United States Army
Recruiting Command

USAREC SR 85-1

AD-A165 582

RECRUITMENT
OF COLLEGE-BOUND YOUTH
THROUGH USE
OF THE
ACT ASSESSMENT FILE

BY

RAY A. ZIMMERMAN
DONA C. ZIMMERMAN

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July 1985

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Research and Studies Division
Program Analysis and Evaluation Directorate
Fort Sheridan, Illinois 60037

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Prepared by

Manpower Research Center
Naval Postgraduate School
Monterey, California

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ACKNOWLEDGEMENTS

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SUMMARY

Background

Over the next decade, the Army will experience an increasing requirement for recruits who are trainable in technical and other specialized skill areas. In order to meet these needs, the Army will have to compete with the higher education establishment for the services of the so-called "college-bound" population. Recent developments have made the American College Testing (ACT) assessment file available to Defense for recruiting college-bound young people to fill enlisted positions. One issue of major importance in recruiting the college-bound is the most effective marketing stategies for attracting these young people to Army service.

Purpose

American College Testing ≠

The purpose of this research was to determine the feasibility of using the (ACT) assessment file for recruiting college-bound young people by employing a market segmentation approach coupled with a personalized approach to information dissemination.

Method

Two exploratory studies were conducted to examine the utility of telephone interviews and mail campaigns in stimulating interest among high school seniors and recent graduates in foreign language training at the Defense Language Institute (DLI). The treatment group for each study consisted of individuals who had studied a foreign language for three or more years.

Study 1 employed telephone interviews of 505 high school seniors and recent graduates to: 1) collect information pertaining to respondents' language background, career plans, interest in pursuing additional foreign language studies, etc., and 2) provide information about foreign language training programs at the DLI. It was reasoned that such a personalized approach in providing information might generate more interest than an impersonal mass mailing approach.

Respondents who expressed some interest in the DLI were sent additional information describing the DLI and the Veterans Educational Assistance Program in greater detail. In addition, arrangements were made for recruiters to receive the names and addresses of respondents who expressed an interest in talking to a recruiter.

In Study 2, 43,848 high school students and recent graduates were contacted by mail. The mail-out materials included: 1) a form letter from the Dean of the DLI with a greeting in the language that the individual had studied (providing a somewhat personalized form of contact), 2) an information sheet describing the DLI and educational assistance for veterans, and 3) a business reply card for requesting additional information. Individuals who returned the business reply card received, through the mail, a brochure containing more detailed information about the DLI. In addition, the names and addresses of these individuals were given to recruiters.

Results

1. The two approaches were first compared on the basis of effectiveness in generating leads and contacts, as well as cost.

   a. The telephone approach yielded one lead for every 8.86 interviews, at a cost of $72 per lead. For the mail approach, the contacts per lead ratio was 58.78 (i.e. one lead was generated from every 58.78 people contacted) and the cost per lead was $26.

   b. Telephone interviews with 505 individuals yielded 6 enlistments, for an enlistment rate of 1.19 percent. A total of 116 enlistments resulted from the mailout to 43,848 individuals, yielding an enlistment rate of 0.26 percent. The enlistment rate for the control group of 78,867 was 0.13 percent.

   c. Interval estimates of the cost per enlistment were computed for the two approaches. These figures, for the total sample, ranged from $673 to $1,010 for the telephone approach and $19 to $73 for the mailout. Cost estimates were considerably lower for males in both treatment groups than for females.

2. The telephone survey data were analyzed to identify variables which would predict the level of interest resulting from telephone contact.

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a. The general pattern that emerged was that respondents who
    showed the most interest in the DLI and in military
    occupations requiring foreign language training:
    1) tended to have a strong interest in studying languages
        (e.g. they had studied or had planned to study more
        than one foreign language, they wanted a career that
        would utilize their foreign language skills),
    2) tended to be somewhat uncertain about their plans for
        the succeeding year,
    3) tended to plan to use educational grants to help
        finance their education (not necessarily scholarships
        or student loans), and
    4) had previously considered military service (although
        they had not necessarily talked with a recruiter).
b. Six constructs were derived from the items of the survey
    instrument. All but one were significantly related to
    interest shown by respondents and one construct (Desire
    to learn a foreign language) showed a fairly strong
    relationship.

3. The relationships of nine items selected from the ACT assess-
    ment file and interest in the DLI and in military occupations
    requiring foreign language training were examined. Several
    items were significantly related to interest, but only one
    showed a relationship that was strong enough to be of practical
    significance. This item, a measure of interest in studying

abroad, was only of practical significance for individuals who were contacted by telephone.

