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JANUARY 26, 1982

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The Honorable John G. Tower
Chairman, Committee on
Armed Services
United States Senate



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The Honorable G. V. Montgomery
Chairman, Committee on
Veterans Affairs
House of Representatives

The Honorable Melvin Price
Chairman, Committee on
Armed Services
House of Representatives

The Honorable Alan K. Simpson
Chairman, Committee on
Veterans Affairs
United States Senate

Subject: The Cost Effectiveness of an Education Assistance Program (GI Bill) As a Recruiting Incentive Is Unknown (FPCD-82-12)

During the first session of the 97th Congress, several bills were introduced in both the House of Representatives and the Senate to provide the Armed Forces with an expanded and permanent educational assistance program (GI Bill) to improve military service recruiting--at a cost of over \$2 billion annually. Additional proposals, including one by the Department of Defense (DOD), are expected to be introduced during the early months of the second session of this Congress. Extensive hearings have been held on the proposals already introduced, and more debate is expected on this issue.

The question of whether an expanded educational assistance program would improve recruitment is not new, having been debated during the 96th Congress. As a result of this debate, the Congress authorized DOD to conduct an Educational Assistance Test Program to determine whether expanded educational assistance

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would improve enlisted recruiting, and if so, whether one form of the program was more successful than another.

Our review of the Educational Assistance Test Program showed that it will provide the Congress with some insights on how an educational assistance program, if needed, should be structured. However, the test program was not designed to, nor will it, provide the Congress with sufficient information to answer the larger questions of whether an expanded GI Bill is currently needed to achieve DOD's manpower objectives or whether an expanded educational assistance program would be more or less cost effective than other incentives designed to achieve the same recruiting objectives. We believe the interrelated questions of need and cost effectiveness should be resolved before the Congress authorizes an expensive, permanent educational assistance program to be offered in exchange for military service.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our review objectives were to determine:

- Whether the recently completed Educational Assistance Test Program, directed by the Congress in Public Law 96-342, provides sufficient information for the Congress so that the Members can determine the relative cost effectiveness of a GI Bill incentive as compared to other recruiting incentives. If sufficient information was not provided by the test program, we wanted to determine whether other tests or studies had been made which could provide Members the necessary information.
- Whether the implementation of the Educational Assistance Test Program was carried out in a way that would provide reliable answers to the questions it was designed to answer; that is, whether one component of the program was a more successful recruiting incentive than another component of the same program.

Our review was performed in accordance with the standards for audit of governmental organizations, programs, activities, and functions during August through December 1981. Our scope was limited to reviewing and discussing with appropriate DOD and service officials (1) the contractual direction provided by the Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) to the Rand Corporation--DOD's contractor for evaluating the results of the test program, (2) the Rand Corporation's interim reports to DOD on the results of test implementation and DOD's quarterly reports to the Congress, and (3) DOD's instructions to the services on test implementation and the services' instructions to their recruiters.

We also interviewed the Rand Corporation's principal investigator responsible for developing and implementing the test program evaluation methodology.

We did not independently test the validity of the test program evaluation methodology, but we did observe how DOD was implementing the test program at recruiting stations in Philadelphia, Milwaukee, and San Antonio. These cities were selected because they are close to the locations of the Recruiting Commands for each service, and because they are located in geographic areas where two versions of the noncontributory educational assistance benefits authorized by Public Law 96-342 were offered. 1/ Our observations at these locations are not necessarily representative of test implementation at other recruiting stations. Neither we nor the Rand Corporation could observe the effect of the educational loan repayment provision 2/ of the Educational Assistance Test Program because this provision was offered nationwide without a control group to measure its effectiveness against.

To determine whether other tests or studies have been made which sufficiently address the relative cost effectiveness of educational assistance as compared to other recruiting incentives, we interviewed DOD officials responsible for manpower policies and researched available literature on this topic.

THE RELATIVE COST EFFECTIVENESS
OF VARIOUS RECRUITING INCENTIVES
AND OPTIONS IS UNKNOWN

The Armed Services, particularly the Army, have experienced a steady decline in the number of enlistees who had completed high school and received high scores on aptitude tests. This decline had been particularly evident from the time the Vietnam-era GI Bill expired at the end of 1976 through fiscal year 1980. This decline in recruiting occurred despite the fact that more and new incentives in the form of increased enlistment bonuses, expanded Veterans Educational Assistance Program (VEAP)

1/See enclosure for a brief description of the Educational Assistance Test Program and the various educational assistance incentives offered under the program.

2/This provision is also explained in the enclosure.

benefits--known as "kickers" 1/--and other options were authorized in an attempt to reverse the trend.

