits generally receive less training in weapons use and other combat oriented skills. The de-emphasis on combat skills in the Marine Corps causes the length of training for women to be somewhat shorter.

Rationale for Recruit Training

The underlying philosophy of Recruit Training in each of the Services is that the demands of military service are fundamentally different from those of civilian life. Military service requires a high level of discipline and physical fitness, a homogeneity of outlook, and an ability to live and work as part of a highly structured organization. There are few parallels in civilian society to the demands of military service. Each recruit, therefore, must be transformed into a member of the military team in order to function effectively in the military environment. The attitudes, habits, and basic skills formed in Recruit Training are the foundation of a cohesive military organization. Later training provides the skills and knowledge needed for specific jobs; Recruit Training shapes the civilian entrant into a dedicated member of his or her Military Service with the potential for further development.

The major determinants of Recruit Training loads are the total number of people entering service who must receive Recruit Training (input), the length of the training course, and projected patterns of attrition. Course length and attrition are discussed later in this chapter. The following two sections discuss inputs: first, inputs of active duty personnel, and second, inputs of members of the Reserve Components on active duty for initial training.

Active Duty Input

The annual recruiting objective for active duty enlistees without prior military service is a function of the following factors:

1. The projected requirement for trained enlisted personnel.
2. Current enlisted trained strengths.
3. Number of enlisted personnel currently in training.
4. Projected enlisted losses through separations or other reasons (e.g., desertion, death, acceptance of a commission, etc.).
5. Projected prior-service enlistments -- that is, the return from civilian life of former service-members.

"Trained strength" is the number of personnel required to fill "structure" spaces (i.e., positions in military organizations that require specific grades and skills) and individual "pipeline" spaces, such as transients en route between assignments. The Defense Manpower Requirements Report contains a full discussion of how military manpower requirements are determined. The projected trained strength requirement is compared with the projected trained strength inventory to forecast future skill and strength imbalances. Future shortages that are not expected to be satisfied either by prior-service enlistees or service-members currently in skill training courses determine the training output needed to man the force with trained personnel. To determine the necessary input to achieve this output, allowance must be made for course attrition, the number of students entering a course of instruction who fail to complete it. The total input requirement must, therefore, be increased to compensate for expected attrition losses.

The optimal leveling of monthly inputs to obtain the most efficient use of training staff personnel and training facilities is a continuing goal. However, the phasing of inputs must at times be varied in order to take advantage of the best recruiting periods for maintaining quality and quantity.

Historically, June through September and January have been the most productive recruiting months, reflecting behavioral patterns that are related to the civilian academic calendar. Enlistments increase (1) shortly after high school graduation, (2) when peers return to school in the fall, and (3) after the results of the first term academic work are announced.

The Services must accept most prospective enlistees at the time they are ready to enter service. Requiring enlistees to enter military service in phase with requirements and on an even-flow basis would result in the loss of many potential enlistees to other sources of employment. Accepting enlistees as they become available, however, requires a training structure capable of accommodating peak surges of enlistments.

Reserve Component Input

Persons enlisting in the National Guard and Reserve forces without active duty experience require the same Recruit Training as active duty enlistees, and for the same reasons. Recruit Training loads for the Reserve Components are based on the same factors as active force loads. Guard and Reserve trainees, while in Recruit Training, are mingled with active duty trainees in units so that their training is identical.

Reserve Component recruits form a significant part of the workload of the active Recruit Training establishment. In FY 1985, 22 percent of DoD Recruit Training loads, and 37 percent of Army's, are attributable to Guard and Reserve trainees.

The planning considerations for Reserve Component personnel are essentially similar to those for the active force; detailed phasing of this training is complicated, however, by the additional consideration of civilian employment or school commitments for these personnel. For this reason, a pool of personnel who have been enlisted but who have not yet been able to attend entry training is normal. It is important that this backlog is kept within a reasonable size.

Course Length and Course Content

Enlisted training loads depend not only upon the numbers of entrants but also on the extent of skills required of entering enlisted personnel by each Service. Enlisted personnel attain those skills in Recruit Training and in Specialized Skill Training. Specialized Skill Training is discussed in a subsequent chapter. Recruit Training course lengths are determined in part by how much of the required training is to be provided during the Recruit Training phase and how much is to be deferred to later training. The four Services, because of differences in their missions, take somewhat different approaches in establishing the content and length of their Recruit Training courses.

Recruit Training in each of the Services covers four areas: (1) some processing and testing; (2) introduction into Service life; (3) instruction in military courtesy, discipline, and hygiene; and (4) fundamental military-related training involving physical fitness, military drill, and self-defense. In addition, each Service provides training in military skills that should be possessed by all, or almost all, members of that Service. The degree to which these Service-wide required skills exist differs widely among the Services. This factor accounts for most of the differences in course content and, therefore, course length. The variance in quality of enlistees among the Services also has a bearing on course length; recruits with lower intelligence and lesser amenability to discipline require a longer training period to achieve training objectives.

The length of the standard Recruit Training course in each Service is shown in the following table:

Recruit Training Course Length, FY 1985 (Weeks)

Army	Navy	Marine Corps	Air Force
8.0	7.2	10.3	6.0

Army and Marine Corps Recruit Training differ from the Air Force and Navy programs because all recruits are given intensive physical conditioning and instruction in basic ground combat skills, including the use of individual weapons. These Services subscribe to the view that all enlisted personnel must achieve a basic level of qualification in ground combat skills, and their Recruit Training curricula both provide a common core of training in these skills.

The Air Force accomplishes all Recruit Training in six weeks. Course content concentrates on indoctrination subjects. Relatively little training in Service-wide skills is provided, since there are few common skills needed by all Air Force enlisted personnel. In addition to subjects oriented toward indoctrinating recruits to military life, the Navy course includes phases designed to prepare them for conditions in a fleet environment. The Navy must be sure that recruits learn to live, work, and fight in restricted space such as they will find on board ship, often close to complex machinery and weapons.

The average length of time spent in recruit status in any of the Services may be longer than the standard course lengths discussed above. Some recruits fall behind their peers because of illness. Others require remedial training. If this cannot be accomplished by additional instructional hours the recruit may be sent to a special training unit or recycled to a following class to repeat a portion of the course.

The common objective of transforming a civilian into a disciplined servicemember tends to set a floor under the length of Recruit Training in each of the Services. Relatively few recruits have had much experience with life in a disciplined environment, been separated from their families and friends, or subjected to the stresses imposed by military life. Compensating for these factors takes not only training but also time. A minimum of six weeks in Recruit Training appears necessary to accomplish this objective alone in any of the Services. Greater amounts of time are required for those Services that must provide extensive training in required common skills.

Attrition in Recruit Training

A final factor in the computation of loads is the projection of the rate and timing of attrition. Recruits may fail to complete training for medical reasons, inability to absorb the instruction, lack of motivation, disciplinary problems, or a variety of administrative causes, such as discharge for fraudulent enlistment or family hardship. The following table shows projected attrition losses for FY 1985.

Recruit Training Attrition Projections, FY 1984 and 1985
(Active and Reserve Combined)
(Percent)

	Army	Navy	Marine Corps	Air Force
FY 84	10.9%	8.8%	14.5%	5.5%
FY 85	10.9%	8.8%	14.5%	6.0%

The timing of attrition varies from case to case. In the case of slow learners or individuals who have difficulty in adjusting to military life, trainees usually are reentered or given special instruction; those who do not respond adequately may not become attrition losses until late in the course.

Army One-Station Unit Training

The Army's One-Station Unit Training (OSUT) program combines Recruit Training and Initial Skill Training for certain skills into a single continuous course. Consequently, this report treats OSUT separately rather than arbitrarily breaking it into two segments.

OSUT loads for FY 1978 through 1985 are shown in the following table.

OSUT Training Loads, FY 1978-85

Service Component	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
Army								
Active	9,252	16,944	20,651	15,003	13,137	15,657	13,343	12,673
Reserve	546	1,861	1,831	2,042	1,965	2,717	2,597	2,720
Natl Guard	2,559	4,973	6,229	6,580	5,528	5,860	5,933	7,049
Res/Gd Tot	3,105	6,834	8,060	8,622	7,493	8577	8,530	9,769
DoD Total	12,357	23,778	28,711	23,625	20,630	24,234	21,873	22,442

The following table displays OSUT inputs and outputs, as well as loads, for FY 1985.

Training Inputs, Outputs and Loads, OSUT, FY 1983-85

Service Component	FY83 Input	FY84 Load	FY85 Input	FY85 Output	FY85 Load
Army					
Active	15,657	13,343	49,034	43,638	12,673
Reserve	2,717	2,597	12,927	11,204	2,720
Natl Guard	5,860	5,933	32,621	28,180	7,049
Res/Gd Total	8,577	8,530	45,548	39,384	9,769
DoD Total	24,234	21,873	94,582	83,022	22,442

In FY 1976, less than five percent of Army non-prior service entrants were trained under OSUT. In FY 1985, about 48 percent of active Army entrants to recruit training will be trained by this method. OSUT requires less training time than the separate Recruit Training and Initial Skill Training courses that it replaced.

The following table shows training time for OSUT courses:

OSUT Training Time, FY 1983-FY 1985

Skill Area	Training Time (Weeks)		
	FY 83	FY 84	FY 85
Infantry	12.5	12.3	13.3
Artillery	13	12	14
Armor	14	13	14
Engineer	13	13	15
Military Police	14.7	14	14
Air Defense	-	14.0	14.0

The time that would be required to complete Recruit Training and the Initial Skill Training in separate courses for these skills would be about 4 weeks longer, including the time required to move the trainee from one training organization to another. The shorter OSUT course lengths provide a significant savings in trainee manyears and, consequently, in trainee pay, allowances and support costs. Moreover, the Army's extensive tests of OSUT indicate that the quality of OSUT graduates is generally as good as the quality of personnel trained under the longer two-course training system.

IV

OFFICER ACQUISITION TRAINING

General Description

Officer Acquisition Training consists of training and education programs leading to a commission in one of the Military Services. These programs fulfill the need both for junior officer entrants into the career force and for non-career junior officers in the force structure. Officer Acquisition Training programs produce officers for both the active forces and the Reserve Components.

Training loads for Officer Acquisition Training are shown in the table on the following page.

Total Officer Acquisition Training Loads, FY 1976-85

Service / Component	FY 76	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
Army										
Active	5,219	4,720	4,777	4,776	4,741	4,636	4,850	4,809	4,793	4,733
Nat'l. Guard	15	34	46	47	42	44	49	3	3	3
Reserve	135	128	1	3	5	4	4	27	34	34
Navy										
Active	6,468	6,072	5,769	5,873	5,661	6,389	6,498	6,497	6,881	6,979
Reserve	100	35	30	35	29	12	31	0	0	0
Marine Corps										
Active	434	359	388	269	249	268	281	432	290	268
Reserve	293	301	313	309	224	264	309	302	202	221
Air Force										
Active	5,255	5,008	5,320	5,816	6,032	5,776	6,050	6,555	6,521	6,523
Nat'l. Guard	-	-	-	-	-	-	-	19	30	30
Reserve	2	1	2	8	10	13	12	0	0	0
DoD										
Active	17,376	16,159	16,254	16,734	16,683	17,069	17,679	18,293	18,485	18,503
Gd/Res Total	545	499	392	402	310	337	405	351	269	288
DoD Total	17,921	16,658	16,646	17,136	16,993	17,406	18,084	18,644	18,754	18,791

Excluded ROTC and Health Professions Acquisition Programs

The total loads above do not include two types of Officer Acquisition Training: the Army, Navy, and Air Force Reserve Officers Training Corps (ROTC) programs and the Armed Forces Health Professions Scholarship program. ROTC and Health Professions Scholarship students are not in active military status, whereas students who make up the training loads discussed in this report are either members of the active forces or members of the Reserve Components being trained on active duty by the active establishments. Although these two programs are not included in the requested training loads, they are discussed in this chapter to provide a complete account of Officer Acquisition Training. The following tables show the number of participants in these programs in the period FY 1983 through 1985.

Average Enrollees, ROTC Programs, FY 1983-85

Service	FY 1983	FY 1984	FY 1985
Army	72,004	73,582	76,285
Navy	9,216	9,913	10,605
Air Force	24,579	24,687	24,956
DoD Total	105,799	108,182	111,846

Health Professions Scholarships, FY 1983-85

	FY 1983	FY 1984	FY 1985
Army	1,562	1,550	1,500
Navy	1,329	1,475	1,300
Air Force	1,536	1,475	1,350
DoD Total	4,427	4,500	4,150

The figures shown above for Health Professions Scholarships are actuals for FY 1983; the FY 1984 and 1985 figures are those currently authorized by DoD to each Service from the total of 5,000 authorized scholarships.

Junior ROTC is a program designed to develop leadership qualities, good citizenship, and an understanding of the basic elements of national security among high school students. Despite its name, it is not an officer acquisition program, since it does not result in a commission and its participants have no military obligation whatsoever. Junior ROTC is not included within training loads covered by this report.

Officer Requirements and Structuring the Officer Acquisition Program

Requirements for new officers, like requirements for new enlisted personnel, are a product of the need for officers in the projected force

as compared to the projected future inventory of officers. Properly functioning programs fill the gross requirements for officer entrants for any given year, and provide an even flow of sufficient new officers to each Service to avoid the emergence of unmanageable shortages and overages by age and grade in the future. Each of the Services uses a mix of sources for new officers.

The mix of officer acquisition programs used must recognize the characteristics of each source. Some of the differing characteristics of current programs are stable input, long lead-time; flexible inputs, short lead-time; high academic quality with comprehensive military indoctrination; and high level of technical skill. Additionally, consideration must be given to each program's ability to attract applicants, the quality of the graduates, and their probable retention and attrition. These differences and others must be recognized and exploited in planning officer procurement.

The Service Academies present a long lead-time program that produces a significant proportion of highly trained career military officers.

ROTC is also a long lead-time program and provides the largest single input of officers to the active duty force, although many of these officers will leave active duty and join the Reserve Components. In this manner, ROTC provides officers to support the total force, both active and reserve.

Officer Candidate Schools provide the short lead-time commissioning source necessary to respond to immediate surges in officer requirements, since the program can be expanded or reduced in a relatively short period of time.

The off-campus commissioning programs, such as the Marine Corps Platoon Leader Corps (PLC) program, are long lead-time programs, and provide the student at virtually any four-year college or university the opportunity to earn a commission through summer training but without military responsibilities during the school year. Finally, Other Enlisted Commissioning Programs are long lead-time in nature, and provide a source of officers who possess specific technical skills and who have a proven high rate of retention.

In addition to these reasons for using a variety of sources to satisfy officer requirements, it is also desirable to use different sources to keep the officer corps from being restricted to a narrow segment of the national population and to provide opportunities for highly qualified enlisted personnel.

Officer Acquisition Training may be divided into six separate programs:

Service Academies
ROTC
Officer Candidate Schools
Off-Campus Commissioning Programs
Enlisted Commissioning Programs
Health Professions Acquisition Programs

Service Academies

The mission of each of the Service Academies (United States Military Academy, United States Naval Academy and United States Air Force Academy) is to meet a portion of the long-range requirement for career military officers. They provide instruction and experience to each cadet or midshipman so that he or she graduates with the knowledge and character essential to leadership and with the motivation to become a career officer. Cadets and midshipmen participate in a four-year program of academic studies and training in leadership and other military subjects. Successful completion of the specified academic and military requirements entitles the graduate to a Bachelor of Science degree and a Regular commission in one of the Military Services. Up to one-sixth of Naval Academy graduates in each year may be commissioned in the Marine Corps.

The Service Academies are distinctive among the collegiate institutions of the nation in that their curricula are specifically designed to prepare young men and women for service as professional officers. The total curriculum at each Academy is designed to develop the qualities of character, intellect, and physical competence needed by the officer who may, in the course of a full career, be called upon to perform duties ranging from leading a small combat unit to advising the highest government councils. The programs include the sciences, the humanities, and military and physical training, and form the basis for further professional development or, when required, graduate education.

The enrollment of each of the Service Academies is established by law. This fact establishes stable training loads for the Academies. Training load data for the Service Academies are shown in the following table:

Training Inputs, Outputs, Loads, Service Academies, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army	4,042	4,028	1,400	1,102	4,004
Navy	4,400	4,372	1,311	1,012	4,373
Air Force	4,371	4,279	1,485	902	4,279
DoD Total	12,813	12,679	4,196	3,034	12,656

Each of the Military Departments sponsors an Academy preparatory school. Marine Corps personnel attend the Navy school. The missions of these schools are to provide intensive instruction and guidance, in courses of instruction approximating one academic year, to selected enlisted personnel in preparation for entry to the Service Academies. Students compete for appointments by the Secretaries of the Military Departments and from other sources. The Naval Academy Preparatory School also provides instruction to candidates for the Marine Corps Enlisted Commissioning Education Program during the summer months.

Training Inputs, Outputs, Loads,
Academy Preparatory Schools, FY 1983-85

Service	FY 83	FY 84	FY 85		
	Load	Load	Input	Output	Load
Army	270	282	340	238	282
Navy	211	230	300	200	230
Marine Corps	13	13	20	12	13
Air Force	218	198	250	170	190
DoD Total	712	723	910	620	715

ROTC Programs

ROTC is a long lead-time program which is the single largest source of officers for the Armed Forces. Like the Service Academies, ROTC is used to provide a relatively constant input of officers for active duty, but ROTC also provides non-career officers as well as career officers. The program is currently conducted at over five hundred civilian colleges and universities throughout the nation. The Army, Navy, and Air Force each sponsor an ROTC program; up to one-sixth of the Navy graduates may be commissioned in the Marine Corps. Scholarships and subsistence allowances authorized by law, in addition to conventional recruiting and advertising methods, are used to attract qualified students. Scholarships are awarded to young men and women who exhibit potential ability and interest in fields of projected Service needs.

There are both scholarship and non-scholarship, as well as two-year and four-year, ROTC programs. The curriculum of each program is tailored to the needs of the individual Services. For example, the Navy teaches the basics of ship navigation, while the Army teaches the fundamentals of ground combat and the Air Force provides some basic instruction in aerospace history and doctrine. Each of the programs includes instruction in leadership, military customs and military history, and each program provides prospective officers with a gradual transition from the

civilian environment to the military environment. Each ROTC program consists of a series of regularly scheduled academic classes throughout the school year combined with mandatory summer camps or cruises which are designed to give the student realistic military experience and a first-hand view of military life.

The ROTC scholarship continues to be an important incentive to attract exceptionally qualified individuals to ROTC. The rising cost of education makes the scholarship even more attractive. The Congress increased the number of ROTC scholarships from 19,000 in FY 1979 to 29,500 authorized scholarships in FY 1982. The Army offered 6,000 scholarships in 1979; the 96th Congress authorized 5,500 additional Army ROTC scholarships in FY 1981 for a total of 12,000. In FY 1981, the Congress authorized the Navy 2,000 additional scholarships for a total of 8,000. The Air Force was authorized 3,000 additional scholarships for a total of 9,500. Both the Navy and the Air Force plan to phase in the awards at the rate of 500 additional awards a year until the authorized level is reached in FY 1987.

The ROTC program is being expanded through the establishment of more host institutions and new extension centers. Students at an extension center participate in the ROTC unit of a larger host institution. This practice extends the ROTC option to students attending the numerous small colleges and universities not large enough in themselves to support a viable ROTC unit. In FY 1980 the Army expanded its program by establishing 41 new extension centers. An additional 48 Army ROTC extension centers and eight new host institutions were established in FY 1981. Since the end of FY 1983 there have been a total of 315 Army ROTC hosts, up from 303 host institution in FY 1981. The Navy added additional host institutions for a total of 63, and the Air Force plans additional units for a total of 153 AFROTC host institutions, in FY 1985.

As noted at the beginning of this chapter, the ROTC program is not included in Service training loads because the students are not in an active military status. The following table shows the three Service ROTC programs for FY 1985.

ROTC Programs in FY 1985

Service	Beginning Enrollments	Graduates	Average Enrollments	Average Number of Scholarship Enrollees
Army	78,246	10,695	77,548	11,726
Navy	10,010	1,400	10,605	7,665
Air Force	26,100	3,347	24,687	8,183
DoD Total	114,356	15,442	112,840	27,574

Off-Campus Commissioning Programs

The Officer Acquisition Training program in which college students participate but which is conducted off the college campus is the Marine Corps Platoon Leaders Class (PLC). This program provides for enlistment as a Marine Corps Reservist while the student is still an undergraduate and requires participation in summer military training.

Students participating in this program attend either one or two summer training sessions, depending upon when, during their college career, they were enrolled. The objective of the program is to indoctrinate, motivate, and train the enrollees by providing instruction in basic military subjects, leadership, and physical training. PLC students are commissioned when their college degrees are conferred; the newly commissioned officers then attend the Marine Corps Officer Basic Course.