Conclusions

1. Both the telephone and mailout approaches are very effective in attracting individuals from the target segment of the college-bound market.

2. The telephone approach is more efficient than the mailout approach in generating enlistments, but also more costly.

3. In addition to foreign language background, interest in studying abroad may be used as a criterion in selecting names from ACT if individuals are to be contacted by telephone.

Recommendations

1. Additional research is needed to:

   a. further evaluate the methods employed in this research for information dissemination by performing a content analysis of the responses of recruiters regarding the quality of the leads that were generated,

   b. compare the utility of the market segmentation and personalized contact approach to that of a standard mailout approach, and

   c. extend the market segmentation and personalized contact approach to recruiting college-bound young people with other specialized skills or aptitudes.

2. It is expected that additional research will confirm the utility of this approach to college-bound recruiting. If so, consideration should be given to establishing a special

activity for recruiting college-bound young people for military occupations where there is a growing need for highly technical or other specialized skills. This activity could be responsible for:

a. identifying MOS and skill areas where the need for college-bound young people is greatest,

b. developing materials describing each MOS or skill area,

c. determining the appropriate approach to be taken in making initial contacts for a given target segment of the college-bound population,

d. making initial contacts with prospects, and

e. forwarding the leads to recruiters in the field.

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I. INTRODUCTION

A. Background

Marketing strategies for recruiting the college-bound

Over the next decade, the Army will experience an increasing requirement for recruits who are trainable in technical and other specialized skill areas. As new generations of weapons systems enter the inventory, the Army's need for highly qualified young men and women is expected to grow at a relatively rapid pace. It will become increasingly difficult, however, to meet the needs for high quality enlisted personnel, since the supply of highly qualified young people is shrinking. It is well known that the number of young people from 18 to 21 years of age has been steadily decreasing. Compared to 1979, the number of males in this age group will decrease by 1.2 million individuals by 1988.[1] The problem is compounded by the decline in cognitive ability of people in this age group, as is evident from the decline in average scores on standardized achievement tests that has been occurring for several years. Thus, in order to meet its high quality enlisted manpower needs for the late 1980s, the Army will have to compete with the higher education establishment for the services of the so-called "college-bound" population.

In order to compete more effectively with colleges, greater emphasis must be placed on developing and improving competitive

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[1]Table 8, U.S. Bureau of the Census (1977).

strategies for reaching college-bound young people. Two such strategies are repositioning and market segmentation. Howard (1977, p. 173) defines repositioning as "...either modifying a brand or telling customers about characteristics which it has but of which they are not aware...." The aim of such efforts is to move the brand to a more protected position in the joint space or market space in order to avoid some of the pressure on price. It should be noted, that the term "repositioning" is somewhat loosely applied in the present context, since the end result is different. That is, the objective of repositioning, in this context, is to make the Army more attractive to college-bound young people, rather than reducing the pressure on the price of a product. However, the perceived "cost" of enlisting in the Army, as compared with other alternatives, would be lowered.

Three interrelated topics must be carefully examined in relation to the strategy of repositioning. These are:

- influencing the attitudes of the college-bound population toward Army enlisted service,
- initiating new programs that will make the Army more attractive to this group, and
- disseminating information about new and existing programs which would be of interest to these young people.

In considering the first of these topics, that of influencing the attitudes of the college-bound population toward Army enlisted service, some simplifying assumptions are necessary. First, it is reasonable to assume that most college-bound young people who

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are favorably disposed toward Army service are only interested in serving as officers. It would not be beneficial to the Army to attempt to persuade some of these individuals to serve as enlisted personnel. Second, a portion of the college-bound population has negative attitudes toward military service in general, or the Army in particular. Such attitudes may be due, in part, to such factors as reinstitution of selective service registration, negative experiences of friends or relatives who have served in the military, etc. Whatever the cause of these negative attitudes, it is unlikely that there would be sufficient payoff in attempting to influence such individuals toward a more positive view of military service. Finally, it is assumed that the largest group of college-bound young people do not have any strong feelings about Army service, either positive or negative. Rather, these individuals simply do not view the Army as a means of achieving their goals. Clearly, this is the group that is of interest in recruiting for enlisted occupations requiring technical or other specialized skills.