By summer, 1980, the number of quality youths enlisting in the services had reached the lowest level of the All-Volunteer Force (AVF) years, with the Army experiencing the most severe problems, particularly in combat arms occupations. Opinions vary as to the reasons for the recruiting problems, but many military leaders and Members of Congress believed that VEAP--a less expensive replacement for the Vietnam-era GI Bill--had failed as a viable recruiting incentive. However, they believed that a larger, more expensive educational assistance package might attract additional quality youths. Consequently, the Congress authorized DOD to implement an Educational Assistance Test Program to run from October 1, 1980, through September 30, 1981. In authorizing this test program, the House and Senate Armed Services Committees stated that

" * * * an effective educational assistance program may well be the best approach for the volunteer force to attract personnel of needed quality."

DOD was tasked with designing, implementing, and evaluating the test program, and with reporting to the Congress by December 31, 1981, on the extent to which the program encouraged persons to enter or remain in the Armed Forces.

We noted, and DOD's quarterly reports to the Congress state, that test implementation problems were encountered. These are summarized on pages 7 and 8 of this report. The extent to which the problems encountered affect the usefulness of the test program results is subject to debate. The important issue, however, is that in implementing the test program, DOD limited its analysis to the costs and benefits of the various educational assistance incentives being offered under the program. DOD did not include an analysis of the relative cost effectiveness of

1/Under the regular VEAP, a service member contributes \$25 to \$100 per month to an education assistance account, with the Veterans Administration providing matching amounts on a 2 for 1 basis, up to a maximum of \$5,400. The Army is authorized to add to this account up to \$6,000 provided that the individual serves in a designated critical occupation. The additional Army payments are known as "kickers."

educational assistance as compared to other incentives or management prerogatives designed to achieve the same objective. ^{1/} As a result, the test has not provided the Congress with information to judge whether educational assistance is the best, most cost-effective approach for the AVF to attract personnel of needed quality.

All recruitment incentives and management tools influence an individual's decision to enlist, but our discussions with Defense officials and our search of relevant literature indicate that there are no clear answers as to the relative cost effectiveness of each option or the relative influence each has on an enlistment decision. There are, however, some recent studies that, in part, address these questions. For example, the preliminary results from a recruiting applicant survey, conducted during 1981 by the Rand Corporation as a part of the Educational Assistance Test Program, suggest that cash bonuses could attract more new recruits, at less cost, than educational assistance. The survey results indicated, for example, that a \$15,000 enlistment bonus would produce the same increase in enlistments as a \$23,000 educational assistance benefit. The Rand Corporation investigators caution, however, that to conclude, based on the survey results, that educational assistance benefits are less cost effective than bonuses fails to take into account that cash bonuses are paid to all eligible enlistees at the enlistment point, whereas only persons who actually go back to school receive educational assistance benefits. They point out that a more detailed assessment of educational assistance versus bonus options, preferably including an experimental assessment of bonus effects, is needed to verify the survey results and resolve the cost-effectiveness issue.

The preliminary results of a 1981 study by the Center for Naval Analysis also raise questions about the relative cost effectiveness of various alternatives for increasing the enlistment supply. These results suggest that a GI Bill may cost nearly six times as much as an enlistment bonus that would increase enlistments by the same amount. Similarly, in November 1981, the Congressional Budget Office testified before the House Armed Services Committee, Subcommittee on Military Personnel and Compensation, that educational assistance benefits may not be the least expensive way to improve recruiting. They indicated that bonuses may cost only one-third as much as the GI Bill

^{1/}Other incentives and management prerogatives would include things such as bonuses, in-service training, job or station of choice, and decisions on the number and distribution of recruiters and how advertising dollars are spent.

proposal (H.R. 1400) which was under consideration by the committee.

As previously stated, the early debate on the need for an educational assistance benefit and the authorization of a test program occurred at a time when the services were experiencing serious recruiting problems. The percentage of enlistees scoring in the top three mental categories on aptitude tests ^{1/} had fallen from almost 93 percent in fiscal year 1976 to only 69 percent in fiscal year 1980. Similarly, the percentage of enlistees having high school diplomas was down as compared to previous years.

For a wide variety of reasons, including less favorable economic conditions, particularly in the youth labor market, and substantially improved military pay and benefit levels, all services experienced a rather dramatic turnaround in recruiting success during fiscal year 1981. The percentage of nonprior service enlistees scoring in the top three mental categories increased from 69 percent in 1980 to 82 percent in 1981, and the percentage having high school diplomas similarly increased from 68 percent to 81 percent during this 1-year period. The Army improvement in fiscal year 1981 in both of these quality measures was even more significant than it was for DOD as a whole. As a result of these improvements, the Congressional Budget Office has estimated that, if end strength levels remain constant and military pay raises keep pace with pay raises in the private sector, the improved recruiting performance is likely to continue for at least another year, possibly longer depending on economic conditions.