In conformance with the nature of this program, the training loads in the following table are based only on the time spent in summer training. Loads, consequently, are low as compared to inputs and outputs.

Training Inputs, Outputs, Loads,
Off-Campus Commissioning Programs
FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
USMC Reserve					
PLC	302	202	2,100	1,692	221

Officer Candidate Schools (OCS)

Each of the Military Services operates an Officer Candidate School. The Air Force school is entitled Officer Training School (OTS).

Enlisted members can use this route to "rise from the ranks". The existence of OCS programs, and the other enlisted commissioning programs covered in the next section, is therefore a significant advancement incentive to ambitious and promising enlisted personnel.

The four Services offer direct entry into OCS to selected college graduates without previous enlisted service. Some college students in highly specialized academic disciplines, such as engineering and physical sciences, feel that they cannot afford the time required to participate in ROTC; OCS allows a way to a commission for these persons and, as well, for other well-qualified persons who choose to become officers after graduation from college.

The following table shows the lengths of the various courses.

Course Lengths, Officer Candidate Schools

Service / Course	Course Length (Weeks)
Army	
OCS: Active	14
Reserve	9
Navy	
OCS	16
Marine Corps	
OCS	10
Air Force	
OTS	12

Load data for OCS programs are shown in the following table.

Training Inputs, Outputs, Loads, Officer Candidate Schools FY 1983-85

Service / Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	263	235	675	520	204
Reserve	3	3	25	15	3
Nat'l Guard	27	34	250	150	34
Navy					
Active	798	912	2,200	1,870	923
Reserve					
Marine Corps					
Active	205	76	391	265	61
Reserve					
Air Force					
Active	784	701	3,254	2,686	710
Reserve	19	30	131	118	30
DoD					
Active	2,050	1,924	6,520	5,341	1,898
Gd/Res Total	49	67	406	283	67
DoD Total	2,099	1,991	6,926	5,624	1,965

Other Enlisted Commissioning Programs

The Air Force, Navy, and Marine Corps each have enlisted commissioning programs in addition to Officer Candidate courses. The purposes of these programs are: (1) to provide a source of officers in specific skills with an expected high rate of retention; (2) to provide an avenue whereby enlisted personnel with proven qualifications can augment the commissioned ranks; and (3) to provide a measure of motivation to enlisted personnel. The Navy's Enlisted Commissioning Programs now number seven and and have a planned training load of 1453 in FY 1985. A similar program, the Marine Enlisted Commissioning Education Program, has been expanded to offer degrees in technical and liberal arts academic disciplines. Students in the USAF Airman Education and Commissioning Program (AECP) major in engineering and computer science or physical science, with matriculation up to three years; the average academic time spent in the program is about 27 months. In all these enlisted commissioning programs, participants attend the Officer Candidate School of their Service before they are commissioned.

Both the Air Force and the Navy will continue to emphasize enlisted commissioning programs to increase officer procurement in FY 1984 and FY 1985. The Air Force increased enlisted participation in the USAF Airmen Education and Commissioning Program by 25 percent between FY 1982 and FY 1984 to identify future officer candidates. The Navy is encouraging expansion in several of its enlisted commissioning programs, including BOOST, to identify potential nuclear, flight and other technically oriented officer candidates. These programs provide a reliable alternative to OCS/OTS officer accessions, and like OCS/OTS, this education carries an active duty requirement.

The following table displays load data for these programs. All participants are members of the active forces.

Training Inputs, Outputs, Loads,
Other Enlisted Commissioning Programs, FY 1983-85

Service	FY 83	FY 84	FY 85		
	Load	Load	Input	Output	Load
Navy	1,088	1,367	1,227	1,052	1,453
Marine Corps	214	201	93	60	194
Air Force	1,000	1,150	600	550	1,150
DoD Total	2,302	2,718	1,920	1,662	2,797

Health Professions Acquisition Programs

This subcategory may be conveniently divided into two parts, the Armed Forces Health Professions Scholarship Program and the Uniformed Services University of the Health Sciences Program.

The Health Professions Scholarship Program was established in 1972 by Public Law 92-426. Participants are selected from among students, or those accepted for enrollment, in recognized health professions schools. Participants are commissioned in grade O1 in the Reserve of their parent Service, but, except for a short period of annual active duty, are not in active status. They are, therefore, not included within the training loads of their Services. Upon graduation, participants must serve obligated tours of duty, the length of which depends on the length of their participation in the program.

The program is authorized a total of 5,000 scholarships at its current level. Service data for FY 1985 is shown in the following table:

Health Professions Acquisition Program,
Scholarships Awarded and Graduates, FY 1985

Service	Scholarships	FY 1985 Graduates
Army	1,309	459
Navy	1,475	430
Air Force	1,536	457
DoD Total	4,320	1,346

An additional acquisition program for health professionals, the Uniformed Services University of the Health Sciences (USUHS), began operation in 1976. In accordance with PL 92-426, the student body of the USUHS is composed of commissioned officers of the Uniformed Services. The first students graduated from this program in 1980.

The USUHS plans an incoming class of 156 medical students in FY 1985. This institution will, over the long term, provide approximately 25 percent of DoD's projected physician requirements. By FY 1985, the University will reach a student strength of 630 medical students. Training inputs, output and loads for this DoD school for FY 1983-1985 are shown below.

Training Inputs, Outputs, Loads, USUHS
FY 1983-85

FY 83	FY 84	FY 85		
Load	Load	Input	Output	Load
596	629	156	155	630

V

SPECIALIZED SKILL TRAINING

General Description

Specialized Skill Training provides officer and enlisted personnel with skills and knowledge needed to perform specific jobs. Each Service has established a job structure that makes it possible for it to carry out its assigned missions. Each position in each organization within that job structure has been analyzed to determine the skills necessary to insure that each job is done properly and efficiently. The purpose of Specialized Skill Training is to impart these required skills to the proper number of individuals in a phased manner so that each position vacancy in the structure can be filled promptly with a qualified replacement.

Specialized Skill Training, as used in this report, is characterized by the following:

Inclusions: Initial, progression and functional training for both officers and enlisted personnel. Specialized Skill Training specifically includes Army Advanced Individual Training and Navy Apprenticeship Training. This training category also includes aviation-related ground training and enlisted leadership training below the level of that carried in Professional Development Education.

Exclusions: All Officer Acquisition Training programs, notably Officer Candidate School, formerly included in Specialized Training budget documents.

Army One-Station Unit Training (OSUT), like Specialized Skill Training, provides Army personnel with job-related training in a number of skills. However, since OSUT is conducted as one course which combines Recruit and Specialized Skill Training, it is treated separately in this report (see Chapter III), and OSUT loads are not included in the Specialized Skill Training loads in this chapter.

Specialized Skill Training loads will increase by 8,000 between FY 83 and FY 85. Reserve Components training loads for both the enlisted and officer corps continue to grow through FY 1985. DoD wide, the requirement to improve the technical skills of career personnel to keep pace with new equipment acquisition and modifications to the existing inventory will continue into the foreseeable future, and this is reflected in the Specialized Skill Training loads for FY 1985.

Specialized Skill Training loads for FY 1976-85 are as shown in the table on the following page.

Specialized Skill Training Loads, FY 1976-85

Service / Component	FY 76	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
Army [a/]										
Active	42,630	41,399	35,883	32,576	39,089	38,168	33,204	33,711	40,910	41,814
Nat'l. Guard	6,488	6,614	7,098	3,970	5,183	5,114	5,405	4,305	6,820	8,730
Reserve	3,219	4,259	3,563	2,514	3,677	5,064	4,500	4,788	5,779	7,339
Navy										
Active	37,117	35,227	35,933	35,973	35,874	37,738	40,748	40,311	42,535	43,926
Reserve	552	510	546	467	469	535	556	635	1,419	1,734
Marine Corps										
Active	11,117	9,877	9,442	10,560 [b/]	7,624	8,527	8,361	9,024	9,635	9,944
Reserve	588	651	662	560	504	838	618	680	1,446	1,410
Air Force										
Active	26,531	25,238	22,629	20,167	21,445	23,310	22,899	22,453	23,158	25,017
Nat'l. Guard	1,085	1,035	1,040	912	1,031	1,256	1,181	841	1,218	1,469
Reserve	684	686	681	565	591	692	788	1,401	1,829	1,909
DoD										
Active	117,395	111,741	103,887	99,273	104,032	107,743	105,212	105,499	116,238	120,701
Gd/Res Total	12,616	13,755	13,590	8,987	11,455	13,499	13,048	12,650	18,511	22,591
DoD Total	130,011	125,496	117,477	108,260	115,487	121,242	118,260	118,149	134,749	143,292

a/ Data do not include Army One-Station Unit Training loads.

b/ Prior to 1980, the Marine Corps training loads include Special Landing Forces Training operations. The data for FY 80-85 reflect only those training loads associated with training (Program 8) in the President's budget for FY 1985. The magnitude of the Special Landing Forces Training loads is about 2,500 per year.

As in the other types of training covered in this report, the demand placed on the training establishment for individuals with certain skills is determined by comparing projected requirements for each skill and skill level with the projected future inventory of trained service-members.

When anticipated losses are deducted from the current inventory, shortages in various skill areas are revealed. These shortages, except for those that can be satisfied through on-the-job training, or, in a few cases, through lateral entry from civilian life of individuals who already possess an employable skill, create a demand for a phased output of trained replacement personnel. Estimates are made of the portion of students in each training course who will fail to complete the course. These course attrition factors determine the inputs necessary to achieve the desired course outputs. Inputs, outputs, attrition patterns, and course lengths determine the training loads. These factors are discussed for each sub-category of Specialized Skill Training in the remainder of this chapter.

Specialized Skill Training is the most diverse of the major categories of individual training. In the interest of clarity, the full category has been divided into five sub-categories. Two are concerned with initial skill training, one for officers, the other for enlisted personnel; two others cover more advanced training, again divided by officer and enlisted. The last category covers both officer and enlisted training which, for the most part, imparts required knowledge or skills without changing the student's primary skill or skill level.

Initial Skill Training (Enlisted)

Initial Skill Training (Enlisted) includes all formal training normally given immediately after Recruit Training and leading toward the award of a military occupational specialty or rating at the lowest skill level. Successful completion of the training qualifies the enlisted member to take a position in the job structure of the Service and to progress, through job experience, to the journeyman level. Army One-Station Unit Training satisfies this same purpose but, because it combines the skill training with recruit training in a single course, it is treated separately in this report.

The great majority of Service recruits are drawn from the least skilled segment of the population. Most recruits are under age 21 and have little civilian job experience. In addition, some civilian specialties are not in demand in the military job structure, and many of the most important military skills have no civilian counterpart. Consequently, only a small number of people enter the Service with a skill that can be used with little or no additional training, and enlistees must be trained in a skill before they can become productive. Some skills can be acquired through experience and on-the-job training. Most, however, are most effectively and efficiently learned through

formal courses. In some situations, on board ship for example, the opportunity for on-the-job training is often limited.

Load data for Initial Skill Training (Enlisted) are displayed in the following table. The classification of this training is determined by its purpose, rather than by whether entrants attend immediately after Recruit Training. Thus some prior-service students and cross-trainees from other skill areas are reflected in these data.

Training Inputs, Outputs, Loads, Initial Skill Training (Enlisted)
FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	16,089	17,864	79,887	72,213	16,174
Reserve	3,433	4,231	32,078	29,311	5,388
Nat'l Guard	3,843	4,536	29,027	26,710	5,809
Navy					
Active	22,350	23,034	194,064	184,289	23,698
Reserve	395	1,179	13,482	12,920	1,425
Marine Corps					
Active	5,818	5,997	42,488	40,094	6,484
Reserve	614	1,313	9,671	9,227	1,297
Air Force					
Active	15,136	15,424	65,001	63,051	17,084
Reserve	694	1,013	6,244	5,960	1,230
Nat'l Guard	1,132	1,519	6,742	6,116	1,563
DoD					
Active	59,393	62,319	381,440	359,647	63,440
Res/Gd Total	10,111	13,791	97,244	90,244	16,712
DoD Total	69,504	76,110	478,684	449,891	80,152

Reflecting the variety of skills required in the four Services, there are a large number of courses for enlisted personnel in Initial Skill Training, as shown in the following table:

Number of Courses, Initial Skill Training (Enlisted), FY 1985

Army	Navy	Marine Corps	Air Force
581	170	84	342

Initial Skill courses include general skills, intelligence, cryptography, and health service training. Some of these courses are in highly technical skills, such as nuclear reactor specialist or electronics technician. Others involve less complex, but not less important, skills -- cook, clerk-typist, mechanic, and vehicle driver. A sampling of courses in each Service with the most students in FY 1985 is shown in the following table.

	No. of Students	Course Length (in days)
Army a/		
Basic Medical Specialist	9,065	70
Motor Transport Operator	8,446	35
Administrative Specialist	7,246	48
Food Service Specialist	6,710	40
Single Channel Radio Operator	4,300	66
Unit Supply Specialist	3,731	37
Navy		
Basic Electricity/Electronics	23,731	62
Apprentice Training b/	19,849	28
Aviation Fundamentals	15,630	11
Propulsion Engineer Basic	8,132	26
Avionics Technician "A" School	5,073	125
Basic Enlisted Submarine	4,282	39
Marine Corps		
Rifleman	4,918	28
Field Radio Operator	2,414	63
Basic Electronics	1,756	98
Antitank Assault Man	1,785	28
Mortarman	1,218	28
Machine Gunner	1,130	28
Air Force		
Security Specialist	7,634	45
Administrative Support Staff Specialist	2,668	41
Inventory Management Specialist	2,394	39
Aircraft Maintenance Specialist (Strategic, Phase I)	1,974	49
Fuel Specialist	1,604	36
Law Enforcement Specialist	1,965	46
Jet Engine Mechanic	1,519	59

a/ Many of the Army high-density skills and most combat skills (armor crewman, artilleryman, etc.) are trained through One-Station Unit Training (OSUT).

b/ Apprentice Training is composed of fundamental training in one of four basic skill areas: Seaman, Fireman, Airman, Constructionman. The course length shown is the average for those four skills.

Course lengths vary widely according to the complexity of the subject matter. For example, the Air Force course for electronic computer systems specialist is 187 calendar days in length, whereas the course for pavements maintenance specialist takes only 20 days. Army nuclear power plant operators receive an entire year of training, but motor transport operators and general construction machine operators complete their training in 35 days. The Navy average is low in comparison to the others because it includes a large number of students in short courses related to particular shipboard duties and because of the predominance of the relatively short apprentice courses; in addition, Navy personnel, to a greater degree than personnel of other Services, receive supplementary formal training during their first enlistments.

Average Course Lengths Academic Days in Training
Training (Enlisted), FY 1985

Army	Navy	Marine Corps	Air Force
50	48	56	66

The final determinant of training loads is the anticipated rate of attrition. Attrition rates must be estimated for each course. The rate may be negligible for a reasonably routine course for which students entered in the course have the necessary abilities and motivation. Attrition may run much higher, up to one-third of the class entrants, in technical subjects, such as the Improved Hawk Continuous Wave Radar Repairman Specialist course. In contrast to policies governing Recruit Training, many of the students who fail to complete these courses are retrained in other skills rather than discharged. The average anticipated rates for FY 1984 and FY 1985 are as shown:

Average Attrition Rates, Initial Skill Training (Enlisted), FY 1984 and FY 1985
(Percent)

	Army	Navy	Marine Corps	Air Force
FY 1984	9.6%	6.3%	5.4%	9.0%
FY 1985	9.1%	6.3%	5.4%	9.0%

Skill Progression Training (Enlisted)

This sub-category covers skill training received by enlisted personnel subsequent to Initial Skill Training. Through this training, the student gains the knowledge to perform at a more skilled level or in a supervisory position. Skill Progression Training is most frequently given after the servicemember has gained experience through actual work in his or her specialty. In some cases, however, training in a relatively narrow subject area as an immediate follow-on to Initial Skill Training is included in Skill Progression Training.

Training load data for Skill Progression Training (Enlisted) are shown in the following table:

Training Inputs, Outputs, Loads, Skill Progression Training (Enlisted), FY 1983-85

Service / Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	1,956	4,039	26,627	25,359	4,964
Reserve	116	543	2,974	2,804	568
Nat'l Guard	82	304	2,195	2,139	413
Navy					
Active	11,625	12,713	121,886	119,555	13,285
Reserve	35	55	771	702	124
Marine Corps					
Active	1,318	1,573	8,966	8,702	1,422
Reserve	21	75	710	704	51
Air Force					
Active	5,711	6,025	77,951	76,539	6,180
Reserve	68	103	3,158	3,048	124
Nat'l Guard	174	187	4,215	4,153	225
DoD					
Active	20,610	24,350	235,430	230,155	25,851
Res/Gd Total	496	1,267	14,023	13,550	1,505
DoD Total	21,106	25,617	249,453	243,705	27,356

The requirement for Skill Progression Training arises from the fact that training in a skill at entry level and subsequent experience do not, in many cases, fully qualify a servicemember to do the more advanced jobs in his or her field without further formal training. Several factors may contribute, singly or in combination, to a need for additional formal training:

1. The introduction of new equipment.

2. The need to produce a higher degree of skill in a sub-specialty.

3. The need to impart a broader base of knowledge to qualify an individual for a supervisory responsibility.

4. The requirement for refresher training to bring the service-member up to date on the latest information and techniques in his or her skill.

The primary need, as in all other types of training, is to have trained individuals available to replace losses as they occur. Planning future training in this sub-category follows the same general pattern as for Initial Skill Training. Some additional complications, however, are introduced by the fact that members eligible for schooling are frequently serving overseas or on board ship, rather than flowing from the Recruit Training pipeline. This situation frequently requires that personnel receive the training when they are available, preferably between duty assignments, rather than when they might more easily be accommodated for formal school training.

The following table displays statistics in Skill Progression Training in each of the Services for FY 1985.

Skill Progression Training (Enlisted), FY 1985

	Army	Navy	Marine Corps	Air Force
Number of Courses	245	1,617	91	890
Average Course Lengths (Academic Days)	52	33	57	23
Projected Attrition Rate (Percent)	4.8%	3.1%	2.7%	*

*Less than 2%

The Air Force's average days in training is low compared to the other Services because of the large use of short courses. The large number of Navy and Air Force courses is a reflection of the technical nature of these Services and their large number of subspecialties. Of course, part of the difference is due to differing Service approaches to course definition and segmenting.

Initial Skill Training (Officer)

As a general rule, Officer Acquisition Training is oriented toward the broad educational background and general military training which is considered necessary for all officers entering a Service. In consequence, most newly commissioned officers require further training for the specific type of duty they will be performing in their first duty assignment. Initial Skill Training for officers is, therefore, analogous to Initial Skill Training for enlisted personnel -- both provide the job-oriented training which, added to the military fundamentals learned earlier, prepares the individual for taking a place in the job structure.

Load data for Initial Skill Training (Officer) are displayed in the following table.

Training Inputs, Outputs, Loads, Initial Skill Training (Officer), FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	2,252	2,742	9,431	9,359	2,514
Reserve	397	1,156	7,803	7,724	1,609
Nat'l Guard	506	516	2,456	2,431	586
Navy					
Active	1,414	1,431	5,977	5,925	1,431
Reserve	10	13	190	188	12
Marine Corps					
Active	1,122	1,165	3,721	3,683	1,128
Reserve	7	9	147	145	9
Air Force					
Active	671	709	4,486	4,416	679
Reserve	32	35	469	469	39
Nat'l Guard	56	70	543	519	70
DoD					
Active	5,459	6,047	23,615	23,383	5,752
Res/Gd Total	1,008	1,799	11,608	11,476	2,325
DoD Total	6,467	7,846	35,223	34,859	8,077

With minor exceptions, all newly commissioned Army officers attend officer basic courses at their branch schools -- Infantry officers at the Infantry School, Engineer officers at the Engineer School, etc. These courses average 18 weeks in length, and the officer attends before reporting to his or her first unit of assignment. In addition, certain officers are selected to attend follow-on skill or functional training courses for more specialized assignments.

All submarine and nuclear officers and most Surface Navy officers go to Initial Skill Training. The Navy provides 42 courses for officers in Initial Skill Training, with an average course length of 83 days.

All newly commissioned Marine Corps officers attend a basic course for general orientation and training. In addition, Marine Corps officers attend 22 Initial Skill Training courses sponsored by the Corps. They may participate in approximately 30 others conducted by the Navy or other Services. Such courses average 98 days in length and are related to specific officer jobs.

The Air Force conducts 66 Initial Skill Training courses for officers, with an average of 42 days in length; about 50 percent of newly commissioned officers attend these courses.

Skill Progression Training (Officer)

Skill Progression Training for officers is, in general, aimed at officers with several years of practical experience and provides them knowledge needed to assume more advanced responsibilities. For example, the Army provides advanced courses which are structured to prepare the students for battalion and brigade staff duties in addition to command responsibilities at the company and battery level. Data for Skill Progression Training (Officer) are displayed in the following table.