One way to appeal to this group is to present Army service as an opportunity for personal growth and maturation prior to college. Many young people do not succeed in college because they have not matured enough to be ready to accept the responsibilities of college. Work experience and travel, through Army service, can help such individuals to mature and thus be better prepared to get the most out of their educational experiences. A second, and perhaps more productive approach, is to present the Army as a means of obtaining one's educational and career objectives. The

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two remaining topics, i.e. initiating new programs and disseminating information, are more closely related to this approach to influencing the attitudes of the college-bound. Examples of programs designed to attract college-bound young people, would include:

- improving educational benefits,
- improving opportunities to earn college credits while on active duty,
- creating enlistment options with shorter time commitments, and
- providing more opportunity for the kinds of training and occupational experiences which are congruent with the educational and career goals of the college-bound.

Obviously, such programs will only be effective as incentives to the extent that information about them is made available to the target population. Thus, information dissemination is critical in reaching the college-bound. Advertising is, of course, one of the most effective means of reaching young people. However, the college-bound population is not likely to be greatly influenced by the types of advertising appeals which attract their peers who do not intend to go on to college. Instead, emphasis must be placed on ways in which the Army can help them to achieve their goals. In order to have the greatest effect, other avenues of information dissemination must be explored in addition to advertising. For instance, the present research involved a comparison of the effectiveness of two different media for information dissemination, i.e. personal contact by telephone and written materials received by

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mail. This will be discussed in greater detail in a subsequent section of this report.

In addition to repositioning, market segmentation may be an effective strategy for reaching college-bound young people. Market segmentation consists of using different marketing programs for different segments of the population. This approach assumes that "...the market for a particular product is composed of segments of customers with somewhat different needs and wants" (Frank, 1974). Typically, the market is first split into relatively homogeneous clusters of individuals on the basis of demographic, socioeconomic, or psychological characteristics. This step may be performed on an a priori basis or an empirical one. The latter involves collecting data on a representative sample of the population and then applying some method of cluster analysis to these data.[2] The distinguishing characteristics (e.g. the cluster centroids or profiles) of each cluster or market segment are then examined and a marketing program is designed to meet the specific needs, interests, etc. of each cluster.

Sources of information on the college-bound population

The strategies of repositioning and market segmentation would be facilitated by sources of data which identify and describe the characteristics of the college-bound population. The Educational

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[2]For descriptions of different cluster analysis techniques and their relative advantages and disadvantages, see Blashfield (1976), Everitt (1980), and Zimmerman, Farr, and Jacobs (1981). Applications of cluster analysis to marketing research are discussed in Aaker (1971), Green and Carmone (1970), and Green and Rao (1972).

Testing Service (ETS), which administers the SAT, and the Educational Opportunity Service (EOS) of American College Testing (ACT) are major sources of information on college-bound youths. Approximately two million high school seniors are tested annually by these organizations. Both organizations maintain automated records including students' test scores and biographical information. These data bases are used extensively by colleges and universities for recruiting purposes. In addition, data from ETS and ACT-EOS have been used by Defense for recruiting purposes for some time. However, until recently, ETS and EOS have only released these data for ROTC recruitment, since ROTC programs provide an education to participants. Within the last year or so, the ACT file has been made available to the Army to be used in recruiting for enlisted positions, but as yet, SAT data are not available for this purpose.

In addition to test scores maintained by ACT-EOS, the ACT data base contains: 1) the Student Profile Section (SPS), which consists of self-reported biographic and demographic information, and 2) the ACT Interest Inventory. The Student Profile Section consists of the following sub-sections:

1. Admissions/Enrollment Information
2. Educational Plans, Interests, and Needs
3. Special Educational Needs, Interests, and Goals
4. Financial Aid
5. Background Information
6. Factors Influencing College Choice
7. High School Information

8. College Extracurricular Plans

9. High School Extracurricular Activities

10. Out-of-Class Accomplishments.

The ACT Interest Inventory consists of 90 activities (e.g. visit a science museum, design a metal sculpture). The student responds to each item by stating whether he or she would like or dislike, or be indifferent toward the activity. These activities are grouped into six general interest categories and an interest profile is computed for each student.

Approximately 86 percent of all students tested authorize ACT to release mailing information to institutions. However, while the EOS allows institutions to make selections of names based on the SPS and Interest Inventory, it does not release these data to the institution; only mailing information is provided.

