

Trends in Pre-Fleet Training and Attrition: Street-to-Fleet Report 2002

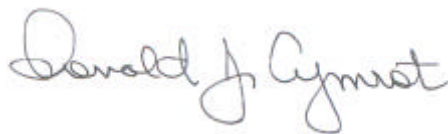
Diana S. Lien • David L. Reese



4825 Mark Center Drive • Alexandria, Virginia 22311-1850

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A handwritten signature in black ink that reads "Donald J. Cymrot". The signature is written in a cursive style with a large initial 'D' and 'C'.

Donald J. Cymrot, Director
Workforce, Education and Training Team
Resource Analysis Division

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CNA Support to the Training &
Education IWAR Team

As part of the Navy's Integrated Warfare Architecture (IWAR), N81 asked CNA to examine trends in the training of recruits before their first fleet assignments. The flow of Sailors into the fleet depends on the number of Sailors who continue through boot camp and training, and the length of time it takes. Policy-makers are concerned with attrition during initial training and the length of training pipelines. To examine these trends, we tracked recruits' early career histories using the Street-to-Fleet database.

This annotated briefing updates the 1999 and 2001 CNA analyses on these trends,¹ adding recent accessions. This document provides more evidence of the impact of Navy training reengineering and these trends. As with the 2001 analysis, we examine initial skills training and attrition, looking at all contract lengths (2-, 3-, 4-, 5-, and 6-year obligations), as well as skills training data by rating categories. We also present more detailed training data for the Information Systems Technician (IT) and Mess Management Systems (MS) ratings, both of which recently changed their training pipelines under the Revolution-in-Training initiative.

¹ Steven W. Belcher, David L. Reese, and Gregory A. Lewis, *Trends in the Training Recruits Receive Before Their First Fleet Assignments*, 1999 (CNA Annotated Briefing 99-150); Carol S. Moore and David L. Reese, *Trends in Navy Initial Skills Training: Evidence From Street-to-Fleet Data*, 2001 (CNA Annotated Briefing D0004070.A1).

Issues

- How long does it take recruits to reach their first fleet assignment?
 - How much of this time is spent under instruction?
 - Is training reengineering continuing to succeed?
- What percentage of recruits make it to the fleet?
 - What proportion of recruits leave during boot camp?
- What are the current trends in the MS and IT ratings?
- What percentage of recruits spend time in temporary duty?

Since 1997, the Navy has implemented a set of initiatives aimed at shortening initial schoolhouse training and cutting the time that students spend idle (i.e., not under instruction, or NUI). The 2001 CNA analysis suggests that these initiatives have succeeded in improving the delivery of recruits to the fleet. This study focuses on whether this success has continued.

This document examines (1) the time it takes recruits to make it to the fleet, (2) how time is spent between beginning boot camp and arriving at the fleet, and (3) the percentage of recruits who make it to the fleet. We examine training differences by length of obligation and by rating. We also focus on whether training reengineering was effective. First, we compare recent cohorts with the FY97 accession cohort. Next, we examine whether improvements in the delivery of recruits to the fleet have been sustained by comparing the most recent accession cohort with the FY99 accession cohort.

With the Revolution in Training, some ratings are undergoing pilot professional training programs that may change training length and type. Here, we focus on two of those ratings: MS and IT. We provide pre-pilot-program trends for these ratings that can be used as a baseline to evaluate future trends.

Finally, we present rates of participation in temporary duty and the participation of Gendets in A-school. Participation levels in temporary duty provide an indication of the amount of stashing (i.e., sending recruits to the fleet while waiting for an A-school opening).

Summary

- For more recent cohorts, FY99 and FY00 accessions, training reengineering has continued to:
 - Decrease time to the fleet
 - Decrease UI and NUI time
- Improvements in training trends have leveled off
- Recent decrease in boot camp attrition of rating-promised recruits
 - For all years of obligation
 - Down 24 percent from FY99 to FY01 accessions

The 2001 CNA analysis suggested that training reengineering succeeded in improving the delivery of recruits to the fleet. This document shows that improvements have been sustained in most areas, but the rate of improvement has slowed and, in some cases, slightly worsened. Thus, improvements from training reengineering seem to be reaching a point of diminishing marginal returns.

Time to the fleet for all obligation lengths decreased for FY99 accessions. For the FY00 accessions, however, time to the fleet decreased for only 3- and 5-year obligations. Of the time it takes to get to the fleet, UI time has leveled off, whereas time not under instruction (NUI) continues to decrease. For recruits with 5-year obligations, UI time has continued to decrease. For recruits with 3- or 6-year obligations, NUI time continues to decrease. For recruits with 4-year obligations, improvements in time to the fleet and time spent under instruction have leveled off.

Recent trends in boot camp attrition are encouraging. For recruits who have less than a 6-year obligation, pre-fleet attrition is dominated by boot camp attrition, which has decreased for all obligations. For the FY01 accessions, boot camp attrition has fallen to a 6-year low of 13.9 percent, with a 24-percent decrease from the FY99 accessions to the FY01 accession cohort. Within all obligation lengths, boot camp attrition has dropped.

Examples of Significant Changes in Training Times

- **Aviation Machinist's Mate**
 - FY00 accessions reached the fleet 19 percent sooner
 - UI and NUI time each decreased by more than 10 percent
- **Missile Technician**
 - 6-year obligation (6YO) accessions reached the fleet 9 percent sooner
 - UI and "Other" time both decreased by more than a month
- **Torpedoman's Mate**
 - 4YO accessions reached the fleet 21 percent sooner

For the most part, improvements from training reengineering have been sustained or have improved slightly. However, time to the fleet for the entire sample increased by 3 percent from the FY99 to FY00 cohort. This slide describes three ratings in which the FY00 accessions had significant decreases in time to the fleet.

In FY00, the following made it to the fleet:

- 897 recruits rated as Aviation Machinist's Mates
- 145 6YO recruits rated as Missile Technicians
- 57 4YO-rated Torpedoman's Mates (Surface).

Street-to-Fleet Database

- Tracks recruits from boot camp to the fleet
- All non-prior-service accessions since FY90
- Personnel data from EMR file
 - Career events, FY90 through September 2002
- Accession data from DMDC and CNRC
 - Cohorts, FY90 through FY02
- Training data from NITRAS
 - Courses taken, FY93 through September 2002

As with the 1999 and 2001 analyses, our source was CNA's Street-to-Fleet (STF) database. This database combines accession, personnel, and training records. Each recruit is followed from boot camp, through initial schooling, and into the fleet.

The accession data, which come from the Defense Manpower Data Center (DMDC) and Commander Naval Recruiting Command (CNRC), include the rating, program, and length of contract under which each recruit enlisted. The current version contains all non-prior-service accessions who entered the Navy from FY90 through FY02.

The personnel data, which come from BUPERS' Enlisted Master Record file (EMR), include rate obtained, date of full-duty status, and, if applicable, date of and reason for separation. The current version of STF contains personnel data through September 2002.

The training data, which come from the Navy Integrated Training Resources and Administration System (NITRAS), contain a historical record of the individual courses each recruit took. For each course, we know whether the recruit passed or failed. The data also indicate the time each recruit spent under instruction, awaiting instruction, awaiting transfer, or in an interrupted instruction status. The current STF version contains data on courses that were completed between FY93 and September 2002.

New Data

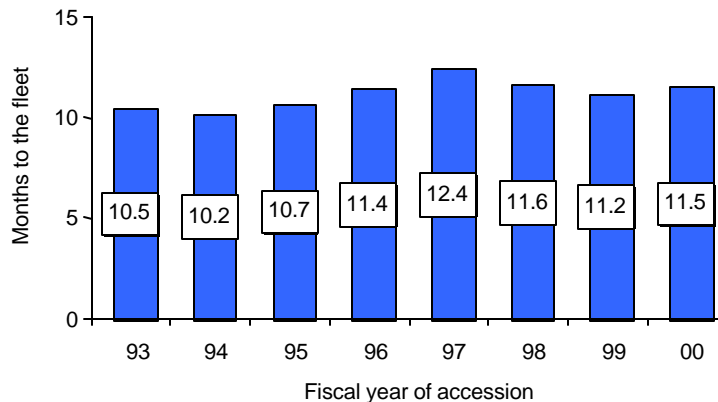
- Accessions
 - FY00 cohort of all accessions
 - FY01 cohorts when looking at attrition
- Career events
 - Fleet arrival through September 2002
 - Attrition through September 2002
 - Training received through September 2002

This update of the STF database allows us to analyze an additional accession cohort and to track recruits farther into their careers. It also allows us to analyze at least an additional year of data since training reengineering began. We are able to examine 2 years of additional data on recruits with 6-year obligations. The 1999 analyses included data through FY99.

In deciding which cohorts to track, we consider the length of time since accession and the percentage still in training at the end of the data period. Included among the new data are also the FY00 accession cohorts of 2-, 3-, 4-, 5-, and 6-year obligations. The 5YO accessions were included among the FY00 accessions because only 2 percent have yet to reach the fleet. We include the FY00 cohorts of 6YOs because only 6 percent of FY00 6YOs were still in training at the end of the data period. Data on FY01 accessions were included only when discussing boot camp attrition.

A backup slide details the status of FY00 accessions for each year of obligation as of September 2002. Although we have data from FY01 and FY02 accessions, not enough time has elapsed to draw conclusive information.

How Long Does It Take Recruits To Reach Their First Fleet Assignments?



First we look at how long it takes all non-General-Detail (non-Gendet) recruits to reach their first fleet assignments. This chart shows the average time (in months) it took recruits to reach the fleet. We exclude the FY01 accession cohort because 51 percent of that year's 6YO accessions have not yet had a chance to make it to the fleet.

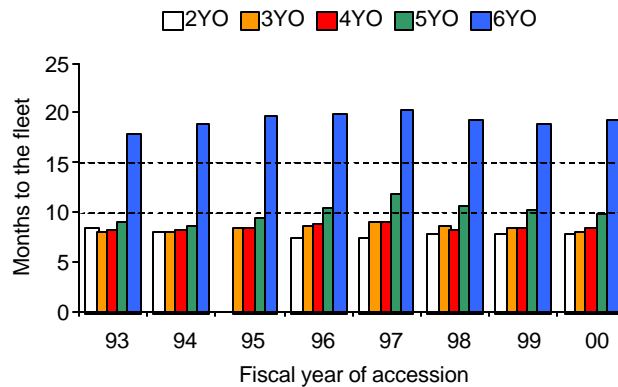
Time to the fleet increased by more than 2 months between FY94 and FY97. Since then, recruits have reached the fleet more quickly. For FY99 accessions, the average time it took a non-Gendet Sailor to reach the fleet was 11.2 months, a 10 percent drop. For FY00 accessions, time to the fleet increased 3 percent to 11.5 months. Compared with 12.4 months for FY97 accessions, the drop in time to the fleet relative to FY97 translates into 1,571 additional non-Gendet work-years available to the fleet.²

² This estimate is based on the number of non-Gendet recruits who reached the fleet from the FY00 accession group. Comparing the FY97 and FY98 accessions, the drop in average time to the fleet resulted in 1,451 additional work-years available to the fleet. This estimate differs slightly from that in CNA Annotated Briefing D0004070.A1 (Moore and Reese, 2001), which was based on the number of total accessions.