Training Inputs, Outputs, Loads, Skill Progression Training (Officer), FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	3,561	4,261	20,542	20,206	5,425
Reserve	166	406	3,123	3,082	426
Nat'l Guard	182	203	1,189	1,171	230
Navy					
Active	989	1,094	8,342	8,168	1,128
Reserve	14	18	330	318	16
Marine Corps					
Active	169	223	1,626	1,620	227
Reserve	10	13	358	358	14
Air Force					
Active	618	718	13,857	13,805	782
Reserve	31	39	914	700	48
Nat'l Guard	26	32	929	920	30
DoD					
Active	5,337	6,296	44,367	43,799	7,562
Gd/Res Total	429	711	6,843	6,549	764
DoD Total	5,766	7,007	51,210	50,348	8,326

The Army conducts 149 courses averaging 68 days in length. The Navy maintains 150 courses, averaging 37 days in length, which cover a variety of specialized duties that are typically performed by officers with several years of service -- for example, destroyer officer course, aviation maintenance officer course, and nuclear propulsion plant course.

Both the Marine Corps and the Air Force conduct broad courses for officers at about the same level as the Army's advanced courses; however, as these are Service-wide and uniform in content, they are carried in Professional Development Education. Within Skill Progression Training, Marine Corps officers attend 30 courses sponsored by the Corps. They also utilize the course offerings of the other Services. The Air Force has 498 courses, averaging 15 academic days each, for the purpose of training officers in new duties required by their prospective assignments.

Attrition from the Skill Progession courses for officers is significantly lower than for enlisted training or initial skill officer training. Attrition of one to two percent is typical of such courses.

Functional Training (Officer and Enlisted)

Functional Training is an "all other" sub-category covering those types of required training that do not fit neatly into the definitions of the other sub-categories. By and large, Functional Training is in subject areas that cut across the scope of military occupational specialties and provides additional required skills without changing the student's primary speciality or skill level. An example is a Damage Control Course conducted by the Navy. Both officers and enlisted personnel participate in Functional Training. Load data for Functional Training are shown in the following table.

Training Inputs, Outputs, Loads, Functional Training, (Officer and Enlisted) FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	9,853	12,004	131,994	119,540	12,737
Reserve	193	484	5,956	5,525	739
Nat'l Guard	175	220	4,221	3,942	301
Navy					
Active	3,933	4,263	406,229	395,864	4,384
Reserve	181	154	12,184	12,124	157
Marine Corps					
Active	597	677	8,004	6,744	683
Reserve	28	36	914	881	39
Air Force					
Active	317	282	10,050	9,956	292
Reserve	16	28	1,118	1,109	28
Natl Guard	13	21	691	684	21
DoD					
Active	14,700	17,226	556,277	532,104	18,096
Res/Gd Total	606	943	25,084	24,265	1,285
DoD Total	15,306	18,169	581,361	556,369	19,381

Army Functional Training includes the airborne, ranger, and special forces qualification courses, many specialized NCO supervision courses, language training, and a number of courses related to specialized equipment (e.g., Satallite Communication Operation and Maintenance; 8-inch Atomic Projectile Assembly).

Navy Functional Training differs from that of the other Services because of the very high input to a large number of very short courses. Most of the training consists of in-port training for ships' crews, and includes the following types of activity:

1. Shore training for shipboard teams (firefighting, damage control, anti-submarine warfare, etc.).

2. Short basic or refresher courses at fleet training centers in the operation of equipment or systems.

3. Shipboard in-port training assistance.

4. Precommissioning training for newly formed crews of ships under construction.

Marine Corps Functional Training provides skills required for specific jobs but not limited to a primary occupational specialty. Some of the included courses are scuba training, sea duty indoctrination, and drill instructor training.

All Air Force Functional Training is survival training related to various environments: water, arctic, jungle, or tropic. This course trains air crews the skills for long-term combat survival and survival in chemical, biological, and radiological contaminated environments.

The following table provides additional statistics on Functional Training.

Courses and Course Lengths, Functional Training, FY 1985

	Army	Navy	Marine Corps	Air Force
Number of Courses	1,431	988	36	8
Average Course Length (Days)	28	4	26	8

VI

FLIGHT TRAINING

General Description

Flight Training programs provide basic flying skills required prior to operational assignment of pilots, navigators, and naval flight officers. Most of the training in this category is undergraduate flight training; at the conclusion of this training, a graduate is awarded "wings" and is classified as a "designated" or "rated" officer. Flight Training includes programs for pilots of all Services, navigators in the Air Force, and naval flight officers in the Navy and Marine Corps. Pilot training may be in jet or propeller-driven fixed-wing aircraft, or in helicopters. Some related advanced flight training, such as Army instructor pilot training and Air Force navigator/bombardier and electronic warfare training, is also included in Flight Training. Enlisted programs in aviation-related subjects (for example, in air traffic control) and Air Force survival training are in Specialized Skill Training. Marine Corps enlisted navigator training is included in Flight Training.

Flight Training loads, by Service and component, for Fiscal Years 1976 through 1985 are shown in the following table:

Total Flight Training Loads, FY 1976-85

Service / Component	FY 76	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
Army										
Active	709	623	724	813	1,204	1,204	1,197	1,455	1,164	1,237
Natl Guard	28	35	72	89	80	44	86	50	85	97
Reserve	10	15	42	49	31	87	46	206	205	232
Navy										
Active	1,442	1,335	1,287	1,065	1,253	1,614	1,993	1,712	1,593	1,663
Marine Corps										
Active	563	658	692	859	790	692	676	647	649	635
Air Force										
Active	2,068	1,978	1,723	2,025	2,467	2,688	3,117	3,170	3,024	2,915
Natl Guard	90	97	94	128	128	61	244	63	99	100
Reserve	35	30	34	37	51	161	52	234	259	258
DoD										
Active	4,782	4,594	4,426	4,762	5,714	6,198	6,983	6,984	6,430	6,450
Res/Gd Tot	215	163	177	242	303	353	428	553	648	687
DoD Total	4,945	4,771	4,668	5,065	6,004	6,551	7,411	7,537	7,078	7,137

Flight Training loads were reduced by approximately 45 percent over the period FY 1975 to FY 1978 because of the net effect of the following factors:

- Peacetime reductions in active force aviator requirements in all Services, except for moderate increases in Army aviator requirements associated with the 16-division force objective in the last years.

- Restriction of undergraduate flight training for Reserve Component members to the number needed to fill positions in reserve aviation units that could not be filled through recruitment of experienced aviators leaving active duty -- as, for example, positions in aviation units that are remote from major population centers.

The Service trends for flight training in FY 1985 call for maintaining the generally higher rates of training initiated in FY 1979. However, the Air Force is making some reductions due to the pilot and navigator inventories approaching balance while retention continues at high levels. The higher rates reflect an ongoing effort to return pilot and navigator inventories to long-term sustainable levels, levels which in the late 1970s were adversely affected by several years of unexpectedly high attrition rates for flying personnel. More undergraduate helicopter pilot training for the Army's active and reserve components is planned. This will increase the Army's active and reserve pilot inventories and increase the deployability of reserve air detachments.

For purposes of clarity, the following discussion of aviation training is divided into three sections -- Undergraduate Pilot Training, Navigator Training, and All Other Flight Training, each treating a subcategory of Flight Training.

Undergraduate Pilot Training

The purpose of Undergraduate Pilot Training is to qualify students to perform the basic duties and assume the responsibilities of military pilots. Courses include sufficient flying training to allow the student to attain proficiency in the general class of aircraft (jet, prop, or helicopter) he/she will be flying in future assignments. Training through flying or in flight simulators is augmented by flight-related ground training and, ordinarily, some officer professional development training to prepare the student for the responsibilities of a junior officer. For the Army, which uses a large number of warrant officer pilots, enlisted entrants undergo warrant officer candidate training before entering flight phases of training; they receive their warrants upon graduation from flight training. A minority of Army flight training students are already commissioned officers upon entry. The Navy also conducts Navy officer training for aviation officer candidates concurrently with the early phases of flight training.

Training data for FY 1983-85 are displayed in the following table:

Training Inputs, Outputs, Loads, Undergraduate Pilot Training, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	1,241	917	1,338	1,228	937
Reserve	43	75	121	107	83
Natl Guard	159	152	239	216	165
Navy					
Active	1,172	1,074	1,377	885	1,121
Marine Corps					
Active	607	607	578	435	597
Air Force					
Active	2,016	1,981	2,455	1,800	1,929
Reserve	53	82	97	82	82
Natl Guard	171	180	209	180	180
DoD					
Active	5,036	4,579	5,748	4,348	4,584
Res/Gd Tot	426	489	666	585	510
DoD Total	5,462	5,068	6,414	4,933	5,094

Load data for each Service for undergraduate helicopter pilot training are shown below.

Training Inputs, Outputs, Loads, Undergraduate Helicopter Pilot Training, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	1,241	917	1,338	1,228	937
Reserve	43	75	121	107	83
Natl Guard	159	152	239	216	165
Navy					
Active	248	242	371	245	261
Marine Corps					
Active	261	280	329	245	280
Air Force					
Active	63	69	84	80	66
Natl Guard	-	3	2	3	2
DoD					
Active	1,813	1,508	2,122	1,789	1,544
Gd/Res Total	202	230	362	326	250
DoD Total	2,015	1,738	2,484	2,124	1,794

The following table shows programmed course lengths and projected attrition rates for the Army undergraduate helicopter pilot training program.

Course Length and Attrition Rates, Army Undergraduate Helicopter Pilot Training, FY1985

	Commissioned Officers	Warrant Officer Candidates	
		Officer Training	Flight
Course Length (weeks)	36.4	6	36.4
Attrition Rate	10%	13%	16%

The Army course is six weeks longer for warrant officer candidates than for commissioned officers, since the course also serves as a warrant officer candidate school.

Navy Undergraduate Pilot Training begins with a common core of basic ground training and primary flight training and then diverges according to whether the student is to be qualified in jet aircraft, propeller aircraft

or helicopters. The basic ground phase, or environmental indoctrination phase, is fourteen weeks in length for officer students and 20 weeks for aviation officer candidates, since this phase also serves as an officer training period for the latter group.

The following table shows course lengths, attrition rates, and type of aircraft used for training for each phase of the syllabus:

Course Phasing, Navy/Marine Corps
Undergraduate Pilot Training, FY 1985

Course/Phase		Course Length (Weeks)	Attrition Rate (Percent)	Type Aircraft
Commissioned Officers Aviation Pre-flight Indoctrination		6	9%	----
Aviation Officer Candidates		20 a/	15%	----
Primary Training	Jet	19.5	15%	T34C
	Prop	19.5	15%	T34C
	Helo	19.5	15%	T34C
Strike Training (Jet)				
Intermediate Jet		23.3	8%	T2C
Advanced Jet		20.3	5%	TA4J
Maritime Training (Prop)				
Intermediate Prop		4.2	1.5%	T34C
Advanced Prop		18.4	5%	T44A
E-2/C-2/C-1 Training				
Intermediate M/H		18.4	5%	T44A
Advanced Maritime		17.9	12%	T2C
Helicopter Training				
Intermediate Helo		4.2	1.5%	T34C
Transition Helo		5.8	1.5%	TH57A
Advanced Helo		13.0	3.0%	TH57

a/ Includes 6 weeks Aviation Pre-flight Indoctrination.

Because of the task requirements which dictate variations in course content, the standard Undergraduate Pilot Training course is as short as 50 weeks for an officer student qualifying in helicopters or as long as 83 weeks for an aviation officer candidate qualifying in jets. Actual course duration may be longer because of unforeseen circumstances such as major aircraft groundings, fuel shortages, or inclement weather.

The changes in duration for various phases of Undergraduate Pilot Training are the result of full inplementation of the Navy Integrated Flight Training System (NIFTS).

The following table displays load data for Navy and Marine Corps Undergraduate Pilot Training. All participants are in the active force.

Training Inputs, Outputs, Loads, Navy/Marine Corps Undergraduate Pilot Training, FY 1983-85

Service	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Navy					
Strike	585	496	561	330	527
Maritime	306	336	445	310	333
Helo	248	242	371	245	261
USMC					
Jet	311	300	211	160	290
Prop	35	27	38	30	27
Helo	261	280	329	245	280

The final program of Undergraduate Pilot Training is training of Air Force fixed wing jet pilots. Air Force helicopter pilots are trained in the Army program. The majority of Air Force fixed wing pilots are trained in the all-jet USAF Undergraduate Pilot Training program. The standard course length is 49 weeks. Forecast attrition for FY 1985 is 23.7 percent, not including that which occurs in the flight screening of the Flight Familiarization Training program.

In addition, approximately 110 Air Force pilots will be trained annually in the EURO-NATO Joint Jet Pilot Training (ENJJPT) program. ENJJPT is a cooperative undergraduate pilot and pilot instructor training program that began operation on 1 October 1981 at Sheppard Air Force Base, Texas. It is the most significant project of its type that has been undertaken among Allies during peacetime. The nations involved in the program are Belgium, Canada, Denmark, Germany, Greece, Italy, Netherlands, Norway, Portugal, Turkey, United Kingdom, and the United States. ENJJPT is based on the principles of proportionate sharing of program costs and proportionate instructor pilot manning. Forecast attrition for the program is 16.5 percent and the course length is 55 weeks.

Load data for both standard Air Force pilot training and ENJJPT are shown in the following table:

Training Inputs, Outputs, Loads, Air Force Undergraduate Jet Pilot Training, FY 1983-85

	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Active	1,953	1,912	2,371	1,720	1,863
Reserve	53	82	97	82	82
Natl Guard	171	177	207	177	178
Total	2,177	2,171	2,675	1,979	2,123

At the conclusion of Undergraduate Pilot Training, the new pilot is capable of operating an aircraft in such a manner that future training required, in order to accomplish a specific mission, is limited to advanced flight training in aircraft used in operational units and training in the employment of applicable mission weapon systems.

Undergraduate Navigator Training

The Navy trains Navy and Marine Corps personnel to become Naval Flight Officers. The Air Force trains its personnel as navigators. The duties of Naval Flight Officers and Air Force navigators are not precisely the same because of mission differences. But at the undergraduate level, they are sufficiently similar that they are referred to collectively in this report as "navigators". (The Army does not train or use navigators.)

The Undergraduate Naval Flight Officer (NFO) training program is a building block training program. The training commences with aviation Pre-flight Indoctrination (6 weeks for officers) or Officer Candidate School (14 weeks for officer candidates) where the student is provided basic aeronautical and aviation physiological foundation knowledge. After completing this phase, the student enters the Basic phase. This 15 week course provides the student with the basic skills and knowledge needed to safely navigate, communicate, manage aircraft systems, and to describe two-plane formation maneuvers. Successful completion of Basic qualifies students for entrance into Interservice Undergraduate Navigation Training (22 weeks) conducted at Mather AFB, California (described in a later paragraph), or the Navy intermediate phase. The intermediate phase (10 weeks) expands the knowledge gained in Basic and requires higher skill and performance standards. Practical flight skills are developed in the ID23 computerized navigation/ communications training device; the 28-37 T-34C simulation the 2F101 T-2 simulator, the T-2B aircraft for jet acclimatization and high-speed navigation the T-39 aircraft for jet instrument navigation, and the T-34C aircraft for formation visual navigation, Instrument/Navigation, and advanced performance maneuvers. After successful attainment of the performance standards, the students proceed to one of the following advanced naval flight officer training phases which provide specific skills and knowledge: Radar Intercept Officer (17 weeks), Tactical Navigation (10.4 weeks), Overwater Jet Navigation (11 weeks), and Airborne Tactical Data Systems Officer (10 weeks).

NFO training should achieve full training capability with the T-34 aircraft in the Basic and Intermediate phases in FY 1984. This aircraft will allow for increased hands-on training. The T-47 will be introduced to NFO training in FY 1985 and achieve initial training capability in certain NFO specialist courses, to include Radar Intercept Officer and Tactical Navigation. T-47 full training capability should be achieved in FY 1986. The T-47 replaces the T-39 aircraft.

The Air Force navigator training program consists of a 28 week basic course that includes 392 hours of academic instruction, 68 hours of flight simulator training, 68 hours of actual flight instruction in the T-43 aircraft, and 7.8 hours in the T-37 aircraft. After the basic course, a bomber, tanker, or cargo aircraft assignee continues training in the four-week Advanced Navigator Course which provides 74 academic hours, 20 simulator hours, and 20 flying hours in the T-43. A fighter or reconnaissance aircraft assignee receives an additional 78 academic hours, 12 hours of flight simulator training, and 11.7 flying hours in the T-37 while attending the five-week Tactical Navigator Course.

The advanced segment of Undergraduate Navigator Training for Naval Flight Officers destined for the anti-submarine warfare community was merged into the Air Force program at Mather Air Force Base in California in 1976. Of the program described above, Naval Flight Officers receive 318 hours of academic instruction, 76 hours of simulator training and 80 hours of flight instruction in the T-43 aircraft during 22 weeks of training.

Undergraduate Navigator Training provides sufficient skills and knowledge so that further training for the newly rated navigator can be limited to advanced flight training in operational aircraft and training in employment of applicable weapon systems. Training load data for Undergraduate Navigator Training are shown in the following table:

Training Inputs, Outputs, Loads, Undergraduate Navigator Training, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Navy					
Active	470	450	770	474	457
Marine Corps					
Active	40	42	44	35	38
Air Force					
Active	688	556	1,538	1,377	526
Reserve	9	15	42	40	15
Natl Guard	57	69	203	211	68
DoD					
Active	1,198	1,048	2,352	1,886	1,021
Gd/Res Tot	9	15	42	40	15
DoD Total	1,207	1,063	2,394	1,926	1,036

Other Flight Training

This category covers miscellaneous types of flight training, including advanced flight training, flight familiarization, and other flight programs, which were not previously included in undergraduate pilot or navigator training. Load data are displayed in the following table:

Training Inputs, Outputs, Loads
Advanced, Familiarization, and Other Flight Training, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	214	247	2,572	2,572	300
Reserve	7	10	128	128	14
Natl Guard	47	53	444	444	67
Navy					
Active	70	69	1,325	1,325	85
Air Force					
Active	466	487	3,022	2,797	460
Reserve	1	2	26	21	3
Natl Guard	6	10	133	120	10
DoD					
Active	750	803	6,919	6,694	845
Gd/Res Total	61	75	731	713	94
DoD Total	811	878	7,650	7,407	939

The Army includes in this category courses for instructor pilots and specific pilot qualification courses in various aircraft. Most of the courses are short, in the range of two to seven weeks.

The Air Force conducts a separate 22-day flight screening program for candidates for Undergraduate Pilot Training who have not had previous flight familiarization training. The resulting student loads are included in Other Flight Training. Similar training is provided to Air Force flight surgeons, most Air Force Academy cadets, some Air Force ROTC cadets, and a limited number of cadets and midshipmen from the Military and Naval Academies. The associated workload is included in the Service Academy loads and in ROTC enrollment figures.

Navy load includes training for instructor pilots, academic flight instructors, and leadership training given to recent flight training graduates. It excludes postgraduate flight training conducted by operational commanders and flight familiarization.

The Air Force Other Flight Training workload is limited largely to instructor courses for pilots and navigators and some specialized courses conducted by the Air Training Command in such fields as electronic warfare. Most Air Force postgraduate flight training is conducted under operational command auspices.

In each of the Services, graduates of undergraduate pilot and undergraduate navigator training receive supplementary training in the specific aircraft they will be flying on operational missions. Emphasis is placed on crew training and performance under conditions that would be encountered in combat. In the Army most of this training is provided as part of normal unit training by the operational unit to which the new pilot is assigned. In the other Services, this additional training is provided by Navy fleet readiness squadrons, Marine combat crew readiness training squadrons, and Air Force combat crew training squadrons. As an exception, centrally conducted Army advanced flight training loads are included within Other Flight Training loads. However, most such training is classified as "crew and unit training" by the Navy, Marine Corps and Air Force and is not included in the loads of this report.

Determination of Requirements for Rated Officers

Flight Training rates are developed by comparing projections of future requirements for rated officers with projections of the future status of inventories of both reserve and active duty rated officers. Consideration is given to the need to have sufficient active duty aviators on hand, in appropriate grades. Requirements for rated officers include both the numbers needed to man the force in peacetime and the additional increment needed under approved mobilization scenarios to man and sustain the force when war breaks out. For analytical purposes, aviator requirements are divided into two parts: unit and individuals. Requirements for aviators for each of these categories are computed to meet both (1) peacetime needs and (2) wartime mobilization needs under approved mobilization scenarios.