Use of ACT assessment records provides access to a highly qualified population and will enable the Armed Forces to compete more effectively with colleges and universities for high school seniors and recent graduates. Almost all of those tested become high school graduates, and the mean AFQT score for this group is quite high. It is not known what proportion of the students who are contacted by using the ACT assessment file would be responsive to marketing programs based on market segmentation and repositioning strategies. This would probably vary considerably among the target segments of the college-bound population identified for recruitment purposes, and be highly related to the programs that the Armed Forces can offer and the techniques used by the Armed Forces to

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make their programs known. As a baseline indicator, about five percent of the male students tested through the ACT program enter military service within a three to four year period. Predominantly high school graduates, the mean AFQT score of this group is at the 65th percentile. The use of ACT assessment records for market segmentation and initiating personalized recruitment appeals would be expected to increase the number and perhaps even the quality of the ACT test takers who enlist in military service.

B. Purpose

The purpose of this study was to examine the effectiveness of using the ACT assessment file in recruiting college-bound young people to fill highly specialized enlisted positions. Perhaps the most important consideration in attracting the college- bound is the marketing strategy to be employed. There is no doubt that advertising appeals directed toward the entire college- bound population would be effective. However, it may be that the use of a market segmentation approach, coupled with a more personalized approach to information dissemination would be more fruitful than providing the same information to everyone in the college-bound market.

The utility of this market segmentation/personalized contact approach was tested in two pilot studies performed at the Naval Postgraduate School. The two studies differed on the basis of the method of personalized contact. Study 1 employed telephone inter-

views, while a mail campaign was used in Study 2. Both studies were conducted in association with the Defense Language Institute (DLI). The Foreign Language Center of the DLI conducts intensive training of personnel who are to serve in Military Occupational Specialties requiring foreign language skills (e.g. radio intercept operator, intelligence specialist). If the market segmentation/personalized contact approach proved to be fruitful, it could be extended to other types of highly specialized MOS.

It was reasoned that college-bound young people who had studied foreign language for several years would, on the average, be more likely to show an interest in language studies at the DLI or in military occupations requiring a foreign language. Therefore, this segment of the college-bound market was selected as the target group for the study. Also, the information provided to these people emphasized the foreign language training program at the DLI.

In addition to testing the utility of the market segmentation/ personalized contact approach, the pilot studies were designed to identify personal and situational variables which could be used in predicting whether an individual in the target group would be interested in language studies at the DLI and in military occupations requiring foreign language skills. These variables could subsequently be used in refining the market segmentation approach. That is, based on such information, the target group could be narrowed to individuals who are most likely to become interested in Army service as a result of receiving information about the DLI. This would result in more efficient use of marketing resources.

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A. Study 1

Sample

The ACT Educational Opportunity Service (EOS) identified a population of approximately 121,000 individuals whose ACT profile (i.e. Student Profile Section) for school year 1983-1984 showed the following characteristics:

- U.S. citizen (item 6)

- no reported physical disability (item 8)

- three or more years of foreign language studies completed by the time of high school graduation (items 88 through 91).

The sample of individuals selected for the treatment group in Study 1 was selected from the population of foreign language students who took the ACT during the 1983-1984 and 1984-1985 academic years. The sample was stratified to represent: 1) educational level of respondents at the time of testing, 2) educational level of respondents at the time of the telephone interview, and 3) languages studied. A systematic sampling procedure was used within each stratum.

The sampling plan for the treatment group in Study 1 is presented in Table 1. Population figures for the 1983-1984 academic year were supplied by EOS. It was assumed that the distribution for seniors taking the ACT in t e 1984-1985 academic year would be highly similar to that of the previous year. Therefore, the same

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Table 1

Sampling Plan for Study 1

Population

	Juniors (1983-1984)	Seniors (1983-1984)
Spanish	31,845	24,816
French	22,968	17,028
German	7,620	8,217
Other	5,379	4,026
Total	67,452	54,087

Sample Pool

	Juniors (1983-1984)	Seniors (1983-1984)	Seniors (1984-1985)
Spanish	132	234	234
French	95	164	165
German	31	64	63
Other	22	37	38
Total	280	499	500

Sample

	Juniors (1983-1984)	Seniors (1983-1984)	Seniors (1984-1985)
Spanish	60	58	118
French	43	41	94
German	17	18	32
Other	10	8	6
Total	130	125	250

Note: Column headings indicate educational level at the time of testing and academic year in which the test was taken.