These data include only recruits who reached the fleet; we do not count pre-fleet attrites. We also exclude Sailors who reached the fleet as Gendets—whether they enlisted as Gendets or were later reclassified as Gendets. People who enlisted as Gendets but were rated before reaching the fleet are included. The majority of slides in this annotated briefing show information from the non-Gendet recruits who reached the fleet; the few charts and tables that include Gendets and recruits who have not yet reached the fleet indicate that alternative samples were used.

With each year of additional data, reported time to the fleet of past accessions may change slightly as more or all recruits actually reach the fleet. However, we have made an effort to present years in which the vast majority have either reached the fleet or attrited from the Navy before completing training.

How Does Time to Fleet Vary With Contract Length?



In general, time to the fleet depends on the recruit’s initial training program, which, in turn, depends on selected rating and length of contract (or initial obligation). Thus, variation in time to fleet could possibly be reflecting changes in the rating composition of obligation lengths. The Navy usually requires longer obligations for ratings that have longer pipelines. For this reason, we looked at time to fleet by different groups of recruits based on length of obligation.

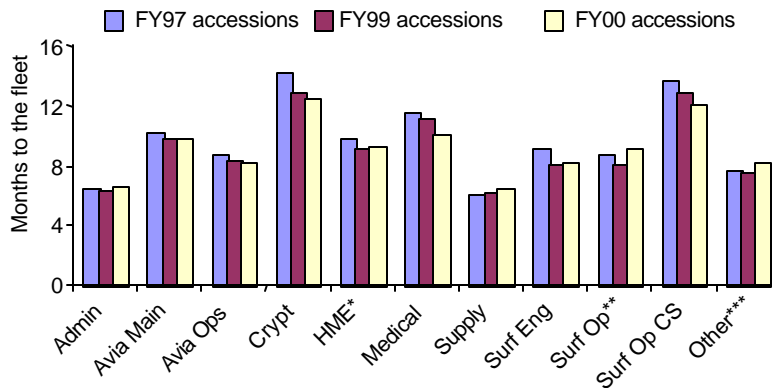
With the exception of 2YOs, FY97 accessions took the longest to get to the fleet. And, since FY94, 2YOs are consistently less than 1 percent of accessions. In recent years, recruits have reached the fleet more quickly—with the largest changes occurring with accessions who entered in FY98 and FY99. The FY00 2YO, 3YO, and 5YO accession cohorts have reached the fleet marginally sooner or at the same speed as the FY99 accessions. The FY00 4YO and 6YO accessions had slight increases in time to the fleet, compared with FY99, but only by 6 days for the 4YO and 12 days for the 6YO.

Of all obligation lengths, time to fleet is longest for 6YOs, who often undergo more training. Overall, time to the fleet for 6YOs decreased slightly between 1997 and 2000. The FY97 6YOs took 20 months to reach the fleet; since then, the time-to-fleet trend has decreased slightly. The 6YOs who entered the Navy in FY98 took 19.4 months to reach the fleet compared with 18.9 months for the FY99 accessions. Time to the fleet increased from the FY99 accessions to the FY00 accessions, who took 19.3 months to reach the fleet.

Overall, time to the fleet has had a downward trend for 3-, 4-, and 5-year obligation groups. With the FY00 accession, time to reach the fleet has decreased for the 3- and 5-year obligation groups:

- **5YO:** FY97 cohort took 12 months to reach the fleet, compared with 10 months for FY00 accessions. FY00 accessions reached the fleet only 6 days sooner than FY99 accessions.
- **4YO:** After increasing to 9 months in FY97, time to the fleet returned to the FY93 level of 8.2 in FY98. This decline has been maintained over the FY99 (8.3) accessions. However, the FY00 accession time to the fleet was 8.5 months, or 6 days longer than the FY99 accessions.
- **3YO:** FY97 accessions took 9 months to reach the fleet, compared with 8 months for FY00 accessions. This is only 12 days sooner than for the FY99 accession cohort.
- **2YO:** From FY97 to FY98, time to the fleet increased slightly and has stayed at that level. However, non-Gendet 2YOs constitute a very small group. Of the FY00 accessions, 102 2YOs were promised ratings, and 86 made it to the fleet.

Time to Fleet by Rating Group



*Hull, mechanical and electrical

**Excludes combat system operators

***Consists of deck, aviation supply, musician, Seabee, & submarine ratings

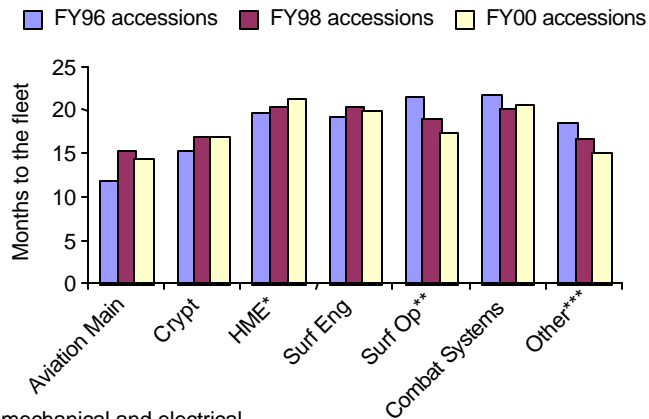
The next two slides detail the changes in average fleet arrival times since the FY97 accession cohort entered the Navy. This slide shows time to the fleet for 3YO, 4YO, and 5YO accessions. Training reengineering affects FY98 and subsequent cohorts, so a comparison of FY97 accessions with FY99 and FY00 accessions provides evidence of the impact of those initiatives. We focus on comparing recent cohorts with the baseline of FY97. Comparisons of the FY99 and FY00 accessions provide information on recent improvements. We present data at the rating group level for non-Gendet recruits with original enlistment contracts of 3YOs, 4YOs, and 5YOs. We grouped these obligation lengths together because (1) the 3YOs probably changed rating and obligation length, but we report initial obligation length, and (2) some rating groups are predominantly one obligation length, so we aggregated the data to avoid small category sizes. We exclude 2YOs, because most are not rated, and present 6YOs in the next slide. We grouped all Navy ratings into 11 categories with similar job-related characteristics.

For all 3YO, 4YO, and 5YO non-Gendets, time to fleet has decreased by half a month since the FY97 cohort entered. This decline was primarily caused by decreases among the Cryptology, Medical, and Combat Systems categories, which had a 12-percent drop in time to fleet. The biggest decline was in the Cryptology group (14.2 to 12.5 months). Cryptology, Medical, and Combat Systems also declined the most in time to fleet since FY99.

Rating groups that had recent increases in time to fleet after a decrease from FY97 to FY99 were Administration, HME, Supply, Surface Engineering, Surface Operations, and Other. For example, from FY97 to FY99, time to fleet for recruits in Surface Operations decreased from 8.7 to 8.1 months, whereas in FY00 the time to fleet increased to 9.1 months. Time to fleet for the Supply rating group increased by 7 percent over the period of FY97 to FY00. This increase is primarily because of the 15-percent increase in time to fleet for the MS rating—of all FY00 Supply group accessions, 29 percent were MS rated.

Later in this document, we present months to the fleet for the MS and IT ratings separately. Data for other individual ratings are available on request. A backup slide gives the ratings included in each rating category. Another backup slide shows fleet arrival times, by rating group, for each cohort from FY93 to FY00.

Time to Fleet by Rating Group: 6YOs



*Hull, mechanical and electrical

**Excludes combat system operators

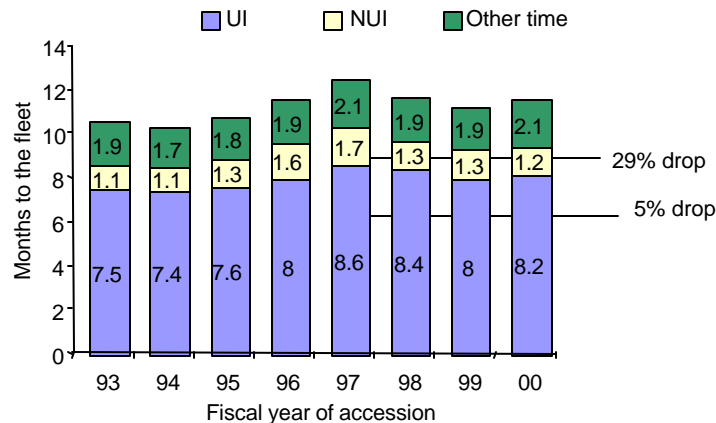
***Consists of deck, aviation supply, musician, Seabee, & submarine ratings

Since the FY96 accessions entered the Navy, time to fleet has decreased among the 6YO Surface Operations and Other rating categories. The largest decline was a 3-month drop in time to fleet among those in the Surface Operations group (such as ETs). The ET rating constitutes the largest percentage of 6YO surface operations recruits since FY93 (1,242 of 1,267 6YO recruits in FY00).

Time to fleet for the Combat System rating group has decreased since FY96. The Combat System rating category had 2,039 recruits in FY00, of which 57 percent were FC rated. Time to fleet of FC accessions decreased from 22 months for the FY96 accessions to 21 months for the FY00 accessions.

Time to fleet increased from FY96 to FY98 for the Aviation Maintenance rating category (from 11.9 to 15.4) but decreased to 14.3 months for FY00. The results are difficult to interpret because the category size is small (72 FY96 accessions, 73 FY98 accessions, and 47 FY00 accessions). The HME category slightly increased over this period, entirely because of a 1-month increase in time spent getting to the fleet for the largest rating in the HME category, the EM rating. The FY00 EM accessions accounted for 84 percent of the HME rating category. The Cryptology and Surface Engineer FY00 accessions took the same amount of time to reach the fleet as the FY98 accessions.

How Do Recruits Spend Their Time Getting to the Fleet?