Unit requirements represent the number of rated officers needed to carry out operational, training, and management activities for programmed units. Each such authorized position (that is, military space or billet) requires a rated officer as an incumbent in order to carry out the functions of the job, either because the job involves flying duties (i.e., "operational flying" positions as defined for purposes of the Aviation Career Incentive Act of 1974) or requires flying experience. Other positions that may be occupied by rated officers for career broadening or similar purposes, but that do not require rated officer incumbents for accomplishing the duties, are not included. Unit requirements have three subcomponents: force, training, and supervision.

Force requirements are the positions required to man and operate the Services' force aircraft. The number of force positions is a product of established crew ratios, or the number of crews per aircraft, which in turn take into account workload (flying hour) and readiness factors and the amount of mission flying and unit flight training that is necessary.

Training positions include the flyers who are conducting formal flight training.

The supervision component is made up of officer positions entailing actual supervision of flying and flight-related activities and the performance of staff jobs which require the expertise of a rated officer. These positions are subject to continuous scrutiny to assure that rated requirements are valid.

Non Unit requirements include the transients, students and other individuals needed to make it possible to provide for reasonable manning of positions in units.

Rated Officer Inventory Projections

Projecting rated officer inventories into the future must be based on historical experience, current judgment, and an appraisal of how the officers will react to conditions in the future (i.e., pay, morale, state of the civilian economy, civilian airline hiring plans, family satisfaction with service life, etc.). These estimates are projected for at least five years in the future. Comparisons of total force inventories of rated officers are then made against the computed total force requirements, and training rates for the entire five-year period are adjusted. This process is repeated each year so that adjustments can be made in training rates based on changes in requirements and/or updated inventory projections. This continuing process of adjustment is necessary to insure that the correct number of trained rated officers will be available in the future without large and expensive fluctuations in training rates.

Training Rate Adjustments

When a comparison of requirements and inventories discloses a shortage or overage of projected rated officers, training rates are adjusted upward or downward in order to bring the program back into balance. For example, if projected FY 1989 pilot requirements exceed projected inventories by 1,000, an increase in training rates (that is, output or production) of pilots of 200 per year starting in FY 1985 may be appropriate. Inputs into the training program would start in FY 1984 in order to obtain the first increase in desired output in FY 1985. This reevaluation process is repeated at least once each year, with adjustments made as necessary to avoid wide fluctuations in loads.

Determination of Training Loads

The process described above, through continuous updating of the comparison between projected rated officer requirements and inventories, leads to a requirement for phased output from the flight training establishment. The desired annual output, considering the anticipated attrition rates and the planned course lengths, as discussed in the preceding sections on the various types of flight training, establishes the size of the input necessary to achieve the target output. Training loads are then calculated, using these factors, to determine the average number of students to be on hand during the training year. For FY 1985, the currently recommended loads are those displayed previously in this chapter.

VII

PROFESSIONAL DEVELOPMENT EDUCATION

General Description

The purpose of Professional Development Education is to provide training and education to career military personnel to prepare them to perform the increasingly complex tasks that become their responsibilities as they progress in their military careers. Whereas Specialized Skill Training is directed toward specific job skills, Professional Development Education is concerned with broader professional development goals in such subjects as military science, engineering, medicine, and management. Professional Development Education is conducted at both military and civilian institutions. This category includes senior enlisted leadership training in recognition of the broad professional content of these courses, as opposed to the narrower skill-oriented training typical of most enlisted training programs. However, most of the programs in this category are for professional development of officers.

Training loads for FY 1976-85 are as shown in the table on the following page.

Professional Development Loads, FY 1976-85

Service Component	FY 76	FY 77	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
Army										
Active	4,023	3,424	3,374	3,109	2,402	2,614	2,587	2,797	3,019	3,006
Natl Guard	94	83	89	55	53	55	54	47	51	52
Reserve	125	55	60	45	56	58	62	52	59	56
Navy										
Active	2,767	1,762	1,616	1,556	1,582	1,686	1,486	1,727	1,893	2,020
Reserve	11	10	15	3	10	16	39	25	26	26
Marine Corps										
Active	801	697	728	637	647	654	672	696	786	800
Reserve	15	18	16	15	14	12	18	30	25	25
Air Force										
Active	4,491	4,324	3,520	3,222	3,191	3,284	3,480	3,995	4,23	4,090
Natl Guard	39	42	36	36	38	47	42	81	75	77
Reserve	32	34	39	35	44	40	83	38	42	44
DoD										
Active	12,082	10,207	9,238	8,524	7,822	8,074	8,225	9,215	9,932	9,916
Gd/Res Total	316	242	255	189	215	228	298	273	278	280
DoD Total	12,398	10,449	9,493	8,713	8,037	8,466	8,523	9,488	10,210	10,196

The total loads in the table show a considerable disparity among the Services in amounts of Professional Development Education. This disparity is more apparent than real, and is related mainly to somewhat different ways of categorizing Service education programs.

The first three subcategories of Professional Development Education are officer professional military development programs. These programs are at three levels: initial, intermediate, and senior.

Education in the military school system is fundamental to the development of military officers who are fully qualified to perform duties of high responsibility in both war and peace. In most non-military professions, growth in ability and knowledge is gained through experience. In the military, opportunities for full practice of the profession are limited to wartime, and even those officers with combat experience have not had the opportunity for thorough exercise of the decision skills they would require, for example, in a war in the Middle East. The military school system serves partially to fill this shortfall by educating the military officer in the skills and knowledge needed to perform his or her duties in a variety of locales and situations, both in peacetime and wartime.

In addition to their regular courses for active force officers, most schools in this category present nonresident courses and short seminars. Large numbers of Reserve Component officers and other military students are provided instruction through correspondence courses.

Officers Initial Professional Schools

The Marine Corps and Air Force conduct initial officer professional courses for officers with some experience in operational units. These courses are Service-wide in scope and are, therefore, carried in this report under Professional Development Education. The Army and Navy conduct courses that are at a similar level, but that are oriented toward specific skills (e.g., the Navy's Surface Warfare Officers Course) or somewhat broader skills within a specific part of the Service (e.g., the Army's Armor Officer Advanced Course). The Army and Navy courses, because of their specialization, are treated in this report as part of Specialized Skill Training.

The Marine Corps Amphibious Warfare Course is designed to prepare officers in the grade of captain for duties in battalion or squadron command or on regimental-level staffs. The course length is 39 weeks. The Air Force Squadron Officer School is an 8½-week course designed to prepare selected captains, after completion of some active service experience, for command and staff duties appropriate to their grade.

The training load data for FY 1983-85 associated with these Marine and Air Force courses are displayed in the following table.

Training Inputs, Outputs, Loads, Initial Officers
Professional Schools, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
USMC					
Active	124	124	170	170	124
Reserve	10	10	265	265	10
Air Force					
Active	496	556	3,440	3,440	556
Reserve	1	1	10	10	2
Natl Guard	3	4	26	26	4
DoD					
Active	620	680	3,610	3,610	680
Res/Gd Total	14	15	301	301	16
DoD Total	634	695	3,911	3,911	696

Intermediate Service Schools

Each of the Services maintains a Command and Staff College. In addition, the Navy is executive agent for the Armed Forces Staff College, a joint institution sponsored by the Joint Chiefs of Staff with students from all Services. While there are differences in approach and curriculum based on the requirements of the parent Service, each of the courses is designed to prepare officers for command and staff duties in all echelons of their parent Services and in joint or allied commands. A relatively small number of officers from each Service attends one of the Command and Staff Colleges of the other Services; a few attend Allied schools at the same level. Attendance at the Intermediate Service Schools is on a selective basis. The following table lists the Command and Staff Colleges and their respective course lengths.

Intermediate Service Schools

Schools	Location	Course Length (Weeks)
Armed Forces Staff College	Norfolk, VA	22
Army Command and General Staff College	Fort Leavenworth, KA	42
College of Naval Command and Staff	Newport, RI	44
Marine Corps Command and Staff College	Quantico, VA	43
Air Command And Staff College	Montgomery, AL	43

Another school categorized as an Intermediate Service School for purposes of this reports is the Defense Systems Management College at Fort Belvoir, Virginia. This is a joint school that conducts a primary 20-week course in management concepts and methods with the major purpose of preparing selected military officers and DoD civilian personnel for assignments in program or project management.

Load data for military personnel attending Intermediate Service Schools is shown in the following table:

Training Inputs, Outputs, Loads, Intermediate Service Schools, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	721	703	1,954	1,952	707
Reserve	23	28	561	559	29
Natl Guard	31	36	382	379	33
Navy					
Active	161	179	1,559	1,559	180
Reserve	14	15	419	419	15
Marine Corps					
Active	155	155	215	215	156
Reserve	11	9	213	213	9
Air Force					
Active	492	472	606	606	468
Reserve	18	16	200	200	16
Natl Guard	11	14	142	142	14
DoD					
Active	1,529	1,509	4,334	4,332	1,511
Gd/Res Tot.	108	118	1,917	1,912	116
DoD Total	1,637	1,627	6,251	6,244	1,627

Senior Service Colleges

Each of the Military Departments maintains a Senior Service College, or "War College." In addition, there is the National Defense University, consisting of two joint Senior Service Colleges, The National War College and the Industrial College of the Armed Forces, which are attended by students from all four Services. Senior Service College attendance is on a highly selective basis; students are chosen by Service selection boards from among the most promising officers in the lieutenant colonel/colonel, commander/captain grades.

The common purpose of the Senior Service Colleges is to prepare students for senior command and staff positions at the highest levels in the national security establishment and the allied command structure. The unifying focus is the study of national goals and national security

policy. Each of the Service colleges, while concentrating on the employment of the parent Service in the defense mission, also includes the study of the employment of the forces of other Services.

All of the colleges integrate the study of economic, scientific, political, sociological, and other factors into the consideration of national security problems. The Industrial College, in its approach to national security problems, emphasizes the use and management of national resources. The length of the principal courses at the Senior Service Colleges is ten months. Most colleges also conduct shorter special-purpose seminar-type courses, some particularly for Reserve Component officers. Use of these short courses is greatest in the Navy.

Load data for the Senior Service Colleges are shown in the following table.

Training Inputs, Outputs, Loads, Senior Service Colleges, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	258	266	447	447	266
Reserve	18	18	119	119	18
Natl Guard	15	16	73	73	16
Navy					
Active	99	109	1,149	1,149	109
Reserve	9	10	294	294	10
Marine Corps					
Active	51	53	72	72	52
Reserve	4	1	35	35	1
Air Force					
Active	267	249	283	283	248
Reserve	6	6	79	79	6
Natl Guard	6	6	79	79	6
DoD					
Active	675	677	1,951	1,951	675
Res/Gd Tot.	58	57	679	679	57
DoD Total	733	734	2,630	2,630	732

Enlisted Leadership Training

The courses included in this category are designed to provide selected senior enlisted personnel the skills and knowledge needed to assume the responsibilities of the highest non-commissioned officer grades. These courses are the culmination of formal enlisted training

and are, for enlisted personnel, analogous to the officer courses discussed in the preceding sections. In addition to such subjects as methods of leadership, human relations, discipline and training, and the administration and employment of military organizations, the senior noncommissioned officer, in these higher-level schools, is given a broader perspective of the role and functions of his or her Service.

Schools, locations and course lengths are shown below:

Schools	Location	Course Length (Weeks)
Army: Sergeants Major Academy	Fort Bliss, TX	22
Navy: Senior Enlisted Academy	Newport, R.I.	9
Marine Corps: Staff NCO Academy	Quantico, VA	6
Air Force: Senior NCO Academy	Gunter AFB, AL	9

Other enlisted leadership training for more junior noncommissioned officers is carried in Specialized Skill Training. This includes command-sponsored NCO academies, for example. This training tends to be more skill related for specific types of specialized leadership responsibilities. The senior enlisted leadership training carried in this chapter is more properly thought of as Professional Development Education in a broader sense.

All four Military Services now sponsor a Senior Enlisted Leadership Academy. The Navy has the newest of the academies; the Navy's Senior Enlisted Academy at Newport, R.I. was opened for 16 entrants in FY 1981. An enrollment of 232 senior enlisted personnel is planned for FY 1985.

Training Inputs, Outputs, Loads, Enlisted Leadership Training, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	197	194	442	440	194
Reserve	6	5	12	12	5
Natl Guard	6	7	16	16	7
Navy					
Active	33	40	232	232	40
Reserve	1	0	0	0	0
Marine Corps					
Active	152	194	1,652	1,635	209
Reserve	5	5	118	118	5
Air Force					
Active	182	186	1,180	1,180	186
Reserve	2	2	15	15	2
Natl Guard	5	5	30	30	5
DoD					
Active	564	614	3,506	3,487	629
Res/Gd Total	25	24	191	191	24
DoD Total	589	638	3,697	3,678	653

Graduate Education Fully Funded, Full Time

The Department of Defense needs military officers with specialized advanced knowledge, at a level attainable only through graduate education, to perform effectively in certain military jobs. The purpose of the graduate education program in each of the Services is to provide graduate-level education in required disciplines to the numbers of officers required to maintain an inventory of officers qualified to fill these jobs. Under the program described in this section, military officers undergo graduate education on a full-time, fully funded basis. An active service payback obligation of three years of service for each year of schooling is required of all officers entering the program, up to a maximum set by the Services. (The Funded Legal Education program established by 10 USC 2004 requires an active service commitment of two-for-one.)

The following table displays training load data for these graduate education programs. All participants are members of the Active Forces.

* typo

Training Inputs, Outputs, Loads, Graduate Education,
Fully Funded, Full Time, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army	* 1,017 ~~1,107~~	1,160	546	541	1,160
Navy					
Active	1,117	1,180	721	667	1,236
USMC					
Active	105	140	79	76	139
Air Force					
Active	1,154	1,291	829	822	1,326
DoD Total	3,393	3,771	2,175	2,106	3,861

Officer graduate students attend either a civilian educational institution or one of the two Service institutions, the Naval Postgraduate School or the Air Force Institute of Technology, depending upon where the required education can best be obtained. Curricula in the two service institutions emphasize military-unique courses, such as in logistics management or intelligence operations, and military applications in all other courses. While these schools are primarily used by the parent Services (including Marine Corps use of the Naval Postgraduate School), they also educate some students from other Services. The numbers of Navy and Air Force officers enrolled in advanced degree and short course programs reflects a five-year plan developed by the Services to improve the advanced technological and engineering capabilities of the career force. The plan incorporates greater utilization of the Naval Postgraduate School and the Air Force Institute of Technology. The following table displays student loads for these two schools.

Graduate Education Loads at Service Institutions, FY 1983-85

	Naval Postgraduate School			Air Force Institute of Technology		
	FY 83 Load	FY 84 Load	FY 85 Load	FY 83 Load	FY 84 Load	FY 85 Load
Army	170	151	138	52	64	65
Navy	921	982	1,029	19	21	26
Marine Corps	79	70	79	3	4	11
Air Force	68	93	93	850	907	853
Total DoD	1,238	1,296	1,339	924	996	955

Requirements for graduate-educated officers depend upon the number of "validated billets", that is, military positions that have been determined to require an incumbent with graduate-level education in the applicable academic discipline. Each Service has established a system, ordinarily culminating in a board of senior officials in the Service headquarters, which examines the duty prerequisites for each billet nominated for validation and determines if the job does, in fact, require an officer with an advanced degree. Requirements for included graduate legal education are determined separately.

Other Full Time Education Programs

In addition to the Professional Development Education programs already described there is a variety of other full time programs tailored to meet the particular needs of the Services. (Health Professions Education programs are discussed in a separate section at the end of this chapter).

Several programs have been designed to permit selected individuals an opportunity to work toward associate, baccalaureate or advanced degrees. These programs benefit the Services in several important ways: they increase the technical qualifications of the individuals in the program; they improve the general educational levels of Service personnel; and they provide career retention and recruiting incentives to outstanding personnel. In addition, to the extent possible, personnel in advanced education programs are later used to satisfy validated requirements and hence reduce the required student load in graduate education for validated billets.

The degree-completion programs are managed by the individual Military Departments and each has its own selection criteria. However, in general a person is not selected for a program unless the education will enhance his or her professional development and be of use to the Military Department. All of the programs require a payback from the individual.

Short-course training provides the Military Services with needed skills in a wide variety of scientific, administrative and other fields. These programs are selected to train personnel in job-oriented skills that can best be acquired through abbreviated courses. Accounting, traffic management and aviation safety are examples of skills involved. Some of this included training is conducted in DoD schools, the remainder in civilian institutions.

The following table displays load data for this category;

Training Inputs, Outputs, Loads, Other Full-Time Education Programs, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	303	337	1,862	1,853	311
Navy					
Active	129	127	3,058	3,051	136
Reserve	1	1	20	20	1
Marine Corps					
Active	109	120	89	76	120
Air Force					
Active	920	1,020	9,753	9,922	871
Reserve	25	23	607	607	24
Natl Guard	13	13	382	382	15
DoD					
Active	1,461	1, 604	14,762	14,902	1,438
Gd/Res Tot	39	37	1,009	1,009	40
DoD Total	1,500	1,641	15,771	15,911	1,478

Health Professions Education

This subcategory is made up of a wide variety of courses for personnel of all health professions -- physicians, dentists, nurses, medical administrators, etc. The majority of the courses offered are conducted in military facilities, and vary in length from a few days to a full year. Some training is conducted at civilian medical institutions, including, in the case of the Army, some advanced degree programs. The purpose of Health Professionals Education is to expand the skills of

military medical personnel and to provide them timely information on the latest techniques in their fields. Educational programs connected with the acquisition of health professionals is carried in this report under Officer Acquisition Training. In this category, the Navy provides long-term training. The Army and Air Force rely on short courses.

The following table shows load data for Health Professions Education.

Training Inputs, Outputs, Loads, Health Professions Education, FY 1983-85

Service Component	FY 83 Load	FY 84 Load	FY 85 Input	FY 85 Output	FY 85 Load
Army					
Active	301	359	16,466	16,446	368
Navy					
Active	188	258	312	239	319
Air Force					
Active	513	460	2,237	2,237	434
DoD Total	1,002	1,077	19,015	18,942	1,121

VIII

RESERVE COMPONENTS TRAINING

In addition to training members of the active forces, the Service training establishments also train members of the Reserve Components. Reserve Component training, as part of individual training and education, involves Reservists and Guardsmen who are on active duty for formal school training. It does not include training of Reserve Component members provided under the following circumstances:

- Training received while members are on extended active duty (this training is included in active force aggregates);
- Training conducted by the Reserve Components themselves;
- Training received on annual active duty, except if provided through courses conducted by the active training establishment;
- Any training received while the individual is not in an active military status; as a minor exception, some Reserve and Guard technicians attend military schools in Civil Service status.

The purpose of this chapter is to summarize the amount and types of training of Reservists and Guardsmen which are conducted by the active training establishments. The training loads discussed in this chapter are included within the loads attributed to the various Reserve Components in the previous chapters.

Training of members of the Reserve Components will comprise 18 percent of all individual training and education in FY 1985, or 2 percentage points more than in FY 1983. The change reflects DoD's overall manpower policy of increasing the peacetime reserve strengths relative to the active force strength in FY 1985. The Reserve training loads and workloads will increase accordingly. Training loads for each of the Reserve Components for each of the major categories of training for FY 1985 are shown in the following table.

Training Loads, Reserve Components, FY 1985a/

Component	Recruit	One-Station Unit Training	Officer Acquisition	Specialized Skill	Flight	Professional Development	Total
Army Reserve	4,392	2,720	3	8,730	97	52	15,994
Army National Guard	3,628	7,049	34	7,339	232	56	18,338
Naval Reserve	1,629	-	-	1,734	-	26	3,389
Marine Corps Reserve	2,285	-	221	1,410	-	25	3,941
Air Force Reserve	423	-	30	1,469	100	77	2,099
Air National Guard	779	-	-	1,909	258	44	2,990
Total, Reserve Components	13,136	9,769	288	22,591	687	280	46,751

a/ Loads in this table are a summary of Reserve Components loads displayed previously in this report, and are not additive to them.

The following table summarizes load data for entry-level Reserve Component basic qualification training for FY 1985.

Enlisted Entry-Level Training, Reserve Components, FY 1985

	Input	Output	Load
Recruit Training	82,690	73,963	13,136
Initial Skill Training	108,852	101,720	19,037
One-Station Unit Training	45,548	39,384	9,769
Totals	237,090	215,067	41,942

Reserve Component training will account for an increasing share of all programmed Reserve and Active Training in FY 1985. Recruit Training for the Reserves and Guard accounted for 17 percent of all DoD Recruit Training in FY 1982 but will account for 22 percent in FY 1985. Reserve Component training accounts for 22 percent of all Initial Skill Training (Enlisted) and 44 percent of all Army One-Station Unit Training programmed in the Department of Defense for FY 1985.

Although entry-level training for enlisted personnel makes up 85 percent of total Reserve Component training loads, Reserve and Guard officers and enlisted personnel beyond the initial entry stage also are trained by the active establishment. The majority of this training is at the more advanced levels of Specialized Skill Training, and fills the same demands for skill progression or new equipment training that these types of training provide for active members. Reserve Component participation in Flight Training is relatively minor, since most aviator requirements in Reserve Component units are filled by experienced aviators who join after extended service in the active components.