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proportions were used in sampling seniors for both years. Diffi-culties were anticipated in obtaining telephone numbers and contact-ing people for interviews. Thus, relatively large sample pools were selected to insure that the desired number of interviews would be completed. Approximately six names were selected for 1 completed interview. In examining Table 1, it is important to note that the column headings indicate educational level at the time of testing, not at the time of the interview. Thus, of the sample of 505 who were interviewed during the winter of the 1984-1985 academic year:

- 130[3] were seniors who had participated in ACT during their junior year in 1983-1984,

- 125 were high school graduates who had taken the test as seniors in 1983-1984, and

- 250 were seniors at the time they took the test in October and December of 1984.

The control group of 78,867 consisted of the individuals remaining in the eligible population after the treatment group for Study 2 had been selected.

The split in the sample of seniors was implemented to evaluate differences between students who delay their participation in the ACT program and those who do not. It may be, for example, that individuals who participate in the ACT during their junior year are more certain of their commitment to attending college and are, therefore, less interested in obtaining information about training and skill-development opportunities that are available

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[3]The target number of 125 interviews was exceeded.

through a military enlistment. By including seniors who tested as juniors and those who tested as seniors, the sampling plan allowed investigation of this kind of hypothesis. The group of high school graduates was included because it was expected that some of these individuals had not entered college or had become dissatisfied with college and might be interested in military enlistment as an alternative.

Finally, the sample consisted of 334 females and 171 males. Certain MOS which require foreign language training are designated as combat MOS and are restricted to males. However, there are a number of language dependent MOS which females can enter. Table 2 provides a list of these MOS and shows the number of females in each MOS who graduated from the DLI over the past three years.

Materials

Four kinds of materials were employed in Study 1. These included telephone interview guidelines, follow-up materials sent to persons requesting additional information, the follow-up interview guide, and a recruiter reply form. Appendix A contains a copy of each of these materials.

The telephone interview guide was used: 1) to obtain data regarding the background, interests and career plans of students in the treatment group, and 2) to provide information about the DLI and educational benefits offered by the Army. A summary of the content of the interview guide is shown in Figure 1.

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Table 2

Distribution of Females in

Language Dependent MCS or Activities

MOS	Year (June – May)		
---	1983	1984	1985
Advisor HQ Staff/Division Level		2	
Advanced Field Operation Unit Below Division		5	1
Voice Intercept Operator	375	170	95
Translator	1		2
Processor/Translator	4		
EW Analyst/Linguist	135	120	36
Investigator	17	18	11
Interrogator	148	141	110
Interpreter (spoken)		1	1
Intelligence Analyst	4	3	1
Intelligence Staff (Service ACSI)		1	
Foreign Area Officer	2	4	
Commander/Staff-Joint/Major Command	3	1	1
Division Staff Subordinate Unit	10	12	4
Special Forces	4		
Military Police	8	5	
Legal Officer/Specialist	1	1	
U.S. Military Community Activity PAO	1	2	
Customs Police Liason	1		
Civilian Affairs Officer		1	

Note: The numbers given are the number of graduates, not the total number of trainees.

1. Desire to learn a foreign language

    1.1   Studied language for enjoyment (Question 1c)
    1.2   Studied language to learn about the culture (Question 1f)
    1.3   Enjoyed language classes (Question 2)
    1.4   Studied additional foreign languages (Question 5.1)
    1.5   Number of years additional foreign languages studied
           (Question 5.2)
    1.6   Member of foreign language club (Question 6)
    1.7   Plans additional foreign language studies (Question 7.1)
    1.8   Plans to teach a foreign language (Question 8a)
    1.9   Plans to enter a career field with a foreign language as
           a primary skill (Question 8b)
    1.10   Intends to use language skills in traveling (Question 8d)
    1.11   Plans to read literature in a foreign language (Question
           8e)

2. Perceived a need to learn a foreign language

    2.1   Needed to fulfill a language requirement (Question 1b)
    2.2   Thought it would be useful in future career (Question 1e)
    2.3   Plans to enter a career field with a foreign language as
           a secondary skill (Question 8c)

3. Language proficiency

    3.1   Grades earned in language classes (Question 3)
    3.2   Strong skills in foreign language (Question 4)

4. Need for financial aid to attend college

    4.1   Plans to use student loans to help finance education
           (Question 9.3)
    4.2   Plans to use educational grants to help finance education
           (Question 9.4)

5. Previous interest in military

    5.1   Had talked with a recruiter (Question 10.1)
    5.2   Number of military services considered (Question 10.2)

6. Prior knowledge of DLI or military occupations requiring
   foreign language training

    6.1   Prior knowledge of enlistment options requiring foreign
           language skills (Question 10.3)
    6.2   Prior knowledge of language training programs at the DLI
           (Question 11)