Time not under instruction continues to decrease

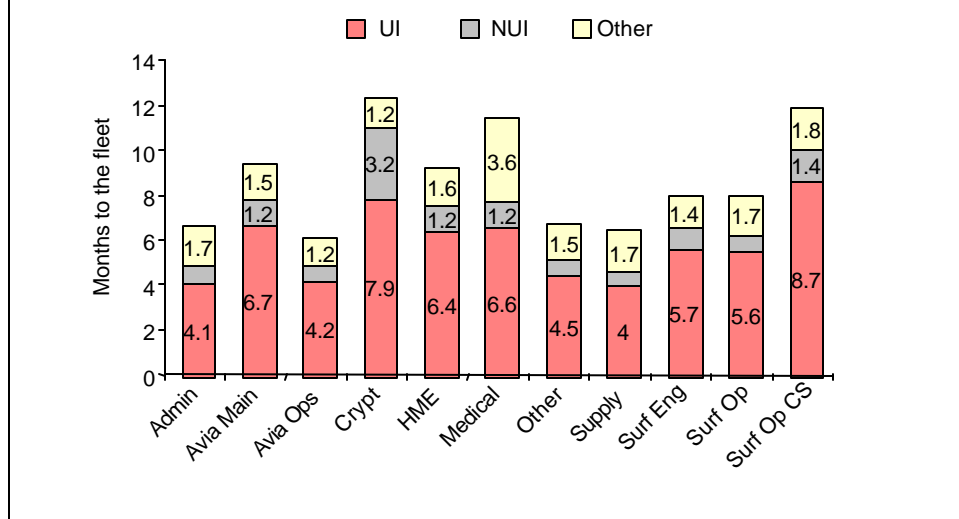
We now turn to the second issue, that of how recruits spend their time getting to the fleet. The next few slides show the amount of training time spent under instruction (UI), not under instruction (NUI), or in other, non-school-related activities (Other time). In comparison to FY97, the FY00 cohort spent 29 percent less time not under instruction, and 5 percent less time under instruction, before getting to the fleet. This translates to a total change of 27 fewer days getting to the fleet. UI time has decreased since the FY97 accessions; however, the number of months spent UI, NUI, and “other” in 1999 and 2000 are almost identical to those in 1995 and 1996.

Reductions in time spent NUI or in “other” activities since the FY97 accessions entered have slightly reversed with the FY00 accessions. In comparison to the FY99 cohort, there has been a 2 percent increase in NUI and a 10 percent increase in “other” time. “Other” time has returned to the FY97 level of 2.1 months.

Holiday standdown is included in time spent NUI. We computed “other time” as time to the fleet less training time. In addition to leave and travel, it may also include unspecified training.

Backup slides show how recruits spend their pre-fleet time by obligation length (2YO, 3YO, 4YO, and 5YO).

Training Time Varies By Rating: FY00 4YOs



This chart shows the amount of training time spent under instruction, not under instruction, or in other, non-school-related activities for the FY00 4YO cohort by different rating groups. On average, it took the FY00 4YO accession cohort 8.5 months to reach the fleet.

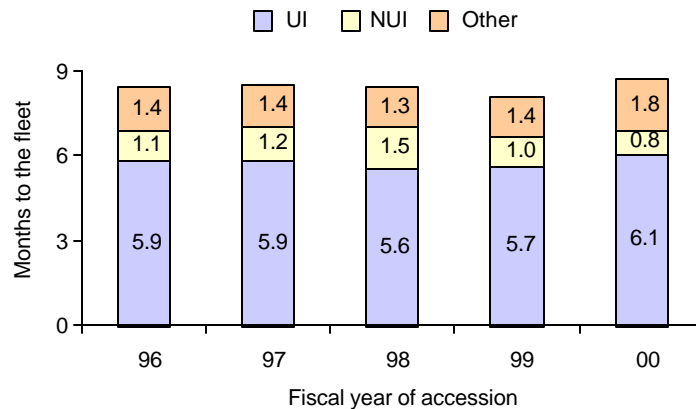
Within rating groups, the way time is spent getting to the fleet varies. The Administration, Medical, and Supply categories spend the smallest proportion of their time UI (on average, 60 percent). The rest of the categories spend about 70 percent of training time UI.

The FY00 Cryptology accessions spent relatively more time NUI than the other accessions (roughly 3 months versus 1 month). This was caused by high NUI time (in months) in five of the seven Cryptology ratings: CTI (2.9), CTM (3.5), CTO (3.4), CTR (4.6), and CTT (4.6).

The Medical group spent the most time, 3.6 months, involved in “other” activities. This was true of both DT and HM; however, the size of this group makes interpretation difficult. Only 2 percent of the FY00 DT and HM accession cohorts had 4-year obligations (a total of 33 recruits).

Backup slides show how recruits spend their time by initial obligation (3YO, 5YO, and 6YO) and rating group.

Training Time: IT Rating



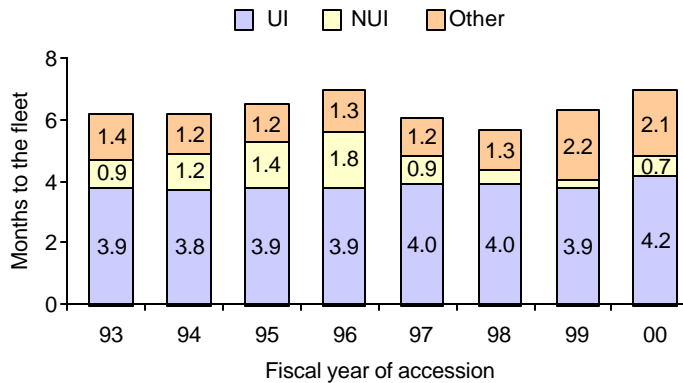
The Task Force for Excellence Through Commitment to Education and Training (Task Force EXCEL) initiative may, in the near future, affect the amount and type of training for some ratings. The Revolution in Training, for example, includes IT recruits participating in pilot training programs.

This chart provides a benchmark of trends from FY96 to FY00, against which to measure future changes in IT training. It was during these years that the Data Processing Technician (DP) and Radioman (RM) ratings were combined under RM, which changed to IT in 1999. This chart includes recruits who enlisted into the IT (RM) rating at all obligation lengths. Of 919 FY00 accessions rated IT, 60 percent were 4YOs.

Time to fleet for the IT rating is 8.4 months on average. For accessions entering between FY97 and FY99, time to fleet decreased slightly. For FY00 accessions, an increase in UI and “other” time increased time to fleet to 8.7 months. Seventy percent of the time it takes IT recruits to get to the fleet is UI time. In most years, the next largest amount of time is “other” time. Between accessions, the most variability has been in NUI time, which has decreased 47 percent from the FY98 to FY00 accession cohorts from a high of 1.5 months in FY98 to 0.8 month in FY00.

For these 5 years, the average number of recruits each year was 1.122. More ITs—1,529—were in the FY99 accession cohort than any other year.

Training Time: MS Rating



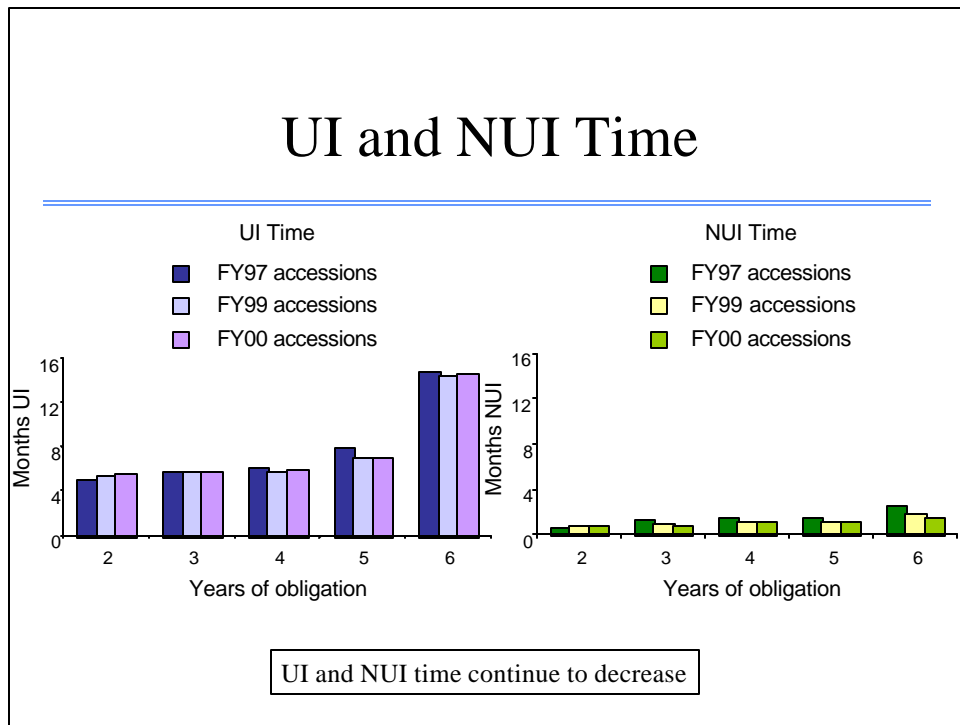
Recent significant increase in time to the fleet for MS rating

Under the Task Force EXCEL initiative, Mess Management Specialists are participating in pilot training programs. For example, MS recruits are going to the Culinary Institute of America instead of more traditional A-school training. This chart shows trends since FY93, as a reference for any future changes in MS training. It includes recruits who enlisted in the MS rating at all obligation lengths. Of 246 FY00 accessions, 65 percent were 4YOs.

On average, recruits with an MS rating spend 6.3 months getting to the fleet. Time to fleet steadily increased until FY96. However, after dropping to 5.7 months in FY98, time to fleet has increased to 7 months for the FY00 accessions, a 23-percent increase. Change in time to fleet has primarily been caused by changes in NUI time and “other” time. NUI time has decreased overall, but it crept back up with the FY00 accessions. “Other” time has steadily increased to 2 months for the FY99 and FY00 accessions, from an average of 1.2 months for the FY97 accession cohort.

The number of recruits who make it to the fleet as MS rated ranges from 1,215 for the FY94 accessions to 246 in FY00, and has on average been 739 recruits over the 8 years of data.