To accommodate an increased force structure in the Reserve Components, more professional development training is required for mid-career officers and enlisted personnel in the Reserves and National Guard. However, Professional Development Education still accounts for only about 6 percent of total DoD officer training at the initial, intermediate and senior levels and about 4 percent of Enlisted Leadership Training in FY 1985.

The great majority of training of Reservists and Guardsmen is in Recruit and Specialized Skill Training and, for the two Army Components, One-Station Unit Training. Within Specialized Skill Training, most of this training is in Initial Skill Training for enlisted personnel. The combination of Recruit and Initial Skill Training or One-Station Unit Training for enlisted personnel, including Reservists and Guardsmen, provides them basic qualification training that transforms the untrained civilian into a servicemember with a useable skill.

Enlisted members of the Reserve Components without prior service receive the same basic qualification training as active service members. Each non-prior service enlistee in the Reserve Components undergoes, as a minimum, twelve weeks of active duty training. This is carried out by sending the new recruit through Recruit Training and on through Initial Skill Training. Alternatively, many Army Guardsmen and Reservists are provided similar training in certain skills through One-Station Unit Training. Trainees who graduate from Recruit Training proceed to Initial Skill Training in their occupational specialty. This may consist of a course in a Service school or Advanced Individual Training at an Army training center. If a course in the proper skill is not available, the trainee may be assigned to on-the-job training in an active duty for training status. The actual length of active-duty training, in comparison with the statutory twelve weeks minimum, varies from twelve weeks to twelve months, depending on the occupational specialities involved. To accomodate the Reserve Component soldier, the Army split-training program allows completion of initial entry training over a period of normally less than two years in two training periods.

Reserve Component personnel participate in a variety of non-resident courses sponsored by Service schools; Reservists and Guardsmen make use of these training opportunities on the same basis as active personnel. For many Reserve and Guard officers, consideration for promotion depends upon successful participation in Professional Development Education programs.

Beyond the training covered in the training loads, the active training establishment makes other valuable contributions to the state of training of the Reserve Components. Perhaps the most important is realized through former active members who join the Reserve Components after having been trained on active duty. The Reserve Components also receive graduates of Army ROTC who are not called to extended active duty. In many instances, the Active Components also provide facilities and equipment used by the Reserve Components for training.

In summary, training of members of the Reserve Components forms a significant portion of the workload of the active training establishment. Particularly at the entry level, this training is indispensable to the readiness of individuals and organizations of the Reserve Components and to the realization of the Total Force policy.

IX

TRAINING MANPOWER

General Description

Manpower associated with the individual training mission in the Department of Defense can be divided into two parts: first, the trainees and students being trained, and, second, the military and civilian manpower that conducts and supports the training. These two classes of manpower are discussed and explained in this chapter.

Trainees and Students

Manpower undergoing training in the Defense training establishment is defined and quantified in three different ways, each of which serves a somewhat different purpose with regard to manpower accounting and resource allocation.

1. Training Loads. These are the "military training student loads" which are detailed in Chapters III through VII of this report -- the average number of military trainees, students, and cadets of each Service and component in training during a given fiscal year, which is subject to annual congressional authorization. Training loads include all military manpower of a given Service or component who are undergoing individual training, regardless of whether the training is conducted by the parent Service, one of the other Services, a DoD school, or by an agency or institution outside the Department of Defense, such as a civilian college or university. Training loads also include all military personnel in training regardless of their assignment status. Some trainees and students are assigned to the training activity; others are attending training in a temporary duty (TDY) or temporary additional duty (TAD) status while remaining assigned to their parent units; still others are attending while in transit from one permanent assignment to another.

Since training loads are an annual average and most courses are much shorter than a year in length, the actual number of students and trainees who enter training, and the number who graduate, is considerably greater than the training load. For example, the total programmed training load for Recruit Training in FY 1985 is about 58,000, yet about 375,000 persons are to enter Recruit Training and about 341,000 are to graduate.

2. Training Workloads. The total number of trainees and students undergoing training within DoD includes some trainees and students of foreign nations, DoD civilian employees, and members of other departments and agencies of the U.S. Government, notably the Coast Guard. In addition, many U.S. military students and trainees are trained by a Service other

than their own. Consequently, the average number of students being trained by a given Service, or its training workload, usually differs from its training load. For example, the Marine Corps has a programmed Flight Training load of 635 in FY 1985; however, since the training is conducted by other Services, its Flight Training workload is zero. On the other hand, because the Navy trains many personnel from other Services and Coast Guard and foreign students as well as most of its own students, the Navy's Specialized Skill Training workload is higher than its training load.

Since training workload, in conjunction with other applicable considerations, is the major determinant of the resources (manpower, funds, materiel and facilities) required to conduct training, it, rather than training load, is appropriately used in considering the allocation of resources to a Service or a training activity. Programmed training workloads for each of the Services in FY 1985 are displayed in the following table.

Training Workloads, FY 1985
(Thousands)

Category	Army	Navy	Marine Corps	Air Force	DoD
Recruit	21.5	17.1	11.8	9.2	59.6
Officer Acquisition	~~5.2~~ 5.1	5.8	~~6.4~~	~~6.6~~ 5.2	18.2
Specialized Skill	~~55.5~~ 62.5	56.7	~~6.4~~	31.1	149.7
Flight	1.8	2.4	-	3.7	7.9
Professional Development Education	~~3.3~~ 2.3	2.6	~~.8~~ .5	3.2	9.9
One-Station Unit Training	22.4	-	-	-	22.4
Total	~~109.7~~ 120.6	84.6	~~19.6~~ 19.1	~~53.8~~ 52.4	267.7

Note: Detail may not add due to rounding.

3. Students, Trainees, and Cadets. In the Individuals accounts of the Defense Manpower Requirements Report, military manpower is included for each Service as "Trainees and Students" and (except for the Marine Corps) "Cadets". Conceptually, this manpower represents the number of military trainees, students, cadets and midshipmen programmed to be assigned (PCS as opposed to TDY/TAD) for training on the last day of a given fiscal year. Student, trainee, and cadet manpower is similar to training load in that both represent military members of the reporting Service in training status. Nevertheless, there are substantial differences in the way the amount of manpower in these two manpower aggregations is calculated, with the result that the totals are seldom the same. The major reasons for these differences are:

- Training loads are manyears in training status, as has been mentioned, whereas trainees, students, and cadets are end-strengths, or

numbers in training on the last day of the fiscal year. Trainee, student, and cadet numbers are thus affected by the seasonality of enlistment patterns, described in Chapter III, while the element of seasonality is evened out in training loads.

- Training loads include students attending training in a temporary duty (TDY or TAD) status as well as those attending in a PCS status. In the Defense Manpower Requirements Report TDY and TAD students are carried in the categories of their parent units. In addition, some individuals attending training while in transit from one permanent assignment to another are included in training loads but are classified as "Transients" in the Defense Manpower Requirements Report.

Training loads are a more accurate measure of the amount of training that is needed to meet military requirements than are the categorizations "trainees," "students," and "cadets."

Manpower in Support of Training

Military and civilian manpower is required to accomplish the individual training mission. This manpower conducts and supports instruction, operates training bases and facilities, maintains training equipment, produces training aids, provides personal and community services to students, trainees, and other military members, plans and manages training, and performs all the other tasks necessary to conduct and support individual training conducted in training institutions.

ROTC students are not military members in an active duty status and are not included in military manpower training loads. However, ROTC Basic Camp loads are included in the Army Recruit training loads. To be consistent with this treatment of ROTC students, manpower supporting ROTC programs is not included in the following manpower tables.

The following tables sum up manpower in support of training by the general functions Conduct of Individual Training, Training Base Operating Support, and Management Headquarters. The function Conduct of Individual Training includes the following types of manpower: instructors, instructional support, school/training center staffs, student supervisors and direct training support such as training aids and literature, audiovisual resources, and instructional systems development.

DoD Manpower in Support of Training,
Conduct of Individual Training Function
(End Strengths, Thousands)

	FY 83		FY 84		FY 85	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	41.2	10.5	41.1	11.4	41.1	12.6
Navy	29.2	3.1	29.1	3.3	28.6	3.3
Marine Corps	8.7	.2	8.7	.2	8.8	.3
Air Force	20.5	5.1	20.8	5.0	21.3	5.0
DoD	99.6	18.9	99.7	19.9	99.8.	21.2

DoD Manpower in Support of Training,
Base Operating Support Function
(End Strengths, Thousands)

	FY 83		FY 84		FY 85	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	10.3	22.8	9.7	22.9	8.4	22.9
Navy	7.3	6.6	6.7	6.6	6.8	6.7
Marine Corps	3.4	2.1	3.2	2.2	3.2	2.2
Air Force	10.7	6.9	11.4	6.6	11.8	6.4
DoD	31.7	38.4	31.0	38.3	30.2	38.2

DoD Manpower in Support of Training, Management Headquarters Function
(End Strengths, Thousands)

	FY 83		FY 84		FY 85	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	0.6	0.9	0.6	0.8	0.6	0.8
Navy	0.3	0.5	0.3	0.5	0.3	0.5
Marine Corps	*	-	*	-	*	-
Air Force	0.9	0.5	0.9	0.5	0.9	0.5
DoD	1.8	1.9	1.8	1.8	1.8	1.8

*Less than 50.

DoD Manpower in Support of Training, All Functions
(End Strengths, Thousands)

	FY 83		FY 84		FY 85	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	52.2	34.2	51.4	35.1	50.0	36.4
Navy	36.8	10.2	36.1	10.3	35.7	10.4
Marine Corps	12.1	2.4	12.0	2.4	12.1	2.5
Air Force	32.0	12.4	33.1	12.0	34.0	11.8
DoD	133.1	59.2	132.6	59.8	131.8	61.1

The Service estimates of training attributable manpower include some staff and support manpower that do not contribute to the production of student output and loads but are reported as training resources in the Five Year Defense Program (FYDP) because they belong to organizations with a primary mission of training. The majority of the non-training attributable manpower is for Base Operating Support (BOS) given to non-training tenant activities at training installations.

The following tables show changes in total military and civilian manpower in support of training between FY 1977 and FY 1985. Manpower for each year is shown by the functions Conduct of Individual Training, Base Operating Support, and Management Headquarters.

Trends, Manpower in Support of Training,
DoD Total, By General Function, FY 1977-1985
(End Strengths, Thousands)

	FY 77			FY 82			FY 85			Percent Change Total Manpower:	
	Mil	Civ	TOT	Mil	Civ	TOT	Mil	Civ	TOT	FY 77-85	FY 82-85
Conduct of Individual Training	108	22	130	96	19	115	100	21	121	-7%	+ 5%
Base Operating Support	36	45	81	35	39	74	30	38	68	-16%	- 8%
Management Headquarters	2	2	4	2	2	4	2	2	4	-	-
TOTAL	145	70	215	133	60	193	132	61	193	-10%	± 0%

Note: Detail affected by rounding

As the table shows, the total military and civilian manpower in support of training is fairly stable between FY 1982 and 1985. However, within the total, there has been a tradeoff. An increase in manpower conducting individual training has been offset by a similar reduction in Base Operating Support.

As shown in the following tables, training workloads will be about 5 percent higher in FY 1985 than in FY 1982; considered with the unchanged level of total manpower in support of training, this implies an increase in manpower productivity.

Trends, Training Workloads, FY 1977-85
(Thousands)

	FY 77	FY 82	FY 85	Percent Change FY 77-85	Percent Change FY 82-85
Army	99	113	110	+10%	-3%
Navy	67	78	85	+21%	+ 8%
Marine Corps	21	18	20	- 5%	+10%
Air Force	54	47	54	± 0%	+13%
DoD	238	256	269	+12%	+ 5%

Note: Detail affected by rounding.

Trends, Training Manpower and Training Workloads, FY 1977-85
(Thousands)

	FY 77	FY 82	FY 85	Percent Change FY 77-85	Percent Change FY 82-85
Manpower in Support of Training	215	193	195	-10%	+0.5%
Training Workloads	238	256	269	+12%	+ 5%

Training Manpower Detailed by Service and Type of Training

As was noted early in this chapter, training workloads, in conjunction with other factors, are the determinants of the resources required to conduct training. The workload/resource relationship is not a simple one, but depends upon the nature of training and training support involved. For example, Flight Training normally requires a great deal of support manpower for aircraft maintenance; weapons training requires close instructor supervision for safety considerations.

Training Manpower by
Service and Type of Training, FY 1985
(Thousands)

Training Activity	Army		Navy		Marine Corps		Air Force		DoD	
	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
Recruit	4.5	0.2	1.6	*	2.4	*	.7	*	9.2	0.2
Officer Acquisition	0.8	0.8	0.9	.9	.3	*	1.2	0.8	3.2	2.5
Specialized Skill	17.2	5.9	17.4	0.9	5.4	0.2	9.9	2.2	49.9	9.2
Flight	1.4	.4	7.6	0.6	0.4	-	6.5	.8	15.9	1.8
Professional Development	0.6	0.8	0.5	0.7	0.3	0.1	1.0	0.5	2.3	2.0
One-Station Unit Training	8.6	0.6	-	-	-	-	-	-	8.6	0.6
Medical Training	1.9	0.6	0.5	*	-	-	0.6	0.1	3.0	0.7
Direct Training Support	6.1	3.3	0.1	0.2	0.1	*	1.3	0.7	7.6	4.1
Base Operating Support	8.4	22.9	6.8	6.7	3.2	2.2	11.8	6.4	32.1	38.2
Management Headquarters	0.6	0.8	0.3	0.5	*	-	0.9	0.5	1.8	1.8
TOTAL[1/]	50.1	36.4	35.7	10.4	12.1	2.5	34.0	11.9	131.8	61.1

1/ The Service estimates of training attributable manpower include some staff and support manpower that does not contribute to the production of student output and loads but are reported as training resources in the Five Year Defense Plan (FYDP) because they belong to larger organizations with a primary training mission.

*Less than 50.

Manpower data in the six categories of training (i.e., Recruit through One-Station Unit Training) includes instructors, school/training center staffs and student supervisors. Direct training support includes such tasks as training aids and literature, audiovisual resources and instructional systems development.

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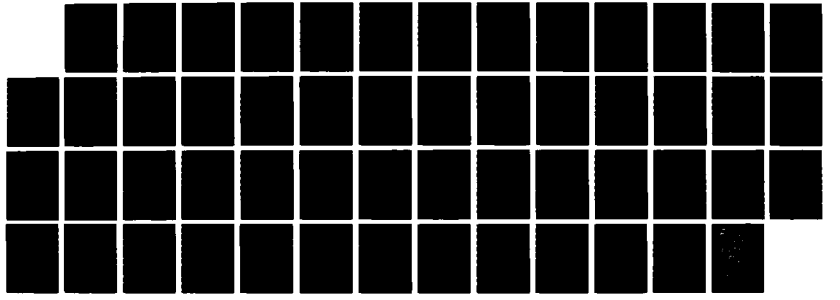

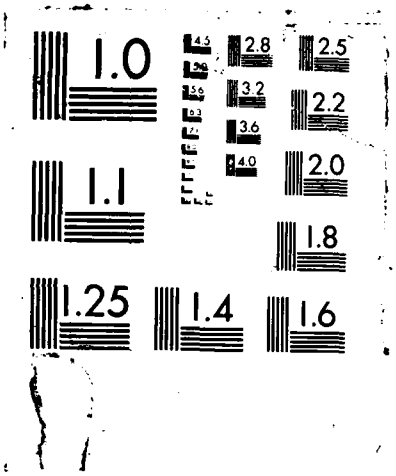
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X

TRAINING MANAGEMENT AND FUNDING

General Description

Chapters III through VII of this report describe and explain the military training student loads requested to be authorized for each military component. These student loads represent patterns and levels of training effort which require manpower and other resources. The purpose of this chapter is to describe and explain the resources (other than manpower, which is discussed in Chapter IX), funding and costs associated with the conduct of individual training.

In considering training resources, it is important to distinguish between the training loads required by a Service but conducted in part outside the Service, and the workloads representing training conducted by the Service. As discussed in the previous chapter, the workloads, which represent training conducted by a Service, are the basis for resource requirements (manpower, materiel, facilities, and funds) needed to conduct and support the training that the Service executes.

Management of Individual Training

Detailed management of individual training is carried out by the four Military Services. Each of the Services, except the Marine Corps, has a training commander immediately subordinate to the Service chief who is responsible for most of the individual training conducted within that Service. Some training is managed directly by the Service headquarters. However, the most prevalent pattern of control is through a training command headquarters that manages most Service military schools, training centers, and other training facilities.

Staff Responsibilities

Within the Office of the Secretary of Defense, staff responsibility for individual training and education policies rests with the Assistant Secretary of Defense (Manpower, Installations and Logistics), with a strong influence over the allocation and use of resources being exercised by the Assistant Secretary of Defense (Comptroller). The staffs of these two offices work closely together in the staff supervision of DoD individual training and education. Other OSD offices, such as Health Affairs, Intelligence, and Research and Engineering, participate as appropriate. The OSD role is generally one of policy formulation, allocation of resources, overview of Service training programs, and coordination among the Services.

Within each Service headquarters, a principal staff officer has responsibility for individual training. Other staff members may have primary responsibility for certain types of training, as, for example, a Service Surgeon General for professional medical training. Other staff members have collateral responsibilities for the allocation of manpower and funds to the training function.

Primary responsibility on the Army staff for individual training rests with the Deputy Chief of Staff for Operations and Plans and his subordinate, the Director of Training. Within the Navy, the principal staff officer is the Deputy Chief of Naval Operations for Manpower, Personnel, and Training. Headquarters, Marine Corps, manages training through the Deputy Chief of Staff for Training. Commanders of the separate major subordinate training activities report directly to the Commandant of the Marine Corps, dealing with the headquarters training staff. Within the Air Force, the Director of Personnel Programs, under the Deputy Chief of Staff for Manpower and Personnel, has staff responsibility for individual training.

Training Commands

The Army, Navy and Air Force each has a command headquarters that manages most of the individual training conducted by that Service.

The Army's principal training command headquarters is Headquarters, Training and Doctrine Command (TRADOC), located at Fort Monroe, Virginia. TRADOC's control is exercised through training installation and school commanders throughout the United States.

The Chief of Naval Education and Training, headquartered at Pensacola, Florida, exercises control, through subordinate functional commanders, of education and training conducted in training centers, schools and programs throughout the Navy.

Headquarters, Air Training Command, at Randolph Air Force Base, Texas, directly controls individual training centers and units.

The Service-wide training commands are not responsible for all individual training and education conducted. As already noted, the Surgeons General are responsible for most health professional and medical technical training. Other examples include the Service Academies, which are under the direct supervision of the respective Service Chiefs.

The Service Training Command Chiefs and the Marine Corps Deputy Chief of Staff for Training are also the senior members of the Interservice Training Review Organization (ITRO). ITRO was formed in 1972 to facilitate cooperative training efforts among the Services. The committees and working groups of the Organization perform the detailed analysis which becomes the basis for decisions on the feasibility of consolidation of training courses or other cooperative arrangements. A listing of major joint training efforts is provided in Appendix B.

Training Facilities

Appendix C lists the principal individual training facilities of the four Services for each of the major categories of training. Projected average training workloads and training support manpower for FY 1985 are also shown for each facility listed.

Training Funding and Costs

The training costs addressed in this section include funding in the President's Budget for Fiscal Year 1985 requested for individual military training and education. These costs differ from life-cycle costs, which would take account of retirement and other costs that are not funded during FY 1985. Depreciation costs of training facilities and equipment are not included, although training investment costs estimated for FY 1985, such as procurement and construction costs, are included. The report uses the data in the DoD's Five Year Defense Program (FYDP) as the basis for all estimates of the manpower and funds devoted to training and education.

The costs in this chapter include funding for military pay and allowances for both PCS and TDY/TAD students, pay and allowances of military and civilian personnel in support of training, training-related PCS costs, base operating costs in support of training, training-related operations and maintenance costs (including civilian support personnel pay and allowances), training investment costs for construction and procurement, and overhead costs for training administration and command. Certain costs for activities that are organic parts of training organizations but that support non-training missions (such as Base Operating Support for non-training activities on training bases) are also included to provide comparability with the Five Year Defense Program and the President's Budget.

For a given Service, the requirement for funding for training arises from two factors: first, the need to fund the pay and allowances of its own military training student loads, regardless of where or by whom the students are trained; and, second, the need to provide for the level of individual training and education effort necessary to meet the Service's commitments to accomplish training for its own and other students.

For comparability, the funding requests associated with ROTC and other non-load training programs are deleted from the following table. Hence the table reports FY 1985 funding estimates related to the requested FY 1985 training loads.