Figure 1. Scales Derived from Telephone Interview Guide

Information about the DLI and Army educational benefits was briefly provided during the interview. Follow-up materials[4] were sent to survey respondents who were interested in receiving additional information. These materials contained a one-page description of the DLI. This description was extracted from brochures, course catalogues, and other DLI materials, and included information regarding the location and surroundings of the DLI, qualifications of the faculty, languages offered, number of college credits earned in residence at the DLI, etc. A second page contained information about military occupations requiring foreign language training, as well as information on term-of-enlistment options (including reserve options) and educational assistance. Finally, the Market and Mission Division of U. S. Army Recruiting Command Headquarters provided two brochures which were included in the follow-up packet. These brochures provided more detailed information about educational loans and the Veterans Educational Assistance Program.[5]

The last two kinds of materials used in Study 1 were the follow-up call guide and recruiter reply form. The former was used to elicit information from respondents to determine the adequacy of the additional information sent as follow-up material and to ask respondents if they would like to be contacted by a recruiter. The

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[4]These materials were reviewed and approved by the Academic Dean and the Public Affairs Office of the DLI. The portion of the materials describing the DLI was subsequently adopted by the Public Affairs Office for its own use.

[5]These brochures were entitled, "Now About That Loan" and "The Army College Fund: The Veterans' Educational Assistance Program with extra Army benefits."

latter was used to obtain information from recruiters about the quality of the leads that were generated from the interviews.

Procedure

In January, 1985, a pilot test of the interview materials and procedures was conducted. A preliminary version of the interview guide was used to structure the telephone interviews with the 20 individuals who had been selected to participate in the pilot testing. Two objectives were accomplished during the pilot study: 1) an estimate was developed of the time and resources required to obtain the telephone number and reach individuals in the treatment group (it was found that this activity added approximately eight minutes to the twelve minute interview) and 2) the wording and sequencing of the interview items was evaluated in order to include pertinent questions, omit irrelevant questions and improve clarity.

During late January, February, and March of 1985, the revised interview guide was used in contacting individuals in the treatment group. Follow-up materials were sent to those requesting additional information about the DLI and the Army College Fund. During April 1985, follow-up calls were placed to individuals expressing the desire to be contacted again by the interviewer after having received the follow-up materials. The names of those interested in talking to a recruiter were sorted by recruiting battalion and sent to the recruiting battalions with recruiter reply forms (which were to be returned for further evaluation).

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Open-ended responses were categorized subsequent to the data collection. Also, for the interview questions for which multiple responses were possible, each response category was coded as a one if the response was positive, and zero if negative. Next, an interest score, one of the study's criteria, was generated for each individual on the basis of the amount of interest expressed (see Appendix B). This interest criterion was used to make comparisons among the three subsamples and between males and females within the treatment group in order to develop initial indications of the utility of this personalized approach to recruiting within the college-bound population.

The next set of analyses was designed to determine the degree of association between the interest measure and each of the survey items. Also included were correlations between interest and the number of affirmative responses for items in which multiple responses were permitted. The final analyses of the survey data consisted of regressing the interest measure on the scales which measured the constructs of the telephone interview guide (see Figure 1). Appendix B shows the weights used in computing the weighted sums which served as scale scores. Also included in this final set of analyses was a cluster analysis of the individuals in the sample, based on their scale scores. The purpose of these analyses was to determine whether it might be fruitful to use other variables (e.g. the constructs measured in the survey) in addition to previous foreign language training for market segmentation.

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The ACT assessment data were also analyzed to identify personal characteristics which are correlated with the interest shown by individuals in the treatment group. The ACT Educational Opportunity Service was provided with the Social Security Numbers, names, and interest scores of those who had been contacted in the telephone interviewing. The EOS then provided frequency and cross-tabular analyses for data from the ACT Interest Inventory and Student Profile Section with the interest measure from the survey. Items from the Student Profile Section that were of special interest and included personal characteristics such as:

- educational intentions (SPS items 14, and 16)
- career intentions (SPS item 15)
- desire to live or work abroad (SPS item 27)
- stated need for financial assistance (SPS items 56 and 57)
- stated need for assistance in making educational and career decisions (SPS item 19).

Finally, the SSN of individuals in the treatment and control groups were passed against the military enlistment file maintained at the Defense Manpower Data Center (DMDC) to determine how many individuals from each group had enlisted in the Army between 1 March 1985 and 31 October 1985. This eight month time period was used in comparing the enlistment rates of the treatment and control groups in both studies.