UI and NUI Time

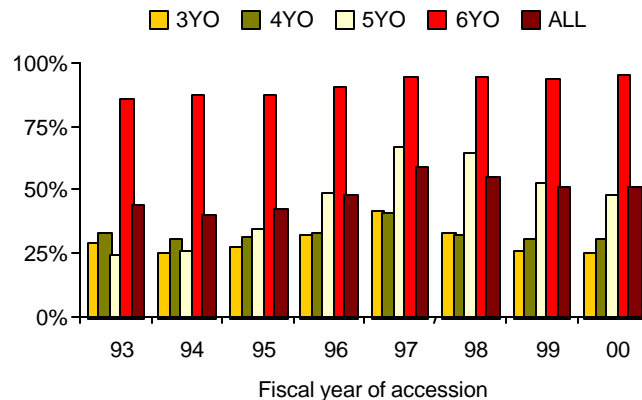


The chart at left shows the average UI time in months by initial obligation for the FY97, FY99, and FY00 accessions. Over this period, only 5YOs and 6YOs decreased their time under instruction. The most dramatic decrease was among the 5YO recruits. From the FY97 to the FY00 5YO accessions, UI decreased by 1.1 months, or 14 percent. For the other rating-promised accessions, UI time was level over these periods or slightly increased.

The chart on the right shows the average NUI time by initial obligation for the FY97, FY99, and FY00 accessions. NUI time dropped for all obligation lengths other than 2YOs. The most significant reduction in NUI occurred for FY97 to FY99 accessions. Although the change was not as large, training NUI time continued to decline for 2YO-, 3YO-, and 6YO-rated accessions from FY99 to FY00. During this period, time NUI dropped 13 percent for 2YOs and 26 percent for 6YOs. NUI training time was at the same level for the 4YO- and 5YO-promised FY99 and FY00 accessions.

UI and NUI time are often proportional to contract length. Because longer obligations are often associated with longer training pipelines, 6YO recruits typically spend more time in training. This is not always the case, however; some recruits have longer obligations in exchange for receiving enlistment bonuses or training that is valued in the civilian workforce.

Who Receives Follow-on Training Before Reaching the Fleet?



Percentage has decreased for 5YOs

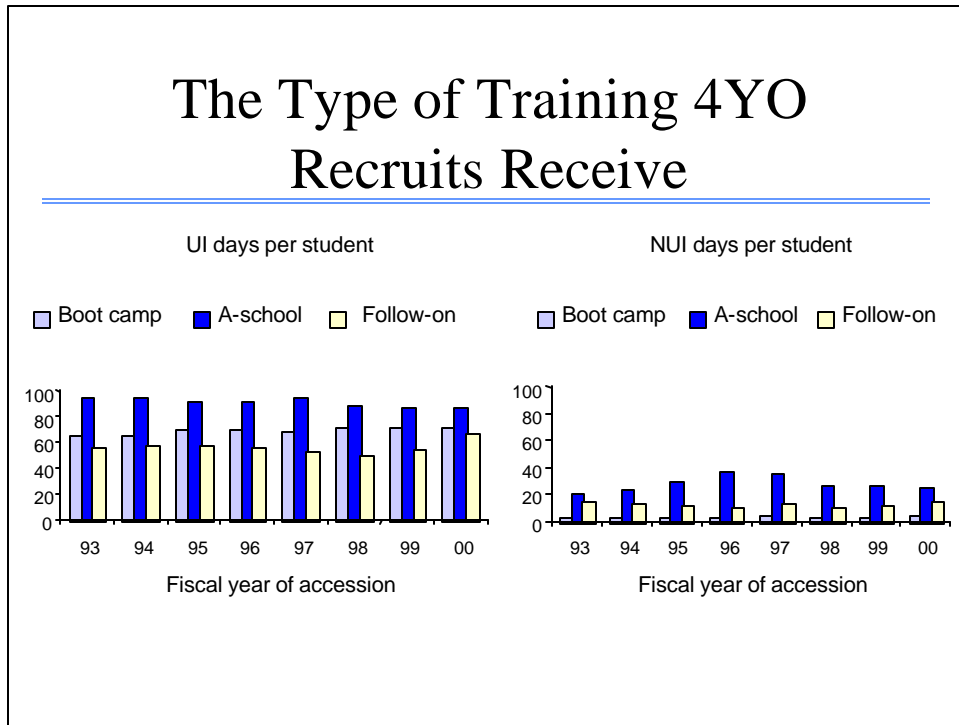
All non-prior-service accessions start their initial training at boot camp, followed by A-school training for all non-Gendet recruits. Following A-school, recruits either go to the fleet or get more training. The likelihood that a recruit will go to follow-on training depends on that recruit's rating and initial obligation. The majority of recruits who sign a 6-year contract, regardless of rating, are promised some level of follow-on training after A-school.

This chart shows the percentage of recruits who went through follow-on training, which we define as any training other than boot camp or A-school. We include each relevant year by initial obligation. The percentage of 6YO recruits participating in follow-on training has increased from 91 percent of FY96 accessions to 94 percent of FY97 accessions; since then, it has leveled off for FY98, FY99 and FY00 (94, 94, and 95 percent, respectively).

For 3YOs, 4YOs, and 5YOs, the percentage of recruits with follow-on training increased until peaking for the FY97 accessions. The decrease in additional training since then may have contributed to the faster arrivals to the fleet. Most of the change occurred for the FY98 and FY99 accessions and has been maintained for the FY00 accessions:

- **3YO:** 42 percent of FY97 accessions had follow-on training, compared with 26 percent of FY99 accessions and 25 percent of FY00 accessions.
- **4YO:** 40 percent of FY97 accessions had follow-on training, compared with only 31 percent of FY99 and FY00 accessions.
- **5YO:** From the FY93 cohort to the FY97 cohort, the percentage of recruits participating in training after A-school increased from 24 percent to 67 percent. Since then, it has decreased to 53 percent of FY99 accessions and 48 percent of FY00 accessions.

The Type of Training 4YO Recruits Receive

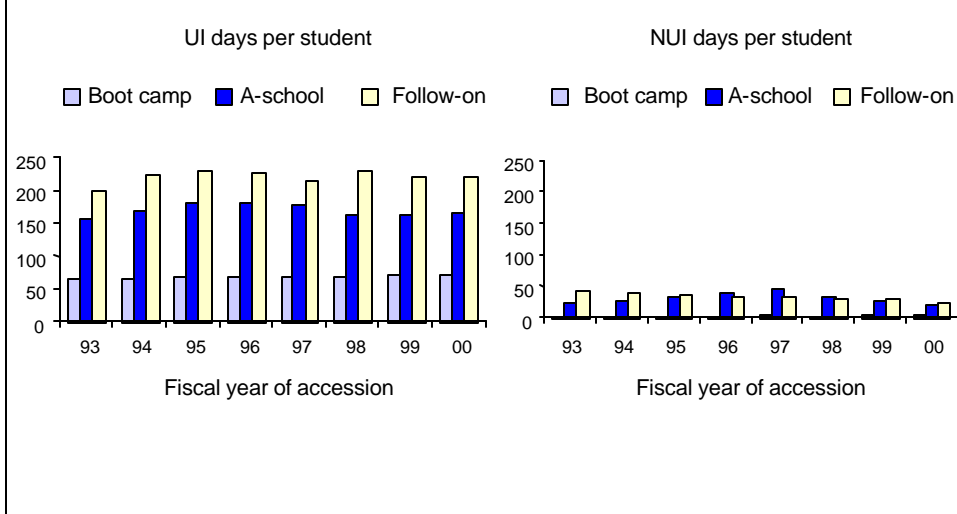


Declines in training time for 4YOs have leveled off for the last three accession cohorts. The chart on the left shows the average time 4YO accessions spend under instruction for each type of training. 4YOs spend most pre-fleet UI time at A-school. From FY97 to FY99 accessions, the average UI time spent in A-school decreased from 95 to 86 days. From there, UI time in A-school increased by a day for the FY00 accessions. UI boot camp time has followed a slow increasing trend from 64 days for the FY93 cohort to 72 days for the FY99 and FY00 accessions. Average time spent in follow-on school has increased from 49, to 54, to 66 days (FY98-FY00) among those receiving follow-on schooling.

NUI time occurs primarily during A-school, perhaps because recruits spend more NUI time between A-school and follow-on training at A-school (awaiting transfer) than at the follow-on school (awaiting instruction or due to equipment shortages). It could also be attributed to backups at the follow-on school. The chart on the right shows that the number of NUI days spent in A-school has declined from 38 for the FY96 accessions to 26 for the FY00 accessions. However, the difference between the FY99 and FY00 accessions was a decrease of only 0.3 day. Of the past 3 accession years of data, NUI days spent in boot camp dropped from 3.5 (FY97) to 2.4 (FY98) but has returned to 3.6 (FY00). NUI follow-on training has fluctuated between 10 and 12 days for the latter part of the 1990s, increasing to 14.5 days for FY00 accessions.

For these charts, average time is calculated for those recruits who went through that type of training (as opposed to the entire accession cohort).

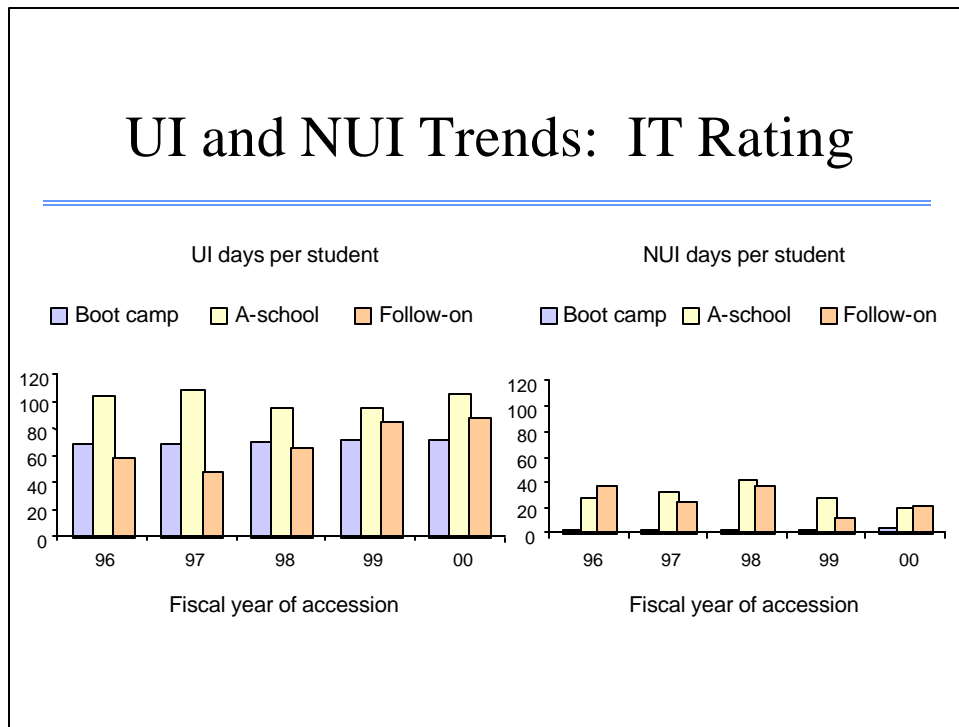
The Type of Training 6YO Recruits Receive



The chart on the left shows the average time 6YO recruits spend under (or not under) instruction for each type of training. Recruits with 6-year obligations spend the majority of their UI time in follow-on training. From FY95 to FY00, UI time spent in A-school has steadily decreased by 11 percent (182 to 165 days). Most of this decline occurred from the FY96 to FY98 accessions.