It is important to note that the conference report (House Report No. 97-265) accompanying the Uniformed Services Pay Act of 1981 (Public Law 97-60) directs the Secretary of Defense to implement a new 2-year program to test the effectiveness of various enlistment bonus levels and to report the results of the test to the Congress by March 1, 1983. The conference report indicates that this test program should be designed in a way similar to the recently completed educational assistance test program. There is no doubt that the effectiveness of the enlistment bonus program needs to be tested. But, if the design of

^{1/}Mental categories are determined by scores obtained on selected subtests of the Armed Services Vocational Aptitude Battery (ASVAB). There are five categories, the top three being considered average or above. Those scoring in the fifth category are ineligible for enlistment.

the bonus test program is patterned after the educational assistance test program, it too will yield insufficient information with which to judge relative cost effectiveness.

EDUCATIONAL ASSISTANCE TEST PROGRAM
IMPLEMENTATION AND RESULTS

As previously stated, several problems were encountered in the implementation of the educational assistance test program. These problems, reported to the Congress in DOD's second quarterly report on the test program, are summarized as follows:

- Because of the way the services' recruiting systems are structured, the test was not controlled to assure consistency in notifying qualified applicants of the educational assistance benefits. The differing roles of recruiters--who make the first contact and "sell" the service--versus counselors--who match the recruit with a specific military occupation--contributed to this problem. Also contributing was the fact that service needs for a particular occupation, which may have been included in the program, varied from time to time. As a result, there was no assurance that all qualified applicants were informed of the benefits.
- The number of occupations covered by the test program varied substantially among the services, thus limiting comparisons that could be made. Army's participation in the test was substantially greater than the other services--with occupations representing almost 80 percent of their enlisted force. Navy and Air Force offered the educational assistance benefits for enlistments in very few occupations and did not use the test program as a major recruiting tool. The Marine Corps included about 50 percent of its occupations in the test, but it offered education assistance benefits as an alternative to enlistment bonuses rather than as an added benefit as did the other services. As a result, the Marine Corps' use of education assistance was quite low.
- Recruiting officials in each service believed that the joint advertising campaign was insufficient to inform the public of the availability of education assistance benefits, and that local advertising should have been authorized. They said that the limited advertising resulted in very few qualified applicants being aware of the education assistance benefits resulting in a program that was considerably less effective in attracting quality applicants than it could have been.

DOD officials and the Rand Corporation evaluators reported that the above test implementation problems occurred. They generally believe, however, that the problems had little influence on the validity of the test results. Neither we, DOD, nor the Rand Corporation know for sure what impact these problems may have had on the test results. However, despite these problems, it appears that the test did answer the limited questions it was designed to answer. In summary, the Rand Corporation concluded that:

--Large educational assistance benefits can produce statistically significant increases in high quality enlistees, but the effect depends on the way the benefit is structured. The largest estimated response appeared to be in the so-called "Ultra-VEAP" 1/ program which increased Army enlistments by 10 percent. The effects of the noncontributory VEAP program, however, were small, and not statistically significant.

--A uniform benefit--one that offers the same amount to all enlistees--may create undesirable results. For example, a program that offers the same educational assistance benefit to all services could reduce Army enlistments. Also, a program open to all enlistees in all occupations may draw recruits out of combat arms into more attractive jobs. Targeted benefits are more effective.

While the test seems to have answered questions about the effectiveness of its various educational assistance components, the test was not designed to, nor did it, answer the broader question of how cost effective any one of the components was compared to other incentives or management prerogatives designed to achieve the same result.

CONCLUSIONS

We believe that congressional action on a new GI Bill which relies on the results of the educational assistance test program would not be warranted because the test's limited scope did not address the larger issue of whether new educational benefits would be cost effective relative to other incentives. In our opinion, this question needs to be resolved before the Congress authorizes an expensive, permanent educational assistance program to be offered in exchange for military service.

1/In certain areas of the country, Army was authorized to contribute "kickers" of up to \$12,000. (See footnote on p. 4.) This limited program was known as "Ultra-VEAP."

At the time when the current GI Bill proposals were first introduced, the services were experiencing severe quality recruiting problems. Since then, however, each service has experienced a rather dramatic increase in the number of quality youth enlisting. This has reduced the urgency for immediate passage of a permanent GI Bill, and perhaps raises the further question of whether such a program is needed at all at this time. The Congressional Budget Office has estimated that the improved recruiting performance is likely to continue for at least another year, and maybe longer depending on economic conditions. In view of the permanency of any GI Bill that might be enacted, and the high cost of such a program, we believe that the Congress should take advantage of the time now available to task DOD with more thoroughly evaluating the cost effectiveness of education assistance as compared to other recruiting incentives.