Special caution should be exercised in using these costs for comparisons among Services. Differences in missions among the Services, differing operating and training conditions, and differences in the mix of Service training programs, degrade the soundness of comparisons based on aggregated data such as these.

Funding of Individual Training by Service and Type of Training, FY 1985
($ Millions)

	Army	Navy	USMC	Air Force	DoD
Recruit	$ 366.8	$ 452.4	$ 260.9	$ 266.9	$1,347.1
Officer Acquisition	119.3	165.2	24.1	183.3	491.9
Specialized Skill	1,481.9	1,601.5	434.4	945.4	4,463.1
Flight	505.2	832.8	54.3	916.4	2,308.7
Professional Development Education	303.2	159.5	38.8	226.4	727.9
One-Station Unit Training	428.5	-	-	-	428.5
Medical Training	281.6	145.9	-	171.9	599.4
BOS and Direct Training Support	2,111.7	1,054.6	230.9	947.8	4,345.0
Management Headquarters	64.4	38.8	0.4	54.7	158.4
PCS Cost for Training	821.1	136.8	0.5	73.3	626.4
TDY and Reserve Component Pay and Allowances	1,130.4	382.3	159.2	368.5	2,445.6
Total	$7,614.2	$4,969.8	$1,203.7	$ 4,154.4	$17,942.1

Note: May not add due to rounding.

Student pay and allowance totals for a Service's requested military student training load have been added to pay and allowances for the staff and support manpower for each Service's workload. This can produce significant distortions in the use of these aggregates for assessing training efficiency (e.g., in the Marine Corps, where significant loads are trained by other Services).

Appendix D shows a distribution of funds in the table above by appropriation.

The preceding table includes substantial segments of cost which are not normally sensitive to significant shifts (say up to fifteen percent) in training load. These include certain command, base, facility, and equipment costs. These "fixed" costs need to be considered in program and budget adjustments because, within a reasonable range of output, they remain approximately the same and do not vary as the training load varies. They change, instead, with decisions to change the manner of accomplishing training, most often through training investment decisions or base realignments.

There are often substantial year-to-year fluctuations in funding for fixed costs. These costs are termed "fixed", not because they do not change from year to year, but because their changes characteristically are not "variable" with changes in workloads from period to period. Funding of these costs reflects significant increases, however, for years in which there are major procurements of, for example, simulators, aircraft, or construction in support of training.

Thus, the proportion of total funding requested to support training differs significantly among the Services and among categories of training; the proportion in the short run, however, is seldom less than one-third of total cost. This has important implications for the extent of funding adjustments appropriate to changes in the level of activity or size of a training program. Other things equal, if training funds are to be adequate for the needs of a reduced program, they must be reduced by a smaller proportion than the program loads in order to account for fixed costs. By the same token, program increases, within reasonable capacity limits, may not require a proportional increase in total program funding.

Training costs are affected by inflation, both because of price rises for goods and services and because of the pay of the military and civilian personnel involved as students, instructors, and support. Some training program costs are strongly affected, in addition, by energy cost increases, especially in flight training.

APPENDIX A

DETERMINING TRAINING REQUIREMENTS

Discussions of the determination of training requirements in this report reflect a generally uniform approach. The following overview of the methodology for assessing and calculating training requirements is provided as a framework for understanding this approach. As noted, details in calculation may differ to some extent among the Services and among the training categories.

Requirements

All training is accomplished to satisfy the need for personnel with certain types and levels of skills to man the approved or projected force. The Services, over the years, have developed detailed, systematic methods of determining the manpower needed to man and support the forces. The Manpower Requirements Report discusses this process. From these force requirements for manpower, the need for trained personnel with specific skills can then be derived. For example, a given force structure establishes the number of trained enlisted personnel needed. The number of authorized positions within that force structure for radar technicians establishes the basic requirement for trained personnel with that skill. This process is reiterated on a phased basis for all skills and skill levels for each Service, for both officer and enlisted skills. The total of all personnel in all skills needed to perform all the jobs in the force at a point in time represents the total requirement for trained manpower projected for that date.

Inventory Projections

The requirements identified through this process must be measured against the available assets, in terms of trained personnel on hand in each skill and skill level. From this asset base, estimates are made of how many trained personnel will be available at various points of time in the future. These estimates take into account probable rates of change to the current inventory -- through reenlistment, promotion, discharge, death, retirement, or other causes. These estimates are based on the best historical information available, tempered by judgment of how in the future personnel policies, the state of the economy, behavioral patterns, and other factors, many of them difficult to predict, will affect the probabilities that a trained individual will remain in the Service. A comparison of skill requirements and skill inventory projections, over time, establishes the extent of shortage or surplus likely to exist in each skill area by month and year. Adjusting the inventory may entail retraining personnel who are in surplus skills, but to a much greater degree, adjustment is likely to require the training of new accessions at entry level in shortage skill areas. The process

places a demand on the personnel management and training establishments continually to analyze information about attrition as it occurs, by skill and skill level, in order to produce the right number of trained personnel with the proper skills needed to restore and maintain the balance of the skill inventory. The workload thus placed on the training establishment is detailed by graduates needed from courses of various lengths and is measured in terms of average student load, or "training load."

Average Training Loads

Resources (men, money, and materiel) needed for any particular category of training vary with the number of students undergoing training at any given time. Facilities must be constructed and maintained to accommodate these students in training. The training establishment must maintain a sufficient staff of qualified instructors to conduct instruction for the "load" of students. Students and Trainees, as described in the "Individuals" chapter of the Manpower Requirements Report, must be programmed to account for the fact that these personnel are in formal school training and are not available for duty with operational units. All of these personnel must be paid, housed, and supported. The basis for establishing these resource requirements is the "average training load."

The aggregate training load of courses of instruction within a given training category or sub-category for a given period is computed in accordance with the following formula, except as noted:

$$L = \frac{\sum_{i=i}^{n} \left(\frac{E_i + G_i}{2} \right) t_i}{y}$$

where L is Average Training Load,

i is a class (1,2,...n) scheduled for a training course within the training category under consideration,

E is number of expected entrants to scheduled class i,

G is number of expected graduates from scheduled class i,

t is the calendar length of the syllabus of class i, and

y is the length of a calendar year expressed in the same units as t (1 year = 12 months = 52 weeks = 365 days).

Fractions of carryover classes conducted during the year are included as though they were separate classes. However, individuals remaining in class at the end of a period are not counted as graduates, nor are individuals already in a class at the beginning of a period counted as entrants except for purposes of computing training loads for these fractions of courses.

The training load for a category or sub-category of training (e.g., Specialized Skill Training or Functional Training within that category) is the sum of the loads computed for all classes of courses within the category or sub-category.

This method of computation implies "straight-line" attrition, under an assumption that net class attrition occurs at a constant rate during a course. In the relatively few cases when attrition patterns experienced characteristically produce a significantly different distribution of attrition, the more appropriate attrition pattern is used in lieu of the term $\frac{E + G}{2}$.

Since attrition varies for different training programs and is not always spread uniformly throughout the length of a course of training, determining training loads becomes a complex problem in estimation. This process of estimation involves two related factors.

First, across the spectrum of training programs that are within the scope of this report, attrition varies from nearly zero to as high as 25 to 30 percent. Most officer Professional Development Education programs have practically no attrition. For FY 1985, the Services estimate that about 10 percent of new recruits, on a DoD average basis, will not complete Recruit Training because they will be found, in the course of undergoing training, not to have the mental or physical qualifications, or the motivation, for military life. Of these, some will fall ill or go absent without leave. Attrition rates in Specialized Skill Training vary widely, with the longer and more demanding courses tending to have higher losses. Pilot training is near the top of the scale in attrition; the higher rate of losses is based on lack of aptitude or motivation for flying, accidents, and similar causes which are intensified in this type of training. While historical data provide a basis for projecting attrition rates for all types of training, there is a considerable possibility for error based on variance in such factors as student quality and motivation.

A second necessary step in evaluating the effect of attrition is to estimate the phasing of attrition for each training program. In some courses, attrition tends to be higher in the early stages of a course when the inept and those lacking motivation are discovered. In other courses, the bulk of attrition may occur toward the end of the course. The patterns of losses vary widely among types of training and, to the detriment of precise planning, over time. The complexities of the

attrition variable makes it necessary for the Services to use computer simulations in their training load calculations which take into account the rates and time-phasing of attrition.

An additional variation is introduced into the conceptual process of forecasting requirements and planning training loads as described above by the seasonal and cyclical nature of new accessions to the Services. Inputs to many of the more stable training programs -- Professional Development Education, Flight Training, the Service Academies, and the most advanced portions of Specialized Skill Training -- are readily predictable. Inputs to the training programs which are dependent on new accessions, Recruit Training and Initial Skill Training for graduates of Recruit Training, are considerably more volatile. The volume of inputs to these types of training depends on such intangibles as job opportunities in the civilian economy and the decisions of young people to enlist, delay enlisting, or not enlist. Moreover, enlistments are seasonal in nature, following a long-term pattern of "good" and "bad" recruiting months, whereas phased requirements may move independently of these seasonal patterns. As a result, training loads for the initial active duty training programs are generally based on a compromise involving the timing of predicted enlistments and the capacity of the training base as well as when the new personnel are needed to fill vacancies in the job structure. Most of the courses in these programs are relatively short, and program adjustments can readily be made.

APPENDIX B

SELECTED MAJOR COURSES/SKILL AREAS TRAINED IN OTHER SERVICES

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Army	Construction Equipment Operator	Marine Corps Air Force
Army	Airborne	Navy Marine Corps Air Force
Army	Artillery	Marine Corps
Army	Armor	Marine Corps
Army	Explosive Ordnance Disposal	Navy Air Force Marine Corps
Army	Medical Lab Technician	Navy
Army	Redeye Missile	Marine Corps
Army	Satellite Communication Fundamentals	Navy Air Force Marine Corps
Army	Tracked Vehicle Repair	Marine Corps
Army	Correctional Specialist	Navy
Army	Postal Clerk	Navy Marine Corps
Army	Foreign Language Training	Navy Marine Corps Air Force
Army	Allergy/Immunology	Air Force
Army	Public Affairs Training	Navy Marine Corps Air Force
Navy	Aviation Maintenance	Marine Corps Coast Guard
Navy	Flight Training	Marine Corps Coast Guard

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Navy	Cryptologic Courses	Army Marine Corps Air Force
Navy	Diving	Army Marine Corps Air Force Coast Guard
Navy	Musician	Army Marine Corps
Navy	Electronic Principles	Marine Corps Air Force
Navy	Cryptographic Maintenance	Marine Corps Air Force Coast Guard
Navy	Teletype Maintenance	Marine Corps
Marine Corps	Computer Systems, Programming (IBM 360)	Army Air Force Navy
Air Force	Navigator Training	Navy Marine Corps
Air Force	Tempest (Cryptologic Courses)	Army Navy Marine Corps
Air Force	Cryptologic Equipment Maintenance	Army Navy Marine Corps
Air Force	Precision Measurement Training	Army Marine Corps
Air Force	Aircraft Pneudraulic Repair	Army
Air Force	Weather Training	Army Navy Marine Corps
Air Force	Military Dog Handler	Army Navy Marine Corps

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Air Force	Law Enforcement	Navy Marine Corps
Air Force	Fire Control Specialist	Army Marine Corps
Air Force	Nondestruct Inspection	Army Navy Marine Corps
Air Force	Defense Sensor Interpretation and Application Training	Army Navy Marine Corps
Air Force	Air Intelligence Training	Army Navy Marine Corps
Air Force	Lineman Training	Army Marine Corps
Air Force	Professional Comptroller	Army Navy Marine Corps
Air Force	Radio Communications Analysis	Army Navy Marine Corps
Air Force	Voice Processing	Army Navy Marine Corps
Air Force	Cryptoanalysis	Army Marine Corps

APPENDIX C

INDIVIDUAL TRAINING FACILITIES AT MAJOR LOCATIONS
AND TRAINING CATEGORY, FY 1985

Facility Location	Student Workload	Training Staff E/S [a/] Military	Civilian
A. Recruit Training			
Army			
Fort Dix, NJ	5,756	1,185	31
Fort Jackson, SC	6,919	1,359	59
Fort Knox, KY	2,901 [b/]	624	46
Fort Leonard Wood, MO	3,399	833	42
Fort McClellan, AL	1,438	294	3
Fort Sill, OK	543	80	2
Fort Bliss, OK	536	80	2
Navy			
Great Lakes, IL	6,655	619	2
Orlando, FL	5,481	519	0
San Diego, CA	4,982	450	8
Marine Corps			
Parris Island, SC	6,148	1,334	6
San Diego, CA	5,676	1,070	5
Air Force			
Lackland Air Force Base, TX	8,047	740	19

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

b/ Includes ROTC Basic Course workload (556).

Facility Location	Student Workload	Training Staff E/S [a] Military	Civilian
B. Officer Acquisition Training			
Army			
Fort Benning, GA	311	36	3
Fort Monmouth, NJ	282	43	24
West Point, NY	4,004	721	778
Navy			
Annapolis, MD	4,373	741	883
Newport, RI	925	124	18
Pensacola, FL [b]	246	-	-
Marine Corps			
Quantico, VA	396	249	4
Air Force			
Colorado Springs, CO	4,269	1,028	721
Lackland Air Force Base, TX	710	158	17

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

b/ Manpower not separately identified by training category in manpower documents.

Facility Location	Student Workload	Training Staff E/S [a] Military	Civilian

C. Specialized Skill Training

Army

Aberdeen Proving Ground, MD	3,512	1,265	223
Charlottesville, VA	230	30	0
Fort Belvoir, VA	1,969	710	210
Fort Benning, GA	3,848	937	182
Fort B. Harrison, IN	3,527	609	111
Fort Bliss, TX	2,059	922	283
Fort Bragg, NC	1,031	687	66
Fort Devens, MA	1,250	804	205
Fort Dix, NJ	1,564	515	10
Fort Eustis, VA	2,854	875	314
[illegible] Gordon, GA	[illegible]	2,343	982
Fort [illegible]	1,[illegible]76	667	173
Fort Jackson, SC	[illegible]	957	81
Fort Knox, KY	2,[illegible]	[illegible]	334
Fort Lee, VA	[illegible]	1,092	105
Fort L. Wood, MO	1,420	[illegible]	46
Fort McClellan, AL	2,012	750	152
Fort Rucker, AL		281	106
Fort Sam Houston, TX	[illegible]	900	160
Fort Leavenworth, KA	216	94	3
Fort Sill, OK	3,075	1,093	455
Fort Monmouth, NY	221	62	25
Monterey, CA	4,002	141	961
Redstone Arsenal, AL	2,042	953	394
Rock Island, IL	409	0	66
Savanna Army Depot, IL	294	0	42
Texarkana, TX	270	0	35
Fort Ord, CA	87	31 [b]	30
Little Creek, VA	161	94 [b]	15
Lackland AFB, TX	0	12 [b]	0

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

b/ Instructors assigned to training facilities of another Service.

Facility Location	Student Workload	Training Staff E/S [a/] Military	Civilian
Navy			
Athens, GA	342	51	16
Bangor, WA	524	460	23
Bethesda, MD (Medical)	298	71	9
Charleston, SC	834	477	7
Dam Neck, VA	2,619	1,397	17
Great Lakes, IL	9,615	1,671	36
Great Lakes (Medical)	2,251	86	9
Groton, CT	2,001	858	7
Groton, CT (Medical)	95	15	2
Gulfport, MS	444	136	11
Idaho Falls, ID	755	601	0
Indian Head, MD	313	99	6
Jacksonville, FL	329	292	0
Lakehurst, NJ	360	211	9
Little Creek, VA	914	168	9
Mayport, FL	252	165	2
Memphis, TN	8,267	1,145	201
Meridian, MS	1,183	132	10
Newport, RI	699	386	22
Norfolk, VA	1,874	1,131	54
Oakland, CA	73	12	8
Orlando, FL	5,339	489	21
Panama City, FL	220	184	5
Pearl Harbor, HI	302	263	10
Pensacola, FL	2,442	817	137
Pensacola, FL (Medical)	298	84	32
Philadelphia, PA	301	50	3
Port Hueneme, CA	537	143	28
Portsmouth, VA (Medical)	392	59	2
San Diego, CA	8,471	3,385	223
San Diego, CA (Medical)	2,707	167	12
San Francisco, CA	461	167	23
Schenectady, NY	808	706	0
Vallejo, CA	1,374	534	0
Windsor, CT	209	173	0
Whidbey Island, WA	188	128	0

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

Facility Location	Student Workload	Training Staff E/S [a] Military	Civilian
Marine Corps			
Albany, GA	39	26	1
Camp Lejeune, NC	2,123	1,028	28
Camp Pendleton, CA	876	616	7
Parris Island, SC	76	127	0
Quantico, VA	1,228	999	54
San Diego, CA	312	65	1
Twentynine Palms, CA	1,602	645	48
Air Force			
Chanute Air Force Base, IL	5,701	1,244	476
Fairchild Air Force Base, WA	256	394	22
Goodfellow Air Force Base, TX	1,664	495	35
Homestead Air Force Base, FL	58	124	2
Keesler Air Force Base, MS	7,981	1,952	639
Lackland Air Force Base, TX	3,592	1,174	169
Lowry Air Force Base, CO	5,723	1,494	341
Sheppard Air Force Base, TX	6,183	1,406	515

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

Facility Location	Workload	Training Staff E/S [a/] Military	Civilian
D. Flight Training			
Army			
Fort Rucker, AL	1,776	1,403	421
Navy			
Chase Field, TX	118	986	125
Corpus Christi, TX	292	601	101
Kingsville, TX	118	1,094	82
Meridian, MS	98	814	63
Pensacola, FL	977	1,401	178
Sacramento, CA	--	34	1
Whiting Field, FL	430	1,027	89
Air Force			
Columbus Air Force Base, MS	414	1,214	83
Lackland Air Force Base, TX	186	9	0
Laughlin Air Force Base, TX	448	1,269	123
Mather Air Force Base, CA	860	1,011	144
Randolph Air Force Base, TX	174	800	149
Reese Air Force Base, TX	411	1,111	162
Sheppard Air Force Base, TX	304	267	27
Vance Air Force Base, OK	415	396	13
Williams Air Force Base, AZ	459	1,256	141

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.

Facility Location	Workload	Training Staff E/S [a/] Military	Civilian
E. Professional Development Education			
Army			
Carlisle Barracks, PA	246	116	132
Fort Belvoir, VA	246	60 [b/]	108
Fort Bliss, TX	246	76	21
Fort Leavenworth, KA	797	227	139
Fort McNair, DC	301	46 [c/]	42
DoDCI, Navy Yard, D.C.	483	19 [d/]	
Navy			
Monterey, CA	1,689	100	477
Newport, RI	536	212	213
Norfolk, VA	261	26	48
Marine Corps			
Quantico, VA	451	189	26
Air Force			
Bolling AFB, DC	7	21	2
Gunter Air Force Station, AL	210	58	8
Maxwell Air Force Base, AL	1,652	523	213
Wright-Patterson Air Force Base, OH	1,361	285	295

a/ Reflects manpower end-strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, Management Headquarters and Base Operating Support.
b/ 24 Army, 42 Other Services
c/ 16 Army, 30 Other Services
d/ 5 Army, 14 Other Services

Facility Location	Student Workload	Training Staff E/S [a] Military	Civilian
F. One-Station Unit Training (OSUT)			
Army			
Fort Benning, GA	7,452	2,464	108
Fort Bliss, TX	1,387	554	31
Fort Dix, NJ	[b]	0	0
Fort L. Wood, MO	3,953	1,790	117
Fort Sill, OK	4,032	1,626	93
Fort McClellan, AL	2,593	674	35
Fort Knox, KY	3,025	1,539	222

[a] Reflects manpower end-strength (E/S) to include instructors, school/training center staffs, and student supervisors. Excludes training support, management headquarters, and base operating support.

[b] OSUT Training was replaced by BT/OT at Ft Dix in FY84 to improve training efficiency.