The chart on the right shows average NUI time for 6YO recruits. Before the FY97 cohort, NUI time spent at A-school was increasing and follow-on training was decreasing. Since then, both A-school and follow-on training NUI time has decreased and, with the FY00 accessions, is at 21 days. NUI time (awaiting transfer or instructions) has decreased since the FY97 accession cohort.

UI and NUI Trends: IT Rating

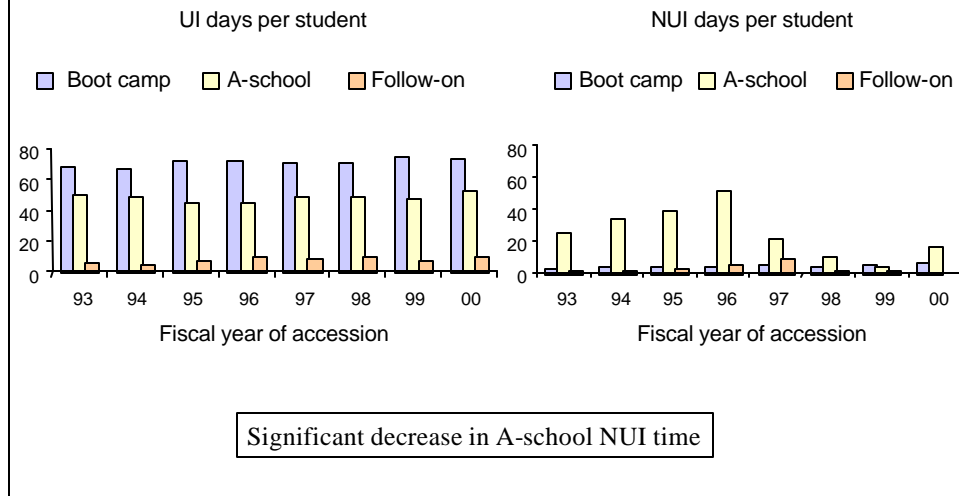


The charts above show the average time IT recruits spend under (and not under) instruction for each type of training. IT recruits spend most pre-fleet UI time at A-school. Although overall training time for the IT rating didn't change much for this period, how time was distributed between UI and NUI activities did vary somewhat. UI time spent in follow-on training has steadily increased to 88 days for the FY00 accessions. However, on average, only 8 percent of ITs who make it to the fleet receive follow-on training; for example, of 1,529 FY99 accessions, only 115 received follow-on training.

For the FY97 to FY99 accessions, more NUI time is spent during A-school than during follow-on training. Since the FY98 accessions, NUI time during A-school has decreased 50 percent. NUI time spent during follow-on training has fluctuated from 12.5 days for the FY99 IT accessions to 36.9 days for the FY96 accessions. For the FY00 accessions, NUI time spent during A-school and follow-on training was at 21 days.

Days per student is based on those recruits who went through that type of training (as opposed to the entire IT cohort). These charts include recruits who enlisted into the IT rating at all obligation lengths.

UI and NUI Trend: MS Rating



These charts show the average time MS recruits spend under (and not under) instruction for each type of training. MS recruits spend most pre-fleet UI time at boot camp. How UI time was spent remained relatively constant from the FY93 accessions to FY00 accessions. For this period, roughly all MS recruits went to boot camp and A-school; for each accession, an average of 16 percent received follow-on training.

NUI time occurs primarily during A-school and generally has declined in recent years. The number of NUI days spent in A-school decreased dramatically—from 51 to 3 days for the FY99 accessions. NUI time spent during follow-on training fell to zero for FY00 accessions. NUI time during A-school increased to 15 days for the FY00 accessions.

Days per student is based on those recruits who went through that type of training (as opposed to the entire year group). These charts include recruits who enlisted into the MS rating at all obligation lengths.

Ratings with Largest Decreases in UI Time

Rating	Fleet arrivals (FY00 accessions)	From FY97 to FY00		From FY99 to FY00	
		Decrease in months	Percentage decrease	Decrease in months	Percentage decrease
FT	100	2.7	20	-0.1	-1
CTM	85	1.6	14	0.3	3
GM	384	1.6	15	0.2	2
ET	1,618	1.4	10	0.6	4
IS	223	1.2	16	-0.1	-2
MU	22	1.2	22	1.2	22
FC	1,171	1.1	7	0	0
DT	294	1	16	0.2	4
MT	148	0.9	7	1.1	8
CTO	140	0.8	12	-0.2	-4

This table shows the training pipelines with the largest decreases in UI time since training reengineering started. To measure the change, we compare FY00 and FY97 training time spent under instruction. This table does not show average annual changes over this period, but differences in UI time between these years. The ten ratings account for 20 percent of all FY00 recruits who made it to the fleet. The medical rating, DT, decreased by a month, which is consistent with our earlier finding that the Medical 3YO, 4YO, and 5YO recruit group has been getting to the fleet more quickly.

This table shows the difference in UI time from the FY99 and FY00 accessions. We present information in this way to show whether changes in UI time continue to improve for these ratings. For the FT, IS, and CTO rating, UI time was higher for the FY00 accession cohort than it was for the FY99 accession cohort. More recent training improvements have continued for the MU and ET ratings. For the rest of the ratings, UI time continued to decrease but at a slower rate.

Backup slides show the same information for the top ten ratings with the largest increases in UI time over this period, as well as the ten ratings with the largest decreases between FY99 and FY00.

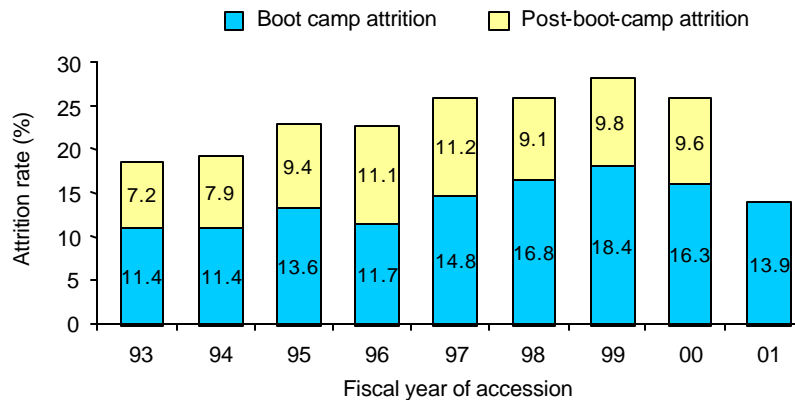
Ratings with Largest Decreases in NUI Time

Rating	Fleet arrivals (FY00 accessions)	From FY97 to FY00		From FY99 to FY00	
		Decrease in months	Percentage decrease	Decrease in months	Percentage decrease
ET	1,618	2.1	66	0.4	27
STG	328	1.5	47	0	0
AS	195	1.4	58	0.1	9
CTI	112	1.2	34	-0.1	-5
AD	897	1.1	55	0.2	18
AMS	146	1.1	65	0.2	25
FT	100	1.1	58	0.6	43
AW	225	1	31	0.5	19
FC	1,171	1	29	-0.5	-26
GSE	79	1	42	-0.1	-8

Here we list the ratings with the largest decreases in NUI time since training reengineering started. We also show the most recent changes in NUI time. The drop from FY97 to FY00 primarily occurred from FY97 to FY99, indicating that the improvements made in NUI time from training reengineering have begun to level off. Decreases in NUI time may be slowing down for *some* ratings, but not for *all* ratings. For example, from FY97 to FY00, ETs had a 66-percent drop in NUI time, a 22-percent annual average decline, compared with a 27-percent decline from FY99 to FY00. These ten ratings account for 23 percent of all FY99 non-Gendet recruits who made it to the fleet. As with the 2001 CNA analyses, the aviation rating showed significant changes (i.e., four of the top ten are Aviation ratings).

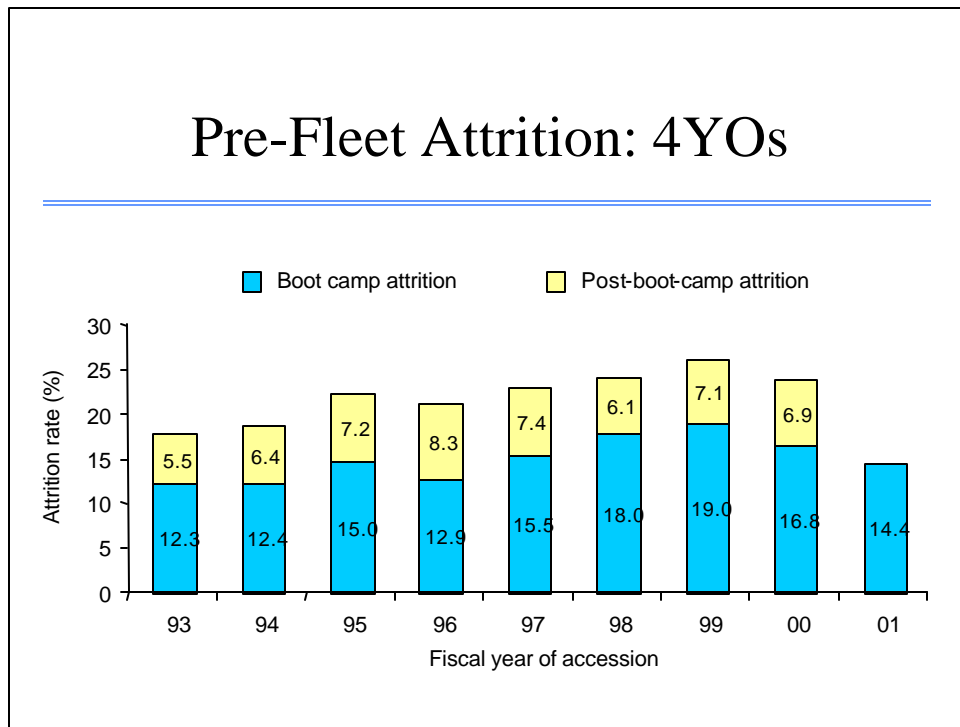
Backup slides show the same information for the ten ratings with the largest increases in UI time over this period, as well as the ten ratings with the largest decreases between FY99 and FY00.