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B. Study 2

Sample

From the population of nearly 121,000 individuals identified by the ACT-EOS (see Table 1), 49,501 individuals were randomly selected for the treatment group for Study 2. The sample of individuals receiving mailed materials represented: 1) high school juniors who participated in the ACT program during the 1983-1984 academic year, and 2) high school seniors who participated in the ACT program during the 1983-1984 academic year. Table 3 shows the sampling pool and final sample used in Study 2. The proportions of individuals selected for each language group reflect the average proportions of students studying that language.[6]

The names of juniors and seniors in each language group were combined. Each language file was then sorted by zipcode to facilitate labeling and bulk-mail bundling. Of the 49,501 individuals, 43,848 received mailed information due to a shortage of letters with a Spanish or French salutation. This reduction was assumed to have a random impact on the junior/senior stratification, since the files had been combined and sorted by zip code prior to printing address labels.

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[6]National Center for Educational Statistics, Bulletin, U. W. Department of Education No. NCES 84-212b, July 1984.

Table 3

Sampling Plan for Study 2

Sample Pool[1]

	Juniors (1983-1984)	Seniors (1983-1984)
Spanish	10,938	4,766
French	9,975	4,836
German	7,039	3,936
Other	5,048	2,963
Total	33,000	16,501

Sample[2]

	Juniors and Seniors Combined (1983-1984)
Spanish	12,227
French	12,635
German	10,975
Other	8,011
Total	43,848

[1]The sample pool reflects the numbers resulting after the telephone sampling pool was drawn.
[2]Indicates the numbers of people from each language group who received mailed materials.

Materials

The mailed materials were prepared at the Naval Postgraduate School (NPS) from materials provided by DLI personnel and were approved by officials at the DLI prior to printing. The mail materials were designed to establish that the correspondence was selective and personal. These materials included: 1) an introductory letter from the Academic Dean of the DLI, with a greeting in the language that the individual had studied, 2) a fact-sheet with information about the DLI's location and programs, some military occupations requiring foreign language training, educational assistance offered by the Services, etc.[7], and 3) a business reply card. The mail materials are shown in Appendix C.

Procedure

Materials were mailed to persons in the treatment group on 5 February, 1985. Recipients were, therefore, high school seniors who had been juniors at the time they completed the ACT profile in school year 1983-1984, and high school graduates who had been seniors during school year 1983-1984. In order to evaluate the utility of this approach to recruiting college-bound youth and to develop a better understanding of factors influencing the decisions of college-bound students, data were collected and analyzed in three phases.

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[7]This fact-sheet was identical to the one included in the follow-up materials for the telephone interview.

In Phase I, replies mailed to the DLI's Academic Dean were collected at the DLI mail room weekly. Replies began to be received by in early February. The returned reply card data were regularly entered into files. The names and addresses were extracted to print mailing labels provided to DLI personnel so that additional information could be sent to individuals who returned the business reply cards.[8] These files of returned reply cards were later matched with the files originally sent from ACT. Individuals returning a reply card by 5 June 1985 were given an interest criterion code of one, while non-respondents were given a criterion code of zero. The names of individuals who returned business reply cards were sorted by recruiting battalion and sent to the recruiting battalions with recruiter reply forms (which were to be returned for further evaluation).

During Phase II, data were collected and analyzed to identify personal characteristics which were correlated with treatment group responsiveness or interest. As in Study 1, the ACT-EOS was supplied with the SSN, names and interest codes for those in the Study 2 treatment group. The EOS provided frequency data that allowed the examination of personal characteristics as related to expressed interested in receiving more information about the DLI and military occupations requiring foreign language training.

In Phase III, SSN of persons in the treatment and control[9] groups were passed against the military enlistment file maintained

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[8]A brochure from the Public Affairs Office of the DLI (DLIFLC Pamphlet 360-1 July 1982) was sent.
[9]This was the same control group of 78,867 used in study 1.

by DMDC to determine the number of enlistments from each group. This analysis provided the primary evaluation of the utility of using the ACT assessment records to facilitate target-specific recruitment of college-bound youth.

A. Study 1

Analyses of survey data

The overall effectiveness of the telephone interview as a medium for disseminating information and stimulating interest among college-bound young people was first examined by means of descriptive statistics for the level-of-interest measure. Table 4 gives the distribution for the interest measure. Of the 505 individuals interviewed, 280 (or 55 percent) were interested in receiving more information about the DLI. From these individuals who expressed some degree of interest, 57 wanted to be contacted by a recruiter. Thus, one lead was generated for every 8.86 interviews. Since the average cost per telephone interview was approximately $8[10], the cost per lead was approximately $72.