APPENDIX D

SUMMARY OF TOTAL FUNDING FOR INDIVIDUAL TRAINING AND EDUCATION, BY SERVICE AND APPROPRIATION, FY 1983-85
($ millions)

Appropriation	FY 83	FY 84	FY 85
Army			
Operations and Maintenance	$2,264.4	$2,511.5	$3,024.5
Military Personnel	2,336.8	2,436.0	~~2,520.3~~
Reserve Personnel	185.6	241.6	364.8
National Guard Personnel	257.1	310.2	462.5
Aircraft Procurement	114.6	193.0	245.4
Missile Procurement	1.0	1.2	1.2
Procurement Weapons and Tracked Combat Vehicles	16.7	14.9	31.8
Procurement of Ammunition	0	0.2	0
Other Procurement	17.3	19.6	24.5
Military Construction	121.3	140.2	197.6
Total Army	$5,314.9	$5,868.4	$7,614.2
Navy			
Operations and Maintenance	$1,095.4	$1,248.9	$1,636.7
Military Personnel	1,928.3	2,017.1	2,826.7
Reserve Personnel	42.8	70.1	100.3
Aircraft Procurement	199.3	197.0	192.9
Other Procurement	72.4	40.0	68.7
Military Construction	104.2	102.2	~~134.8~~
Total Navy	$3,442.4	$3,695.0	$4,969.8
Marine Corps			
Operations and Maintenance	$ 125.2	$ 145.3	$ 168.3
Military Personnel	713.5	707.6	951.5
Reserve Personnel	46.3	46.3	68.6
Procurement	28.1	6.1	15.3
Total Marine Corps	$914.1	$905.2	$1,203.7

Appropriation	FY 83	FY 84	FY 85
	Air Force		
Operations and Maintenance	$1,292.8	$1,274.4	$1,373.9
Military Personnel	1,549.6	1,600.8	2,282.9
Reserve Personnel	36.9	38.4	40.1
National Guard Personnel	51.5	61.4	80.7
Aircraft Procurement	112.8	104.3	~~241.4~~ 248.7
Other Procurement	12.0	19.8	29.9
Military Construction	104.3	107.0	98.2
Total Air Force	$3,160.1	$3,208.9	$4,154.4
Total Department of Defense	$12,831.4	$13,677.4	$17,942.2

Note: Totals may not add due to rounding. These totals exclude funding for individual education and training programs for which loads are not requested and for which funds were not shown in the funding tables in Chapter X (e.g., ROTC).

COLLECTIVE

TRAINING

READINESS IMPLICATIONS

OF

COLLECTIVE UNIT TRAINING

DEPARTMENT OF DEFENSE

March 1984

Prepared by

Office of the Assistant Secretary of Defense
(Manpower, Installations and Logistics)

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READINESS IMPLICATIONS OF COLLECTIVE UNIT TRAINING

INTRODUCTION

Military operations are performed by organizations, not by individuals. To attain full readiness, these organizations must learn to operate as cohesive and responsive teams that are capable of succeeding in appropriate wartime missions. This section of the Force Readiness Report discusses the state of readiness of U.S. Forces in terms of trends in the amount and quality of this team training.

Collective Unit Training in Perspective. The first part of this volume of the Force Readiness Report discusses the training of servicemembers as individuals in the institutional setting, mainly in military schools and training centers. Graduates of these schools join operational units, where the individual learning process continues through formal and informal on-the-job training and job experience. Units, in addition, engage in team training, referred to in this report as "collective unit training," to improve and maintain the operational capability of each unit and such subordinate units as it may have.

The term "unit" includes the whole range of military organizations from the smallest to the largest. At the lower end of the spectrum there are aircrews, infantry squads, combat vehicle crews, and a wide variety of primary organizations including sections, work centers and other organizational groupings, normally under a single leader or supervisor. Training exercises of larger units, such as battalions and brigades in the Army or Marine Corps, frequently include attached and supporting organizations from outside the formal organizational structure. Toward the top of the spectrum, units may include cooperating organizations from more than one Military Service and from allied nations. "Collective unit training" includes the team training and exercises of this full spectrum of units.

Effects of Other Elements of Readiness. Both materiel readiness and personnel readiness, discussed in other volumes of the Force Readiness Report, have a profound effect on the quality of collective unit training.

The readiness of a unit's materiel influences the amount of collective unit training that can be conducted, the amount of command attention that can be devoted to it, and the quality of the training.

Personnel readiness is particularly important to sound collective unit training. This type of training is most effective in terms of developing and retaining team proficiency when:

- o The units undergoing training are at full strength.
- o Personnel turnover and turbulence are low.
- o Leadership positions are filled with qualified people.
- o Individual unit members are capable of learning and performing in their job skills.

There has been an improvement over the past several years in each of these personnel factors, as is noted in Volume III of the Force Readiness Report. This improvement makes it possible for units to concentrate more attention on collective unit training by lessening the need for constant corrective training of individuals and repetitive training at the primary unit level. The improved availability of qualified leaders, especially at the smaller unit level, enhances the quality of the collective unit training, since the leaders are primarily responsible for the proficiency of their units. Personnel stability raises the level of retention of team skills; as a result, the collective learning effects of collective unit training are retained over a longer period of time, and greater readiness value is gained from a given amount of training.

While high personnel and materiel readiness provide the preconditions for good collective unit training and enhance its value, they cannot substitute for it. Team proficiency is gained only through well-prepared, realistic collective unit training. Furthermore, team proficiency tends to decay rapidly unless the team is exercised regularly. Units which have not been properly trained are subject to avoidable casualties and reverses in combat despite the quality of their personnel and weapons. Well-trained units can be counted on to acquit themselves well in combat.

Readiness Indicators. The following four subsections of this report discuss the readiness status of each of the four Military Services with regard to collective unit training. Appropriate statistics that indicate levels and trends of collective unit training activity are included for each Service. While these indicators are useful for this purpose, some of them need to be used with some caution for the following reasons:

- o Some statistics, notably flying hours and ship steaming hours, include operational activity as well as training activity. For example, flying hours for antisubmarine warfare aircraft include operational ASW patrol flights as well as flights undertaken for training only. The two types of activity are not readily separable; they are funded from the same accounts, and all operational activity has some training value, although the amount may vary from a great deal to very little. An un-

programmed amount of operational activity may cause a temporary peak in the statistics without a commensurate enhancement in readiness.

- For many types of support units, activities in wartime are much the same as in peacetime; consequently, routine peacetime operations constitute most of the collective unit training of these organizations. For example, maintenance units and underway replenishment ships train mainly by performing their routine support missions. Participation in exercises by such organizations enhances training readiness mainly by raising the tempo of activity and, in some cases, changing the environment in which the work is done.

- Some activity indicators, notably battalion training days, do not disclose the actual differential values of the included activities. For example, a day of live-fire exercises may be much more valuable to a tank unit than a day of limited maneuvers without live fire.

Where it is feasible and useful, these anomalies are explained through supplemental statistics or discussions in the text.

ARMY

The Army's activity levels in collective unit training are described in the following paragraphs in terms of battalion training days, flying hours and training munitions expended.

Ground Unit Training. Battalion training days (BTDs) continue as the Army's measure of collective unit training accomplished. For ground combat units, a BTD is defined as "a battalion day of activity" planned or accomplished for the primary purpose of furthering the unit's training program.

BTDs are the sum of field training days designed to improve individual and collective technical and tactical proficiency. BTDs are not precise and do not fully reflect the dynamic nature of the Army's diagnostic training system. Other factors, such as the status of ranges and training facilities; adequacy of fuel, training ammunition and spare parts; and personnel and leader quality and availability, are significant in determining the effectiveness of training.

BTDs provide a general index of time devoted to individual and collective training in units and reflect the level of effort expended toward achieving and maintaining a ready state in the units involved. Table I summarizes Army BTDs for FY 1982-FY 1985.

TABLE I

ARMY BATTALION TRAINING DAYS (BTDs)

	Actual				Estimated			
	FY 1982		FY 1983		FY 1984		FY 1985	
Type Unit	Units	BTDs	Units	BTDs	Units	BTDs	Units	BTDs
Armor Battalion	56	8,824	56	8,830	55	8,450	54	8,440
Mechanized Infantry Battalion	55	8,583	58	8,911	47	6,694	46	6,768
Infantry Battalion*	58	10,543	55	10,139	54	10,153	56	10,595
Field Artillery Bn	88	13,860	88	13,900	86	13,812	88	13,964
Armored Cavalry Sqdn	20	2,958	20	3,365	19	3,178	19	3,162
Air Cavalry Sqdn	7	1,563	7	1,285	7	1,285	9	1,771
Engineer Battalion	48	7,364	48	7,507	48	7,575	46	7,170
Total	332	53,695	332	53,937	316	51,147	318	51,870

*All types except mechanized infantry -- airborne, air assault, ranger, etc.

The total number of BTDs decreases somewhat over the period shown in the table, but this is the result of force structure changes that reduce the numbers of battalions. The number of days per battalion remains virtually steady at about 162 days per year. Furthermore, the value of time spent in training is increasing as improvements to training areas, ranges and other facilities and devices are put into use. Two examples illustrate this change:

- The use of the MILES laser engagement system, both at the National Training Center and at other training areas, greatly increases the learning value of force-on-force exercises.

- Multipurpose range complexes will be opening at several divisional stations in the United States and also in Germany. These will provide highly realistic gunnery training for individual tank crews and Bradley Fighting Vehicle squads and crews. As an even more important improvement, these ranges will greatly improve the realism of live-fire training for tank, infantry and armored cavalry units at platoon or company level.

Flying Hours. The Active Army Flying Hour Program (FHP) provides a quantitative index for a significant aspect of unit training. The goal of the FHP is to achieve at least the minimum number of hours required to support training for crews in order to maintain individual and unit-level technical and tactical proficiency for operational aviation units at their programmed manning levels. The FHP is based on the hours required per pilot.

The FHP is a total system designed to realize the full combat potential of a growing and inceasingly sophisticated aviation force. The FHP as a whole is made up of hours used for training of individual aviators and their parent units, combined-arms training, and special or geographic missions. Flight time undertaken for one of these purposes may, at the same time, satisfy one or more of the other purposes. For example, participation in a combined arms exercise may also satisfy unit and individual flying requirements.

Table II summarizes actual and projected flying hours in terms of total hours by selected aircraft types for FY 1982 through FY 1985.

TABLE II

ARMY TOTAL FLYING HOURS

Aircraft	Actual FY 1982	Actual FY 1983	Estimated FY 1984	Estimated FY 1985
		ACTIVE FORCE		
AH/TH-1	107,591	107,142	109,908	118,649
UH-1	530,985	536,591	523,801	502,830
UH-60	50,983	62,242	91,055	123,465
CH-47	45,878	36,411	55,143	51,278
OH-58	230,830	219,119	228,083	210,836
OV/RV-1	15,275	17,980	20,404	22,173
Others	241,274	236,329	229,119	237,324
Total	1,222,816	1,215,814	1,257,513	1,281,209
		RESERVE COMPONENTS *		
AH/TH-1	4,790	7,474	10,462	11,286
UH-1	215,472	221,723	225,362	241,199
UH-60	-	274	768	768
CH-47	9,022	6,571	8,868	10,413
OH-58	63,069	60,333	60,798	64,039
OV/RV-1	6,072	5,983	5,924	5,954
Others	52,742	70,586	73,097	74,484
Total	351,167	372,944	385,279	408,143

* Reserve Component flying hours for aviator qualification courses are included within Active Force display.

Table III shows trends in flying hours per crew per month in operational aviation units.

TABLE III

ARMY FLYING HOURS PER CREW PER MONTH*
(FORSCOM, USAREUR, Pacific Forces)

Aircraft	Actual FY 1983	Estimated FY 1984	Estimated FY 1985
AH-1	10.4	9.8	9.4
UH-1	13.2	14.2	14.4
UH-60	12.2	13.5	16.4
CH-47	8.6**	12.9	10.4
OH-58	9.7	9.4	10.2
OV/RV-1	8.7	9.9	10.1

* Comparable figures for FY 1982 are not readily available.
** CH-47's were grounded for transmission problems in the 1st quarter of FY 1983.

The Army FHP has been constrained to some extent because of a repair parts funding shortage that began in FY 1982. The FHP is scheduled to grow above prior-year levels in FY 1985; however, this growth is contingent on congressional approval of a pending request for reprogramming of prior-year funds required for procurement of additional repair parts. The FY 1985 FHP, if approved, will meet the flying hour requirement for basic pilot training and advanced skills at authorized pilot manning levels.

Training Ammunition. The Army's stated ammunition requirements have been significantly reduced by the extensive review carried out by the Standards in Training Commission (STRAC). The Army's five-year requirement for training ammunition has been reduced by $7.2 billion as a result of this management initiative. Table IV shows Army ammunition expenditures for the support of individual and collective unit training programs.

TABLE IV

VALUE OF ARMY AMMUNITION EXPENDED FOR TRAINING
($ in Millions)

Actual		Estimated	
FY 1982	FY 1983	FY 1984	FY 1985
720	774	950	1,050

The cost growth shown in the table is largely the result of the introduction of new weapons, such as the Bradley Fighting Vehicles, which use more expensive types of ammunition. The amount of ammunition available for training has remained relatively stable over this period. However, it is important to note that the range improvements previously discussed serve to enhance the training value of each round fired for certain types of weapons.

The Army remains short of 45 caliber ammunition for training because of past congressional constraints on procurement of this type of ammunition. This problem should be resolved when the Army completes its plan for the proposed replacement weapon, the 9mm pistol. In the meantime, qualification and sustainment training with the 45 caliber pistol is generally limited to firing by law enforcement, special security operations, and selected combat arms personnel.

Army-Sponsored Field Exercises. The focus of unilateral Army field training exercises is at the battalion task force and brigade levels. Army units participated in more than 1000 field training exercises during FY 1983. These exercises ranged from short-duration nonfiring engagement simulations to combined arms live-fire exercises. Participation during FY 1984 and 1985 will be about the same, although there will be variations in exercise scope and the mix of units participating.

Combined-arms and multiservice scenarios are used in all Army exercises. Many Army exercises include Air Force tactical air and airlift units, and other exercises involve the Navy and Marine Corps. Joint and combined arms exercises provide excellent opportunities to enhance readiness by translating collective unit training into total force scenarios of the type that would be encountered in combat.

Units of the Army National Guard and Army Reserve regularly participate in Active Army exercises under the partnership and overseas deployment training programs. In FY 1985 over 30 Reserve Component units and 80 smaller "unit cells" will participate in major exercises. The Army places particular emphasis on training activities involving early deploying Reserve

Component units and their Active Army partnership units. Collective unit training of this type is very important in improving the combat potential of the total Army.

The National Training Center (NTC), Ft. Irwin, California, provides a realistic training environment for units to perfect collective tactical mission tasks. In FY 1984, 24 mechanized infantry and tank battalion task forces will conduct two weeks of intensive training at the NTC. This compares to 18 battalion task force exercises in FY 1983. In FY 1985, the program will expand to include 28 battalion task forces, five of which will be from the Reserve Components. These exercises represent the pinnacle of Army training in units and are a valuable readiness multiplier.

Summary. Collective unit training for the total Army force has been and remains a priority effort. Collective training has been significantly enhanced through training readiness improvement programs leading to closer cooperation between active and reserve forces.

Sustainment of desired training readiness levels is a function of operating tempo, which in turn is dependent on the availability of resources such as fuel, repair parts and ammunition required to achieve a ready state. The FY 1985 budget provides adequate resources to attain and sustain needed readiness in training.

Modernization of training equipment, facilities, simulators and devices provides up-to-date technologies to the force. Collective unit training will improve with this added modernization while achieving efficiency in training costs.

NAVY

Within the Navy, collective unit training prepares groups (teams, crews, etc.) to accomplish tasks required of each group as an entity. Intra-unit training, which emphasizes basic team proficiency and safety considerations, must be accomplished first; inter-unit training, which trains groups in integrated warfighting skills and prepares them for deployment, then follows and builds on the skills developed in intra-unit training.

Two general measures of the level of effort devoted to collective unit training are steaming days for afloat units and flying hours for aviation units.

Steaming Days. The Navy's goal for training operating tempo (OPTEMPO) is 29 steaming days per quarter for the non-deployed fleets. The deployed fleets normally are allocated the additional resources required to support 50 or 51 steaming days per quarter; this provides them the means to carry out assigned operational tasks as well as training. In FY 1980-1982, unscheduled increases in steaming days devoted to operational tasks were funded by supplemental appropriations and internal reprogrammings, and the minimum goal of 29 days per quarter for training was achieved. In FY 1983, training OPTEMPO was underfunded by $76 million. This shortfall, coupled with continuation of carrier battle group contingencies off the coasts of Lebanon and Central America and in the Indian Ocean, resulted in readiness compromises by fleet commanders. These compromises included operational constraints on some surface units to 19 steaming days per quarter, reduced duration of carrier group work-ups, and cancellation of test and evaluation trials and various ship and fleet unit work-ups. The FY 1984 budget, as approved by the Congress, restored funds for steaming days to a level that should bring training operations back to an average of 29 days per quarter for the non-deployed fleets. Funds requested for FY 1985 will support a continuation of the training OPTEMPO at this level. Table V summarizes actual and estimated ship steaming days per quarter for each of the four fleets.

TABLE V

SHIP STEAMING DAYS PER QUARTER

Fleet	Actual		Estimated	
	FY 1982	FY 1983	FY 1984	FY 1985
Non-Deployed				
Second Fleet	31.0	28.8	31.0	31.0
Third Fleet	27.0	25.2	27.0	27.0
Deployed				
Sixth Fleet	61.1	59.9	50.0	50.0
Seventh Fleet	54.1	51.0	51.0	51.0

Flying Hour Program. The flying hours used by the Navy and Marine Corps to reach readiness levels are shown in Tables VI and VII. Table VI shows the flying hour program in terms of hours flown by representative aircraft in the active inventory. Flying hours projected for FY 1984 and FY 1985 reflect continued efforts to attain a high state of readiness.

TABLE VI

NAVY/MARINE CORPS FLYING HOURS BY TYPE AIRCRAFT

Type Aircraft	Actual		Estimated	
	FY 1982	FY 1983	FY 1984	FY 1985
Navy				
A-6	42,060	46,206	41,316	43,671
KA-6	17,664	17,371	14,605	15,732
A-7	114,363	108,752	102,618	108,837
F-4	23,516	16,250	10,629	7,105
F-14	69,190	77,197	75,569	84,602
E-2	25,804	27,343	22,789	26,857
SH-3	37,485	35,884	36,388	36,078
SH-2	35,925	33,221	33,997	34,448
S-3	45,279	46,703	47,243	48,909
P-3	154,912	154,659	152,541	155,928
EA-6	14,829	15,805	16,918	17,450
F/A-18	-	126	7,637	7,278
SH-60	-	-	1,058	8,147
Marine Corps				
AV-8	10,059	11,501	13,447	14,575
A-4	25,453	22,198	21,286	21,413
A-6	19,576	18,312	16,373	18,877
F-4	38,042	34,371	30,383	28,651
UH-1	20,797	20,490	21,007	19,449
AH-1	18,611	15,672	19,757	21,534
CH-46	47,904	51,357	48,522	55,351
CH-53	29,073	35,939	29,476	37,895
OV-10	10,254	10,355	10,569	10,446
KC-130	23,605	22,206	25,394	26,557
EA-6	4,322	4,616	4,177	4,781
RF-4	6,733	6,105	6,295	6,584
F/A-18	-	5,022	12,714	14,226

Table VII shows the flying hour program by hours per crew per month. Navy tactical air crews will average a slightly higher number of hours per month in FY 1985 than the projected FY 1984 figure of 24 hours per month.

TABLE VII

NAVY/MARINE CORPS FLYING HOURS PER CREW PER MONTH

Type Aircraft	Actual		Estimated	
	FY 1982	FY 1983	FY 1984	FY 1985
Navy				
A-6	25	27	24	23
KA-6	27	25	21	21
A-7	23	22	22	23
F-4	17	18	20	20
F-14	23	22	20	21
E-2	36	35	29	38
SH-3	29	26	28	26
SH-2	22	20	21	21
S-3	23	22	23	24
P-3	43	41	41	41
EA-6	23	24	25	24
F/A-18	-	-	25	23
SH-60	-	-	23	23
Marine Corps				
AV-8	13	15	18	16
A-4	16	15	17	17
A-6	26	23	21	25
F-4	18	16	18	19
UH-1	28	27	27	28
AH-1	20	16	21	21
CH-46	20	21	20	21
CH-53	19	21	17	22
OV-10	20	18	19	17
KC-130	30	28	33	34
EA-6	17	18	17	20
RF-4	19	16	18	19
F/A-18	-	16	22	23

Fleet Exercises. Military forces must exercise the way they plan to fight, and the Navy is making progress toward this goal. Numerous joint, combined, and Navy-only exercises are held annually, with a resultant improvement in the quality of training and overall readiness. Recent joint efforts by the Navy and Air Force have resulted in an enhancement of the total force capability to conduct maritime operations. In particular, these

joint exercises have identified problem areas in interoperability; solving these problems will help to improve performance in future exercises and the joint ability to meet the threat at sea.

Training Improvements. The Navy has made considerable progress in the use of simulators of various types to improve collective unit training. Wargaming simulators are being used increasingly to enhance the tactical abilities of commanders. The aviation community continues to make good use of flight simulators.

In general, the Navy has found that simulators are most effective as a means of complementing and extending conventional training rather than as a replacement for significant parts of it. As an example, pierside trainers are now widely used to exercise combat information center personnel and sonar and radar crewmen in realistic combat exercises while their ships are in port. These simulated exercises add to the learning experience and team proficiency gained in exercises at sea. In addition, the more modern simulators can replicate the full array of possible threats and the combat environment that could be expected in wartime; it is difficult, and in some cases impossible, to achieve an equally realistic combat environment through exercises at sea. Simulators of this type pay off handsomely in terms of advancing ships' crews toward full exploitation of the capabilities of their ships.