How Many Recruits Never Reach the Fleet?



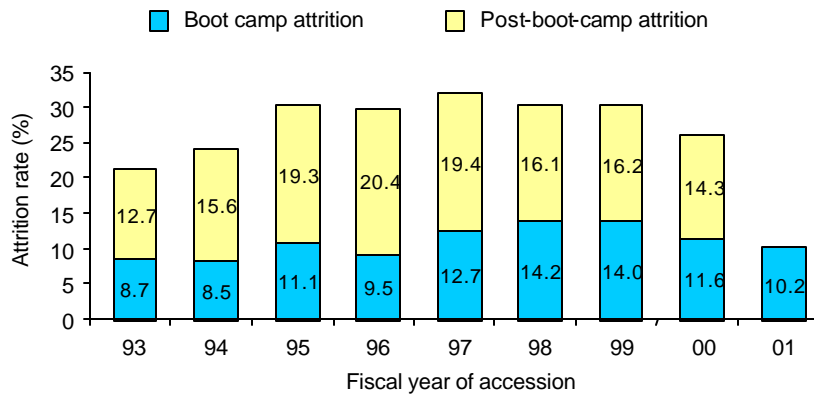
The third issue we analyze is attrition: what percentage of the recruits leave the Navy before reaching the fleet? This chart shows the percentage of non-Gendet accessions who left the Navy before their first fleet assignment. For FY01 accessions, only boot camp attrition data are presented, because 18 percent are still in pre-fleet training. As shown, 26 percent of FY00 accessions did not reach the fleet, with most attrition occurring during boot camp. Overall pre-fleet attrition has increased by over a third since FY93 accessions (18.6 to 25.9 percent). This is troubling because these recruits never serve time in the fleet and represent a waste of both recruiting and training resources. This trend seems to be reversing. The FY00 attrition rate is 8 percent less than the FY99 level, and the FY01 boot camp attrition rate is 15 percent less than that in FY00. This shows a current decrease in boot camp attrition and indicates a potential decrease in overall pre-fleet attrition. Despite the big decreases, attrition rates are still higher than in all years prior to 1997.

Pre-Fleet Attrition: 4YOs



This chart shows the percentage of 4YO recruits who left the Navy before reaching the fleet. Changes in non-Gendet 4YO pre-fleet attrition are driven by changes in boot camp attrition. Post-boot-camp rates have varied, but haven't followed any obvious trends. The FY00 pre-fleet attrition level reverses the steady climb in boot camp attrition with a 12-percent drop. The FY00 accession attrition rate is still higher than the rates before FY97. However, boot camp attrition dropped a further 17 percent between FY00 and FY01, indicating that the upward pre-fleet attrition trend in the 1990s has been reversed.

Pre-Fleet Attrition: 6YOs



This chart shows the percentage of 6YO recruits who left the Navy before reaching the fleet. Of all obligation lengths, a larger percentage of 6YOs attrite before reaching the fleet. Although expected because 6YOs have longer training pipelines, this pattern is alarming because 6YOs usually represent the most promising of recruits and are difficult to recruit.

Unlike other Sailors, 6YO recruits are more likely to attrite after boot camp than during boot camp, which follows from the fact that 6YOs, on average, spend more time in A-school and follow-on training. Post-boot-camp attrition has leveled off at 16 percent and has dropped to 14 percent after increasing to 20 percent for the FY96 accession group. The FY00 and FY01 boot camp attrition levels reverse the increase in boot camp attrition that occurred with the FY98 and FY99 accessions. Overall, pre-fleet attrition for 6YOs has declined. Although, FY00 post-boot-camp attrition is at a 7-year low, this rate may change as the remaining 6 percent of 6YO FY00 accessions reach the fleet.

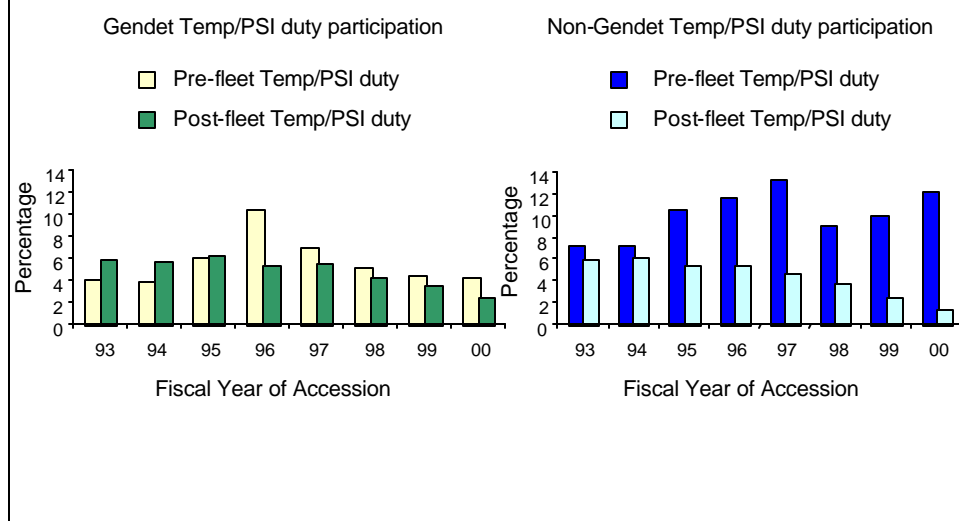
Backup slides show attrition trends for 3YOs and 5YOs.

Temporary and PSI Duty

- Examine temporary and PSI duty to measure the level of “stashing” that occurs
 - “Stashing” involves recruits being temporarily assigned to the fleet while waiting for A-school
- Not all temporary or PSI duty assignments are for “stashing”
 - Example: Gendet Targeted Enlistment Program

The final issue we address is the use of temporary duty assignment and Gendet participation in A-school. Not all PSI duty assignments indicate “stashing,” so the level of temporary/PSI duty classification provides only suggestive evidence on how much “stashing” occurs. In the next slide, we present the percentage of Gendets and non-Gendets who are classified in temporary or PSI duty. Next, we present information on the Gendet Targeted Enlistment Program, which is an example of how temporary/PSI duty classification does not always indicate the occurrence of stashing. Finally, we look at what percentage of Gendets participated in A-school before and/or after reaching the fleet.

Participation in Temp and/or PSI Duty

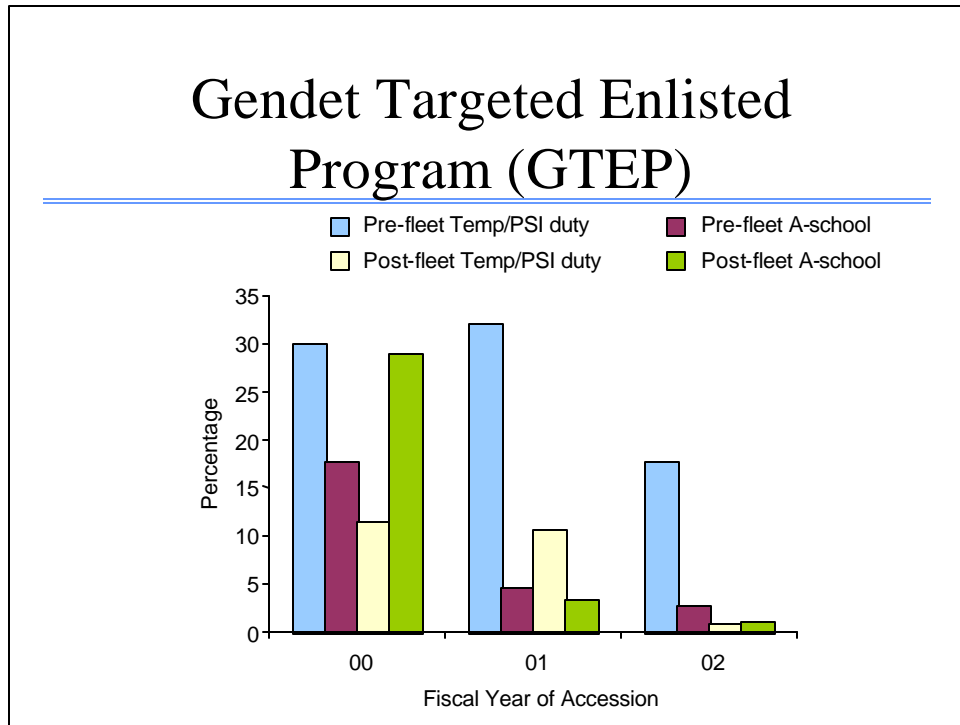


This slide shows the participation rate in temporary or PSI duty for recruits who reached the fleet both for Gendets and non-Gendets. Stashing is the temporary assignment of Sailors waiting for A-school, but (as shown on the next slide) it is not the only reason for classification in temporary or PSI duty. Temporary duty classification includes being temporarily assigned to the fleet for further assignment or transfer. PSI duty is defined as guaranteed programmed school input program.

Less than 14 percent of Gendet or non-Gendet recruits are classified as being in temporary or PSI duty before or after reaching the fleet. The chart on the left shows PSI/Temp duty participation for Gendets. Of recruits who reached the fleet as Gendets, the percentage who spent time in PSI or Temp duty before reaching the fleet peaked at 10 percent for the FY96 accession—1,266 of 12,194 recruits. The level of participation for Gendets in Temp or PSI duty has decreased since the FY97 accessions.

The chart on the right shows PSI/Temp duty participation for non-Gendets. A higher percentage of non-Gendet, rated recruits participate in Temp/PSI duty before reaching the fleet. For the FY97 non-Gendet accession, 13 percent participated in PSI and/or Temp duty before reaching the fleet—2,830 of 21,419 recruits.

Gendet Targeted Enlisted Program (GTEP)

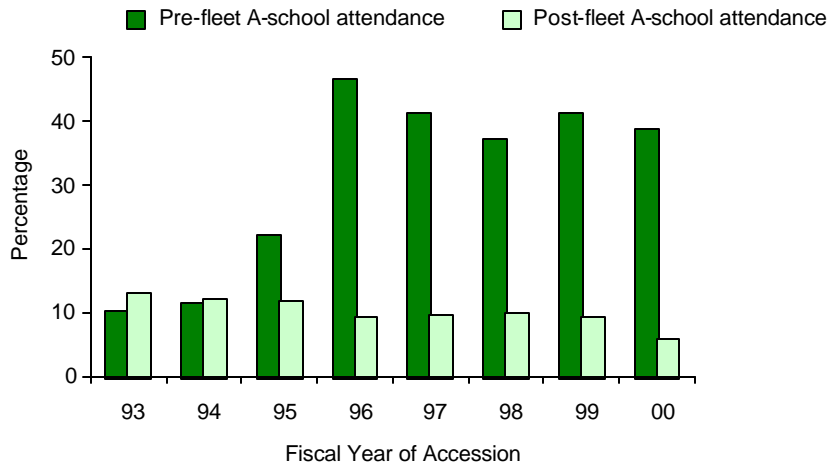


This slide shows the percentage of recruits participating in GTEP who have been classified as Temp/PSI duty and/or have received A-school training.