The Congress has demonstrated its desire to obtain answers to cost-effectiveness questions by requiring DOD to test certain programs--for example, the Educational Assistance Test Program and the 2-year enlistment bonus test directed as part of the Uniformed Services Pay Act of 1981 (Public Law 97-60). We believe, however, that to improve the test programs' quality and usefulness to the Congress, tests should be designed to measure not only their individual effectiveness, but also their cost effectiveness relative to other inducements aimed at solving the same problem. Only in this way can the Congress be assured that all the tradeoffs have been considered and that the incentive programs finally recommended are the least costly for achieving the desired results.

RECOMMENDATIONS

We recommend that the Congress not approve a permanent educational assistance program until DOD has performed a comprehensive test to determine the most cost-effective mix of recruiting incentives needed to attract the necessary quantity and quality of enlistees. In order to carry out such a mandate, we recommend that the Congress enact legislation which would:

- Authorize selected educational assistance benefits for the period of the test. These benefits could be similar to those provided under the Educational Assistance Test Program.
- Task the Secretary of Defense with expanding the scope of the bonus test program to measure the relative cost effectiveness of bonuses and other incentives and management prerogatives, including, but not limited to, educational assistance benefits, proficiency pay, increased recruiting resources, and increased advertising.

--Task the Secretary of Defense with (1) conducting the test in a controlled environment, (2) developing an implementation evaluation plan, and, (3) to the extent possible, preventing the reoccurrence of the problems encountered in the Education Assistance Test Program.

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DOD plans to submit its proposed GI Bill legislative package for congressional consideration by early February 1982 and the cognizant committees indicated that action on the various proposals would occur shortly thereafter. So that the committees may have this report available for their use as they consider possible GI Bill legislation, we did not follow our usual policy of obtaining and evaluating official agency comments on this report. The House Committee on Armed Services, Subcommittee on Military Personnel and Compensation, indicated its intention to obtain DOD's views on our recommendations as it evaluates DOD's GI Bill proposal.

Copies of this report are being sent to the Secretaries of Defense, Army, Navy, and Air Force; the Commandant of the Marine Corps; and to other interested parties.



Comptroller General
of the United States

Enclosure

EDUCATION ASSISTANCE TEST PROGRAM

The Department of Defense Authorization Act, 1981, (Public Law 36-342) authorized DOD to test the effectiveness of three educational assistance programs designed to influence an individual's decision to enlist in the Armed Services. In summary, the programs authorized were:

- Section 901: a noncontributory educational assistance benefit which provides tuition assistance, monthly stipend, benefit transferability, in-service use, and an option to receive a percentage of the benefits' cash value at the end of the first enlistment.
- Section 902: authorization for the Secretary of Defense to repay loans made under the Higher Education Act of 1965 in exchange for service in the Armed Forces, commonly referred to as the educational loan repayment provision.
- Section 903: a noncontributory educational assistance program providing a specific cash value.

To participate in any of these programs, an enlistee must have (1) been a high school graduate, (2) had no prior military service, (3) scored at least 50 on the enlistment qualification test, and (4) enlisted for service in a designated critical skill. The Act authorized DOD to offer these programs on a test basis for 1 year ending September 30, 1981.

The test was administered by each of the services at the direction of the Secretary of Defense. The Rand Corporation was tasked to assist in the design of the test and to perform the evaluation. For test purposes, the Nation was divided into four test cells, each offering a different set of benefits.

- Cell A covered 52 percent of the country and served as the control group. It offered ongoing and additional Veterans' Education Assistance Program (VEAP) benefits, and kickers, of up to \$6,000 to qualified Army applicants.
- Cell B covered 18 percent of the country and offered basic VEAP and kickers up to \$12,000 for qualified Army applicants.
- Cell C covered 15 percent of the country and offered Section 901 benefits of tuition assistance of up to \$1,200 per year and a monthly stipend of \$300 per month. Upon reenlistment, benefits may be cashed for 60 percent of their actual value or they may be transferred to another member of the family.

--Cell D covered 15 percent of the country and offered Section 903 benefits of a noncontributory VEAP. DOD will contribute \$75 per month, and the Veterans Administration will add \$150 per month to a qualified individual's educational account, to a maximum of \$8,100. The Army also offered kickers of up to \$6,000.

In addition to the above, Section 902 benefits (educational loan repayment) were available nationwide. Repayment entitlements for each year of service are \$1,500, or 33 percent of the loan total for active duty, and \$500, or 15 percent, for Reserve duty.

The Act required DOD to report to the Congress by December 31, 1981, on the extent to which these programs have influenced quality individuals to enlist in the Armed Services. The report will include

- an evaluation of the ability of each program to attract quality people,
- an analysis of the costs and benefits of each program, and
- recommendations for new or revised educational assistance programs that would encourage more quality persons to enter or remain in the Armed Services.

According to DOD officials, this final report on the Education Assistance Test Program is not expected to be submitted to the Congress until late January 1982.