Summary. Collective unit training for the Navy has been, and will continue to be, a priority effort. The resources available have generally been adequate to meet, or come close to meeting, peacetime training objectives as well as to support the nation in Grenada, Lebanon and elsewhere. However, any reduction in the flying hour or steaming hour programs below their minimum levels would damage fleet readiness and the Navy's capability to train its units for adequate execution of the nation's maritime strategy.

MARINE CORPS

The following section discusses collective unit training in the Marine Corps, first in terms of trends in statistical indications, then in terms of progress toward better training.

Combat Arms Battalion Field Training Days. A "field training day, as used in Table VIII, is a day spent in collective unit training, either in the field or off amphibious shipping, in furtherance of the unit mission.

TABLE VIII

MARINE CORPS: COMBAT ARMS BATTALION FIELD TRAINING DAYS

Type Unit	Units	Actual FY 1982	Actual FY 1983	Estimated FY 1984	Estimated FY 1985
Infantry Battalion	27	2,520	2,580	2,738	2,903
Tank Battalion	3	395	293	372	335
Assault Amphibian Vehicle Battalion	3	156	209	245	261
Artillery Battalion	12	1,302	1,316	1,344	1,420
Engineer Battalion	3	209	310	225	277
Reconnaissance Battalion	3	294	345	359	353
Light Armored Vehicle Battalion*	2	-	-	45	85
Total	51/53*	4,876	5,055	5,328	5,634

*One light armored vehicle (LAV) battalion will be activated in FY 1984.

Included within the general growth in Battalion Field Training Days are two significant changes:

- o A shift from predominantly small-unit training to a greater emphasis on training operations at battalion and regimental level.
- o Longer training deployments away from home bases.

Flying Hours. Marine Corps flying hours are reported with Navy statistics (Tables VI and VII).

Training Munitions Expended. Figures in Table IX show the value of ammunition expended for training purposes. The figures do not include aviation ordnance procured by the Department of the Navy.

TABLE IX

MARINE CORPS: TRAINING AMMUNITION EXPENDED
($ in Millions)

Actual		Estimated	
FY 1982	FY 1983	FY 1984	FY 1985
115	105	154	163

The increase shown in total training ammunition costs is attributable to the higher costs of new ammunition types being purchased to support new weapon systems. Two examples illustrate this effect.

- With the replacement of the 105mm howitzer by the new M-198 155mm howitzer, the cost of a round of artillery ammunition is roughly tripled.
- The LAV-25 mounts a 25mm automatic cannon. The cost of a single round for this weapon is approximately $38.

Marine Corps-Sponsored Training Exercises. Table X provides an outline of major field training exercises, other than those directed and coordinated by the Joint Chiefs of Staff.

TABLE X

MAJOR MARINE CORPS FIELD EXERCISES

Type Exercise	MAU*			MAB*			MAF*			Regiment and below			TOTAL		
	83	84	85	83	84	85	83	84	85	83	84	85	83	84	85
Amphibious	17	14	14	3	7	4	1	2	1	16	29	16	37	52	35
Desert										16	16	16	16	16	16
Jungle										2	2	2	2	2	2
Cold Weather				1		1				3	2	3	4	2	4
Aviation Ops.										91	69	71	91	69	71
Missile Ex.										5	1	1	5	1	1
Command Post Ex.				6	7	6	3	4	5				9	11	11
Mountain										5	4	5	5	4	5
Logistical										1	1	1	1	1	1
Firing Ex.				1	2	2				22	21	22	23	23	24
TOTAL	17	14	14	11	16	13	4	6	6	161	145	137	193	181	170

* Definitions:
MAU: Marine Amphibious Unit
MAB: Marine Amphibious Brigade
MAF: Marine Amphibious Force

Since FY 1980, the number of MAU- and MAB-sized exercises has increased very significantly. In association with a general increase in the size of exercises, this has meant that more Marines received more critical training on a more frequent basis. Further, increased Operations and Maintenance funding has permitted more training deployments away from home bases. This has provided more opportunities for training in varied terrain and climatic conditions than were available under FY 1980 funding levels.

Training Trends and Improvements. Prior to FY 1982, ammunition purchases were not sufficient to satisfy training requirements. Procurements in FY 1982 and subsequently have been more adequate for the conduct of training. In addition, training devices in various stages of the acquisition process will enhance the skills of riflemen; tank, TOW, Dragon and Stinger gunners; and artillery/mortar forward observers. Other devices under development will enhance the skills of commanders and staffs in tactical decision making, command and control, and fire support coordination.

The Marine Corps is developing two aids to help in the management of collective unit training. A Unit Training Management Guide on methods of conducting training, use of training standards, and employment of training resources is being prepared for unit commanders. An Aviation Training Readiness Information Management System (ATRIMS) for squadron use is also being developed. ATRIMS is software designed to transfer the squadron aircrew training management workload to existing unit hardware, programming resources and directives. Only increased comsumable costs are anticipated.

Effect of Modernization. The Marine Corps has identified the lack of training standards as a significant deficiency in its training system. This deficiency is due in large measure to the rapid rate of force modernization. A second deficiency, which is directly related to training standards, is the lack of cost-effective training methods.

Training standards will be developed that establish performance levels to be achieved by all Marines and Marine units. They will ensure that each individual Marine and unit is being trained sufficiently to meet operational requirements, but is not being over trained.

Analysis of various methods for achieving specified performance levels should increase the efficiency of training methods and procedures. This analysis will also identify the performance level tradeoff between training under "live" conditions (i.e., with the actual item of operational equipment) and training under simulated conditions. Since the Marine Corps has programmed few Service-unique items of equipment, it will follow closely the developments in training technology by the other Services. Analysis of this type is particularly important due to the cost of dedicating operational equipment to training and the costs of providing adequate facilities to exercise with the operational equipment.

Regarding the adequacy of ranges, current deficiencies are a matter of degree. That is, training with current weapons and equipment on current ranges is subject to various environmental and safety limitations. For example, the full capabilities of the following weapons systems cannot be exercised at Camp

Lejeune, NC: M60 tank, M198 howitzer, TOW wire-guided antitank missile, and MK19 grenade launcher. In addition, some unit training, such as mechanized combined arms training at the task force level, cannot be conducted at Camp Lejuene. Each training center throughout the world has a unique set of capabilities and limitations which makes it more or less able to satisfy full-capability training with modern weapon systems. Transportation of units to various sites to exercise withhigh-capability weapons is limited by the associated cost.

The solution to this problem, assuming little if any increase in facility size, will be dependent upon training standards (identifying what individual and collective skills must be performed) and training methods (identifying alternative means to meet the standards). The Marine Corps is focusing its efforts toward this end.

AIR FORCE

The following paragraphs discuss progress in collective unit training in the Air Force.

Aircrew Training. Air Force aircrew training continued to improve during FY 1983. Over 90 percent of the total flying force was either fully or substantially combat ready in unit training. Aircrew training was enhanced by increased flying hours and realistic exercises for combat-like training. Even with the demands of aggressive training, tough exercises and frequent deployments, 1983 was the Air Force's safest year on record, with only 1.7 major accidents per 100,000 flying hours.

Tables XI and XII display total flying hours by aircraft type. Table XI shows flying hours for the active Air Force, Table XII for the Air Reserve Forces -- that is, the Air National Guard and the Air Force Reserve.

TABLE XI

AIR FORCE: FLYING HOURS BY AIRCRAFT, ACTIVE FORCE

Type Aircraft	Actual FY 1982	Actual FY 1983	Estimated FY 1984	Estimated FY 1985
A-7	5,329	5,962	5,645	5,645
A-10	168,787	178,158	173,702	175,849
A-37/OA-37	9,052	14,134	17,036	5,208
B-52	127,677	106,822	102,570	103,046
C-5	53,045	54,349	58,094	57,685
C-9	28,131	29,176	30,006	30,006
C-10	5,675	11,705	15,663	20,587
C-130	231,458	226,472	227,181	231,462
C-135	209,540	208,610	212,061	212,272
C-141	286,447	290,988	293,765	291,920
E-3	26,369	29,205	30,149	31,284
E-4	1,900	1,508	1,467	1,677
RF-4	46,856	48,193	48,504	50,013
F-4	192,432	177,783	165,688	167,103
F-15	149,569	163,939	175,587	186,400
F-16	95,762	137,671	178,924	211,886
F-106	32,908	29,848	20,048	15,562
F-111	78,115	75,517	72,859	75,969
FB-111	16,047	17,863	19,140	20,368
EF-111	1,259	3,050	5,923	10,088
H-1	45,753	46,118	46,895	45,667
H-3	19,050	20,149	21,684	21,857
H-53	13,872	13,699	14,349	14,367
H-60	-	2,303	4,100	4,100
O-2	31,351	27,902	24,224	23,951
OV-10	31,817	28,764	33,620	29,359
T-37	319,295	329,022	325,731	331,402
T-38	361,972	367,004	380,859	377,627
T-39/C-12/C-21	79,348	76,124	83,415	85,419
TR-1	1,704	1,509	8,922	7,775
Total*	2,670,520	2,723,547	2,797,811	2,845,554

TABLE XII

AIR FORCE: FLYING HOURS BY AIRCRAFT, AIR RESERVE FORCES

Type Aircraft	Actual FY 1982	Actual FY 1983	Estimated FY 1984	Estimated FY 1985
A-7	78,454	79,274	74,268	74,268
A-10	42,354	49,000	48,500	48,600
A-37/OA-37	14,426	13,499	13,534	14,028
C-130	147,079	147,646	150,957	154,206
C-135	50,954	50,061	49,872	49,872
RF-4	32,871	31,340	24,423	27,174
F-4	70,951	92,401	111,692	118,734
F-16	-	278	7,131	9,827
F-106	25,261	25,641	19,921	20,342
H-1	2,272	2,207	2,295	2,245
H-3	5,698	6,076	6,435	6,435
O-2	8,869	4,688	4,414	102
CT-39/T-39	2,010	2,778	2,640	2,640
Total*	481,199	504,889	516,082	528,473

* Excludes low-density aircraft such as T-43, UV-18, C-7, etc.

Table XIII displays flying hours per crew per month for selected high-density aircraft in the Active Force. In FY 1985, the program will provide approximately the number of hours required for aircraft commander and crew proficiency in the respective weapon systems as well as for currency in combat procedures and tactics.

TABLE XIII

AIR FORCE FLYING HOURS PER CREW PER MONTH
(Selected Aircraft Types; Active Force Only)

Aircraft Type	Actual FY 1982	Actual FY 1983	Estimated FY 1984	Estimated FY 1985
A-10	22.9	20.6	23.9	24.6
B-52	25.1	22.7	19.6	19.9
C-5	20.7	18.9	17.7	17.4
C-130	29.9	25.7	28.8	29.9
KC-135	17.3	15.7	18.4	18.2
C-141	30.3	32.5	35.9	36.1
F-4	15.2	14.2	16.8	17.8
F-15	15.7	15.6	19.0	19.7
F-16	15.8	16.8	18.6	20.6
F-111	17.8	17.7	18.0	19.7
FB-111	16.9	14.8	14.9	16.5

Although the Air Force is meeting its peacetime training objectives, any cuts to the flying hour program would adversely impact on combat readiness. In the near term, there will be a growth in the requirement for mission training related to new weapon systems (F-15, F-16, KC-10) and sophisticated munitions (air launched cruise missiles, precision-guided missiles) as these systems come on line. As the threat becomes more sophisticated, the amount of training required to meet and defeat that threat will increase.

Training Munitions. Table XIV shows trends in procurement of training munitions for the Air Force.

TABLE XIV

AIR FORCE TRAINING MUNITIONS COSTS
($ in Millions)

	Actual		Estimated	
	FY 1982	FY 1983	FY 1984	FY 1985
General Training Munitions	330.2	183.8	273.6	333.0
Training Missiles*	95.0	98.9	91.8	113.4
Total	425.2	284.7	365.4	446.4

* Expenditures are used primarily for weapon system evaluations; aircrew training is a secondary benefit.

Munitions for training are bought as they are needed; however, numerous variables are involved which make the total dollars spent each year fluctuate. In cases where the training munition is the same as the war reserve munition (WRM), the Air Force buys training munitions in conjunction with war reserve purchases. There are other cases where no training munitions are actually purchased, and munitions are used out of the overage in WRM supplies for training. The primary reason for the increases in FY 1984 and 1985 is the increased rate of purchase of 30mm training munitions.

Exercise Participation. Air Force units participate in numerous exercises, all of which are tailored to provide realistic training and demonstrate weapon system capability. All forces are improving their combat capabilities through participation in "FLAG" exercises. These provide excellent aircrew training in an interactive environment with each Air Force major command, other Military Services, and forces from foreign nations. These exercises include:

- RED FLAG: Based on extensive range complex at Nellis AFB,Nevada. Provides intensive combat crew training for tactical units and aircrews, fused together under a central manager, in a realistic combat environment.

- GREEN FLAG: Integrates maximum feasible amount of electronic combat training into specified RED FLAG and other exercises.

- COPPER FLAG: Air defense exercises.

- MAPLE FLAG: Conducted in Canada with Canadian air units. Provides realistic tactical training over terrain similar to that in Europe.

- BLUE FLAG: Non-flying training for battle managers in various wartime tactical scenarios.

FY 1983 "FLAG" participation by major weapon system category is shown in Table XV. Participation rates in FY 1984 and 1985 are expected to be roughly the same.

TABLE XV

AIR FORCE PARTICIPATION IN "FLAG" EXERCISES

	Sorties	Flying Hours
Tactical Air Forces		
RED/GREEN/MAPLE/ COPPER FLAGS	22,479	37,526
Strategic Bomber/ Tanker Forces		
RED/MAPLE FLAGS	1,154	5,941
Strategic/Tactical Airlift Forces		
RED FLAG	635	1,684

Air National Guard and Air Force Reserve units regularly participate in each type of FLAG exercise.

Training Improvements and Trends. Air Force training is benefiting from added emphasis and support for flying hours, realistic flying training, joint exercises, and improved simulators.

The FY 1985 flying hour program for all active and reserve forces represents a three percent growth over FY 1984. This growth supports realistic training programs that enhance combat readiness and increase the flying hours per month per aircrew for most weapon systems.

Realism in training contributes directly to increased combat readiness. Ongoing training exercises, such as RED FLAG, train Air Force flight crews under conditions that approximate the combat environment. The expected payoff will be the ability to attack and destroy enemy resources successfully and also to reduce attrition through this "combat experiencing" process. Another facet of realistic training involves deploying active and Air Reserve Forces fighter units to their planned European wartime bases of operation. At the forward locations, aircrews become more familiar with their wartime missions and areas of operation; this experience improves their combat effectiveness and survivability.

Joint exercises provide another valuable training experience for Air Force units through the use of the command and control systems and procedures that will be used during actual combat employment. This training is an essential part of the total force application of air power in its global role.

The Air Force simulator program is geared to complement aircraft flying training. The emphasis of the program is on crew training requirements that can best be performed through the use of simulators. Simulator improvements have been achieved for the B-52, C-130, A-10, and F-16 aircraft. The FY 1985 budget will support prototype simulator production for the B-1B, T-46, and EF-111A. An air refueling part-task trainer and an F-15/16 air combat simulator are also in the budget. The Air Force continues to adapt, where feasible, commercial training programs to military use, as is the case with the KC-10.

Training improvements are occurring across the board as a result of congressional budgetary support. However, while the simulator program has experienced successes, the need still exists for more realism and increased availability of combat training simulators. Continued support for Air Force simulator programs is essential to achieve a desired cost-effective balance between simulation and day-to-day flying training.

JCS DIRECTED AND COORDINATED EXERCISES

Realistic and challenging training is essential to the development and maintenance of collective unit capabilities within each Service. Collective unit training is a principal peacetime occupation in each Service. Training at home stations is capped, when possible, by further training at facilities such as the Army's National Training Center, the Marine Corps' Air-Ground Combat Center, and the Air Force's Nellis range complex. These facilities provide environments where units experience the stress and test of rigorous wartime conditions against actual adversaries. Data gathered at these and similar facilities allow the Services to improve doctrine, combat tactics, training methods, and unit operating procedures. Service-sponsored exercises frequently include participation by units of other Services.

As an important extension of Service training, the JCS-directed and coordinated exercise program provides opportunities to use and evaluate joint doctrine, tactics, techniques, procedures, and command and control in a realistic environment. These exercises are essential to the readiness of US forces supporting the missions of the unified and specified commanders. The trend in the number and cost of these exercises is shown in Table XVI.

TABLE XVI

JCS DIRECTED AND COORDINATED EXERCISE PROGRAM

	Actual		Estimated	
	FY 1982	FY 1983	FY 1984	FY 1985
Number of Exercises	66	57	71	69
Funding ($ Millions)*	273.5	244.4	280.3	347.5

* Excludes funding for participating units of the Services.

This program of approximately 60 directed and coordinated exercises per year is designed to deploy forces to the Far East, Europe, Latin America, and the Middle East; operate in desert and other extreme environments; exercise command and control of multi-Service task forces; and link reinforcing units with deployed or pre-positioned equipment. Another very important readiness benefit is derived from the realistic training these exercises provide to support units and functions during the deployment, employment and redeployment phases. This training improves the performance of operational units, sealift and airlift organizations, logistics networks, lines of communication,

medical support, and supply functions of all types. Finally, these exercises are used to evaluate US strategic plans and show US presence throughout the world.

In recent years, the world situation has increasingly required the demonstration of US resolve and capability to project US military presence in support of national interests and commitments. Combined exercises with allies provide the necessary interaction to test and evaluate combined systems, lines of communication, and agreements. The US BRIGHT STAR series of exercises demonstrates US determination to project military forces into the Middle East to defend interests in that region. Similarly, intensified joint and combined exercises are conducted in the Central American-Caribbean region. The annual REFORGER exercise ("return of forces to Germany") and TEAM SPIRIT in Korea continue to demonstrate resolve and support for US allies in those regions. During FY 1985, joint and combined training exercises will continue to play a vital role in sharpening the readiness posture of US forces and that of its allies.

SUMMARY AND CONCLUSIONS

As was stated in the introduction to this section of the Force Readiness Report, the readiness results of collective unit training activities are quite sensitive to materiel and personnel readiness, particularly the latter. This effect can be demonstrated by comparing the potential for good collective training in two hypothetical units:

- Unit A, which has all of its authorized materiel, a high percentage of which is operable, and has a complete, relatively stable fill of personnel qualified in their jobs.

- Unit B, which has problems with equipment availability, a shortage of qualified personnel and higher personnel turnover.

Given access to equal resources for collective unit training, Unit A can be expected to conduct more and better training and to gain more in readiness than Unit B. Unit B would be diverted from collective unit training by the need to solve its maintenance and individual training problems. Its collective unit training would be of lower quality because of the shortage of fully manned teams and leaders capable of conducting good training. Finally, the value of past training would dissipate faster than in Unit A because of personnel turnover.

As a generalization, it is fair to say that the typical unit in the period leading up to 1981 tended to resemble Unit B. In 1984 and 1985, the typical unit will be more like Unit A. The improvement in the materiel and personnel posture has set the stage for improved collective unit training.

Neither of these hypothetical units, however, could achieve their potential in combat readiness without good collective training, which is the force multiplier that turns the potentially good unit into a combat-ready team. Resources put into collective unit training pay off by producing units that are capable of operating at or near their potential in combat. Conversely, a lack of adequate resources for training exacts a cost in forgone combat capability.

There are existing and growing obstacles to good collective unit training. The amount of space--land, sea and air--available for training is subject to an increasing constriction. Most of the land space available for training is scaled to World War II-vintage weapons, whereas the range and speed of modern weapons are far greater and will continue to increase rapidly. The growth in civilian land use and aviation activity make it unreasonable to expect that available training space will expand

much. The squeeze on space, coupled with the growing sophistication of the threat and the rising costs of training resources, requires greater reliance on technology to improve the quality of training and to supplement conventional training. This type of progress through training technology is demonstrated by actions the Services have been taking in using technology to improve the training value of training exercises within the constraints discussed above. The Army's increasing use of the sophisticated training facilities available at the National Training Center and the increased reliance in all Services on simulation are key steps toward improving the quality of training.

The preceding Service sections of this report generally indicate a planned increase in FY 1984 and 1985 in the basic resources used in collective unit training. These resources are represented by flying hours, steaming days, training munitions, time devoted to training and advances in simulation and other fruits of training technology. The funding requested for these resources, if approved, will provide the minimum level of resources required to achieve an acceptable state of readiness through collective unit training. The Department of Defense earnestly solicits the support of the Congress in providing the funds for sound collective unit training.

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