GTEP was implemented on June 1, 1999, as a continuation of the Targeted “A” School Program (TASP). The goal of GTEP is to improve Gendet manning, by allowing Gendet recruits to receive an enlistment bonus. The rules for GTEP are as follows: recruits are classified as Gendets, have a contract length of 4 years, and spend at least 12 months in the fleet before going to A-school. Before A-school, the recruits are at a permanent duty station under the classification of PSI. Thus, the GTEP program is an example of how Temp/PSI duty classification does not always indicate the occurrence of stashing.

The GTEP program is not large. Of the FY00 16,711 accessions who reached the fleet as Gendets, 488 were participating in the program. In 2000, 809 recruits participated in the program. Of the 809 recruits, 60 percent made it to the fleet as Gendets, 13 percent made it to the fleet rated, 18 percent attrited, and the remainder are still in pre-fleet training.

How Many Gendets Receive A-School Training?



Participation in GTEP is not the only example of Gendets going to A-school. Of the 955 FY00 accessions who made it to the fleet as Gendets and had A-school training after reaching the fleet, 722 did not participate in the GTEP program. This slide shows the Gendet participation rate in A-school before or after reaching the fleet. It gives information on sailors who reached the fleet as Gendets. Sailors who enlisted as Gendets and were rated before reaching the fleet are not included. One reason Gendets participate in A-school is that some are guided into ratings with manning shortfalls, through programs such as the Rating Entry for General Apprentices (REGA). Some of those ratings may require participation in A-school.

Most Gendets who receive A-school training have 4YO obligations; 48 percent of those who participated in pre-fleet A-school were 4YOs, and 85 percent of those who participated in post-fleet A-school were 4YOs. Of non-Gendet 4YOs, 99 percent receive A-school training.

Of the FY96 accessions, the percentage of Gendets participating in A-school increased by an unusually high rate of 108 percent, from 22 to 47 percent. From the FY95 to FY96 accessions, as shown on an earlier slide, Gendets classified as in temporary or PSI duty before reaching the fleet increased by 73 percent, from 6 to 10.4 percent. This suggests that stashing occurred among the FY96 accessions who reached the fleet as Gendets. Other than the increase in FY96, the two trends don't follow each other, so we can't conclude that higher rate of A-school participation results in more temporary or PSI duty assignment in general; however, significantly large increases in A-school participation may result in some form of stashing.

Conclusions

- Training improvements have been sustained
 - Among recruits with 4-year obligations
- Or improved slightly
 - Among recruits with 3-year, 5-year, and 6-year obligations
- Recent drop in boot camp attrition
 - At 13.5 percent for 2001 accessions

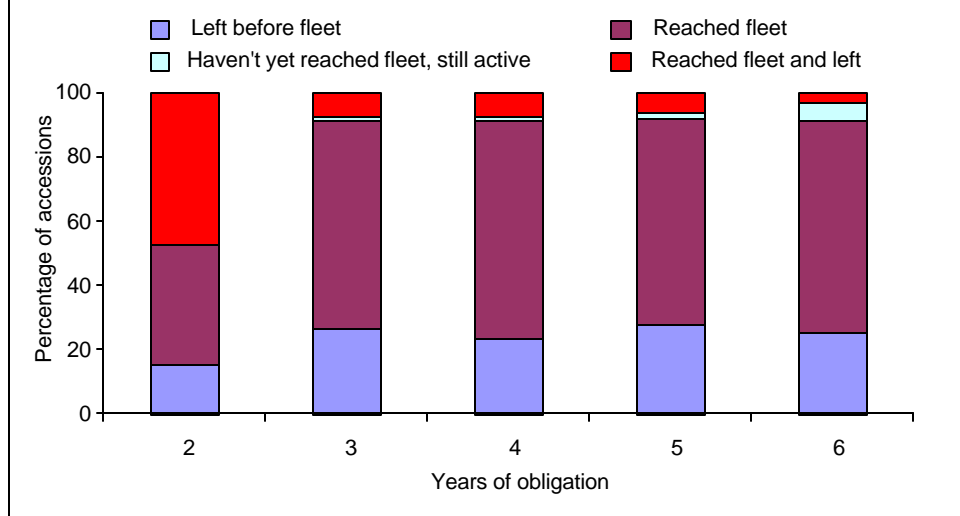
The latest data suggest that the Navy has continued to succeed in improving the delivery of recruits to the fleet. However, these improvements are essentially sustaining improvements that occurred immediately after training reengineering, suggesting that the benefits from training reengineering are leveling off.

Improvements in training efficiency occurred soon after training reengineering, whereas improvements in attrition rates are only now appearing in the data. This is true for boot camp attrition, which has decreased for the FY01 and FY02 accessions. This result is encouraging because boot camp attrition accounts for the majority of 2YO, 3YO, 4YO, and 5YO non-Gendet pre-fleet attrition.

Several caveats apply. Our analysis does not provide direct proof of the success of training reengineering because we have not linked the personnel trends to specific reengineering initiatives. We did not control for confounding factors and their potential influences on the street-to-fleet process. Thus, the evidence on training reengineering is indirect.

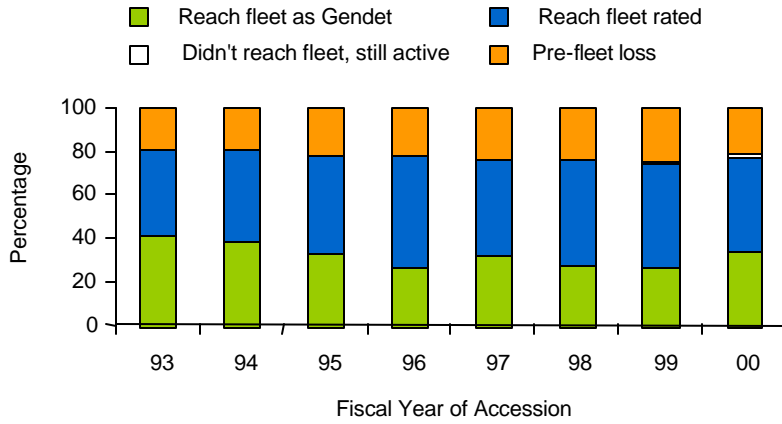
Backup Information

Status of FY00 Accessions as of September 2002



This chart does not include Gendets. Non-Gendet 2YO is a very small group. Of the FY00 accessions, 102 2YOs were promised ratings, and 86 made it to the fleet. These 2YOs probably changed obligation length when they were rated.

Who Makes It to the Fleet?



This slide includes all Gendet and non-Gendet accessions.

Rating Groups

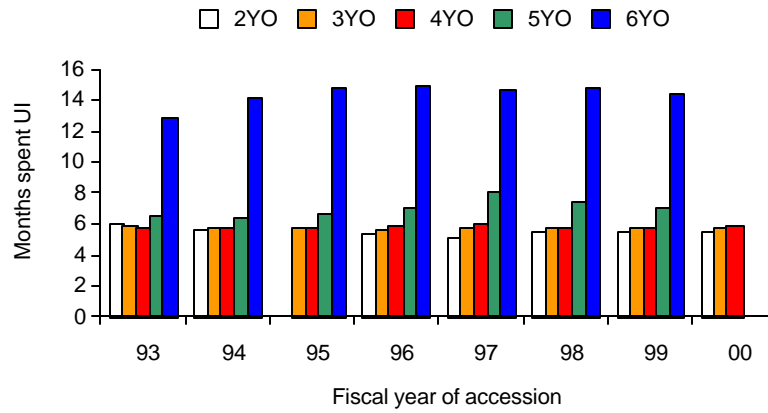
Group	Ratings
Administration	DP, JO, LI, LN, MA, NC, PC, PN, RP, YN
Aviation maintenance	AD, AE, AM, AME, AMH, AMS, AS, AT
Aviation operations	ABE, ABF, ABH, AC, AG, AO, AW, PH
Cryptology	CTA, CTI, CTM, CTO, CTR, CTT, IS
Hull, mechanical and electrical	DC, EM, HT, IC, IM, ML, MR, OM, PM
Medical	DT, HM
Supply	DK, MS, SH, SK
Surface engineering	BT, EN, GSE, GSM, MM
Surface operations	ET, OS, RM (IT)
Surface combat systems	DS, EW, FC, GMG, GMM, OTA, OTM,STG
Other	AK, AZ, BM, BU, CE, CM, CN, EA, EO, FT, MN, MT, MU, PR, QM, SM, STS, SW, TM, UT

For FY93-FY95 accessions, recruits rated as DP are included in the Administration category. In 1996, the DP rating merged with the RM rating under the RM name. In 1999, the RM rating was renamed IT.

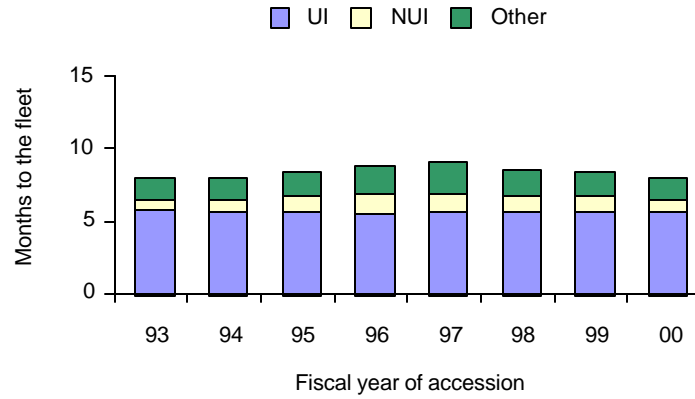
Months to Fleet by Rating Group

Group	1993	1994	1995	1996	1997	1998	1999	2000
Administration	6.2	6.3	6.2	6.4	6.7	6.8	6.5	6.6
Aviation maintenance	10.6	11.2	10.1	10.1	10.3	9.6	10	9.7
Aviation operations	8.2	8.3	8.5	8.3	8.8	7.6	8.4	8.3
Cryptology	12.7	12.2	12.9	13.4	14.4	12.9	13	13.2
HME	11.3	10.9	12.1	13.9	14.8	14.6	14	14.1
Medical	9.3	8	9.3	10.2	11.6	11.1	11.1	10
Supply	6	6.1	6.3	6.6	6.1	5.9	6.2	6.4
Surface engineering	14.3	14.2	13.5	13.4	14.5	14.1	13.7	14.5
Surface operations	13	13.5	12.3	12.9	14.2	12.4	11.6	12.3
Surface combat systems	17	16.8	18.7	18.6	19	18.2	18.3	17.9
Other ratings	7.2	7.4	8.1	8.8	8.7	8.4	8.1	8.7

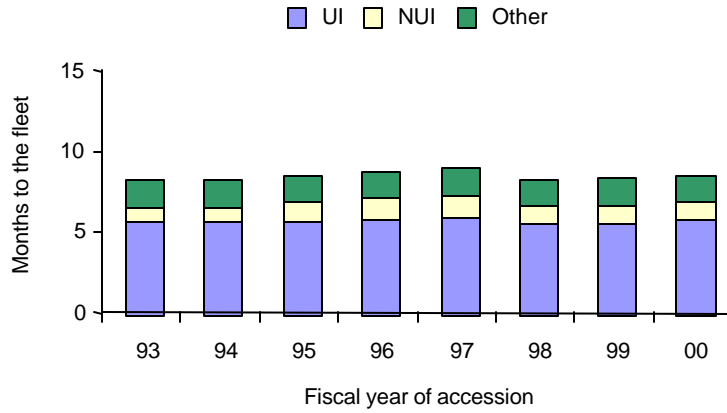
Trends in UI Time and Contract Length



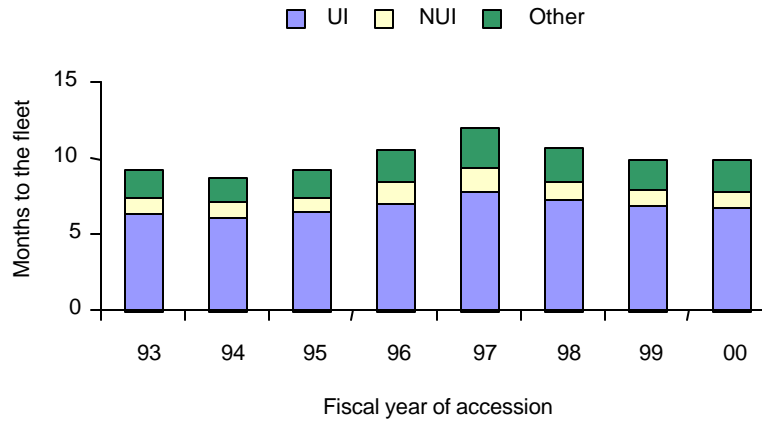
How Recruits Spend Their Pre-Fleet Time: 3YOs



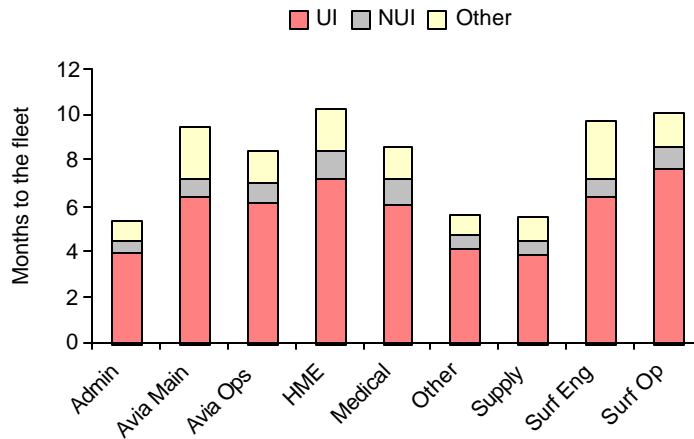
How Recruits Spend Their Pre-Fleet Time: 4YOs



How Recruits Spend Their Pre-Fleet Time: 5YOs

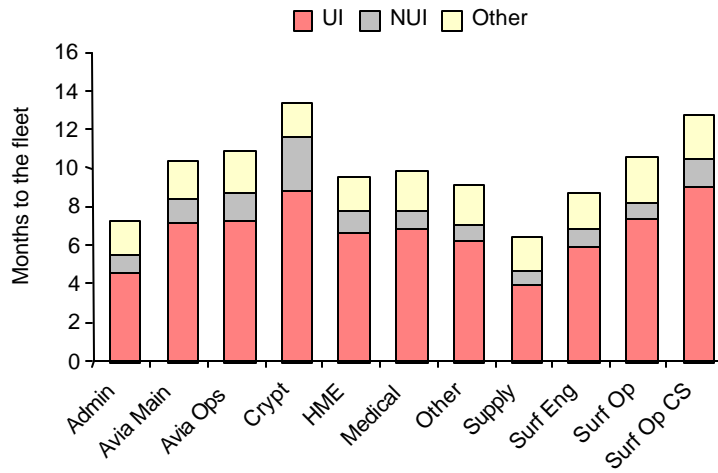


How Recruits Spend Their Time: FY00 3YOs, by Rating Group

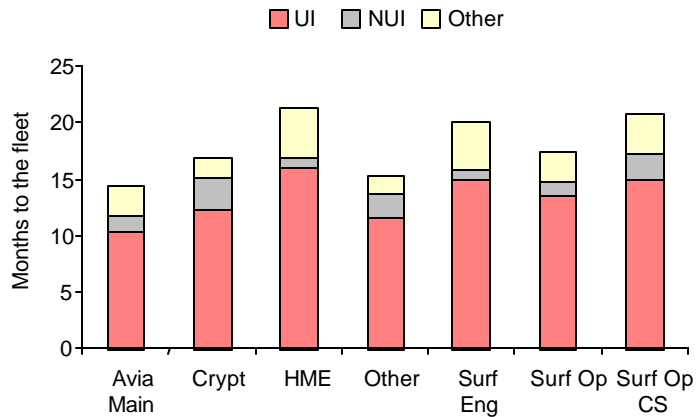


3YO-rated recruits most likely became rated after enlistment and changed their obligation length. In the data, however, they are still classified as 3YOs. For the FY00 accessions, no 3YO-rated recruits were given ratings in the Cryptology rating category and only one recruit was given a rating in the Surface Operations-Combat System rating category. Both of these categories were therefore excluded.

How Recruits Spend Their Time: FY00 5YOs, by Rating Group



How Recruits Spend Their Time: FY00 6YOs, by Rating Group



The Administration, Aviation Operations, Medical, and Supply ratings categories had less than 20 FY00 6YO-rated accessions, so we excluded them from this graph.

Ratings with Largest Increases in UI Time

Rating	Fleet arrivals (FY00 accessions)	From FY97 to FY00		From FY99 to FY00	
		Increase in months	Percentage increase	Increase in months	Percentage increase
JO	20	2.3	35	0.3	3
PH	10	1.4	30	0.1	2
STS	253	1.3	18	0.4	5
PC	34	1.2	50	-0.7	-16
UT	33	1.1	23	0.3	5
EO	38	0.9	16	0.7	12
STG	328	0.8	8	-0.2	-2
CE	19	0.8	15	0.1	2
PR	98	0.8	19	0.6	13
AG	92	0.7	13	0.4	7

These ten ratings account for 4 percent of all FY00 recruits who made it to the fleet. For the PC and STG ratings, UI time decreased from the FY99 to FY00 accessions.

Ratings with Largest Increases in NUI Time

Rating	Fleet arrivals (FY00 accessions)	From FY97 to FY00		From FY99 to FY00	
		Increase in months	Percentage increase	Increase in months	Percentage increase
JO	20	2.9	580	1.8	11
CTM	85	1.3	59	0.4	13
CTO	140	1.1	50	0.9	38
CTR	295	1	28	0.4	10
CE	19	0.8	100	-0.1	-6
CTT	51	0.4	10	0.1	2
EW	156	0.4	27	0	0
CN	58	0.3	30	0.2	18
MN	48	0.3	60	0.4	100
SW	104	0.3	38	-0.2	-15

These ten ratings account for 5 percent of all FY00 recruits who made it to the fleet. For the CE and SW ratings, NUI time decreased from the FY99 to FY00 accessions.

Ratings with Largest Recent Decreases in UI Time

Rating	Fleet arrivals (FY00 accessions)	Decrease in months	Percentage decrease
CTI	112	1.4	7
MU	22	1.2	22
TM	61	1.1	19
MT	148	1.1	8
HM	1807	0.7	9
PC	34	0.7	16
ET	1618	0.6	4
AD	897	0.5	10
AW	225	0.5	4
CTA	36	0.4	8

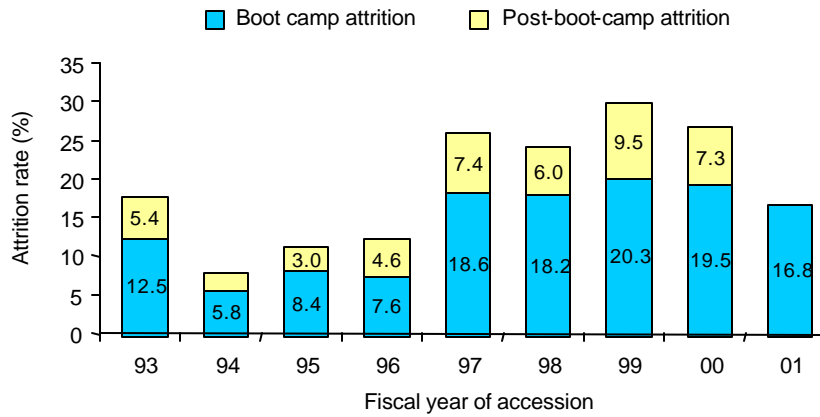
This slide shows the ratings with the largest declines in UI time in comparing the FY99 and FY00 accessions. These ten ratings account for 24 percent of all FY00 recruits who made it to the fleet. The AM rating was excluded from the table because there were only 6 accessions in FY99. The MA rating was excluded from the table because there were only 5 accessions in FY00.

Ratings with Largest Recent Decreases in NUI Time

Rating	Fleet arrivals (FY00 accessions)	Decrease in months	Percentage decrease
TM	61	0.9	56
CTA	36	0.9	50
PH	10	0.9	75
EM	804	0.8	44
MM	1645	0.8	47
PC	34	0.6	55
PN	237	0.6	55
FT	100	0.6	43
AW	225	0.5	19
DT	294	0.5	42

This slide shows the ratings with the largest declines in NUI time in comparing the FY99 and FY00 accessions. These ten ratings account for 16 percent of all FY00 recruits who made it to the fleet.

Pre-Fleet Attrition: 3YOs



Pre-Fleet Attrition: 5YOs