Of the 57 respondents who wanted to be contacted by a recruiter, there were 4 enlistments during the period of 1 March 1985 to 31 October 1985. Thus, at least 4 enlistments could be directly attributed to the telephone approach, so a conservative estimate of

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[10]This estimate was based on the expectation that ACT records will continue to be used as the basis of mail campaigns for the college-bound market. Thus, there would be no additional cost for acquiring names. The estimated cost per contact was based on two factors. The first was the cost of telephone usage per interview (including directory assistance, repeated attempts to reach the same individual, and the 12 minute interview). This cost was approximately $2,600 for the 505 interviews. Finally, the cost for the interviewer's time was approximately $3 per interview, or roughly $1,500 for the entire sample. Thus, the total cost of interviewing 505 individuals was estimated to be $4,100.

Table 4

Frequencies and Percentages for the

Measure of Level of Interest for Study 1

Level	Description	n	Percent
0	No follow-up materials	225	44.55
1	Follow-up materials; no follow-up call	120	23.76
2	Follow-up materials; follow-up call by interviewer	103	20.40
3	Follow-up materials; follow-up call by recruiter	57	11.29

the enlistment rate resulting from the telephone approach would be 0.79 percent. It was hypothesized that a number of the respondents from the treatment group did not request a follow-up call from a recruiter, but at a later date, contacted a recruiter on their own initiative. Therefore, it was necessary to determine the number of enlistments from the entire treatment group of 505. It was found that a total of 6 enlistments resulted from the treatment group for Study 1. The enlistment rate for the entire treatment group, then, was 1.19 percent. This figure should be viewed as an optimistic estimate, or upper bound on the enlistment rate, since it cannot be determined, for certain that the two additional enlistments were a direct result of the telephone interview. All that is known for certain is that these two individuals had been given the same information about the DLI and MOS requiring foreign language training that was given to the other four who enlisted. In any case, the the enlistment rate for the total treatment group is the appropriate one to be used in comparison with the enlistment rate for the control group.

In matching the SSN of the 78,867 individuals in the control group with the military enlistment files, it was found that 103 individuals with foreign language backgrounds had enlisted in the Army between 1 March 1985 and 31 October 1985. Thus, the enlistment rate for the control group was 0.13 percent. This figure provides a point estimate of the enlistment rate for individuals in the target population who would enlist without having received information about the DLI by either the telephone or mailout approaches.

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Clearly, the telephone approach, which yielded an enlistment rate of 1.19 percent, is effective in improving the enlistment rate of persons in the target segment of the college-bound market.

In addition to evaluating the overall effectiveness of the telephone interview, it is necessary to determine whether such variables as gender of the respondent, educational level when tested, and educational level at the time of the interview affect the amount of interest shown by respondents. Table 5 gives the breakdown of interest by gender and Figure 2 depicts the relationship between gender and interest based on percentages within gender. Out of 171 males and 334 females interviewed, 85 males (or 50 percent) and 195 females (or 58 percent) expressed some interest in the DLI. Sixteen males and 41 females asked to be contacted by a recruiter.[11] This resulted in interviews/leads ratios of 10.69/1 for males and 8.15/1 for females. Thus, the cost for females was $65 per lead, while the cost per lead for males was $86. Also, of the 57 leads resulting from Study 1, only two were recent graduates. The remaining 55 were seniors at the time they were interviewed. Thus, the interviews/leads ratios were 62.50/1 for graduates and 6.91/1 for seniors, and the cost per lead was $520 for graduates, but only $55 for seniors.[12]

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[11]Tables D-1 and D-2 in Appendix D give the cross-tabulation of interest by sample subgroup for males and females, respectively. It is important to note that only two of the sixteen male leads and none of the female leads came from the group of recent graduates.

[12]Thus, if only seniors were considered, the cost per lead for males and females separately would be considerably lower than the figures shown above.

Table 5

Cross-tabulation of Level of Interest

by Gender of Respondent for Study 1

Frequencies		
	Gender	
Interest	Female	Male
0	139	86
1	79	41
2	75	28
3	41	16
Total	334	171

Percentages Within Gender		
	Gender	
Interest	Female	Male
0	41.62	50.29
1	23.65	23.98
2	22.46	16.37
3	12.28	9.36
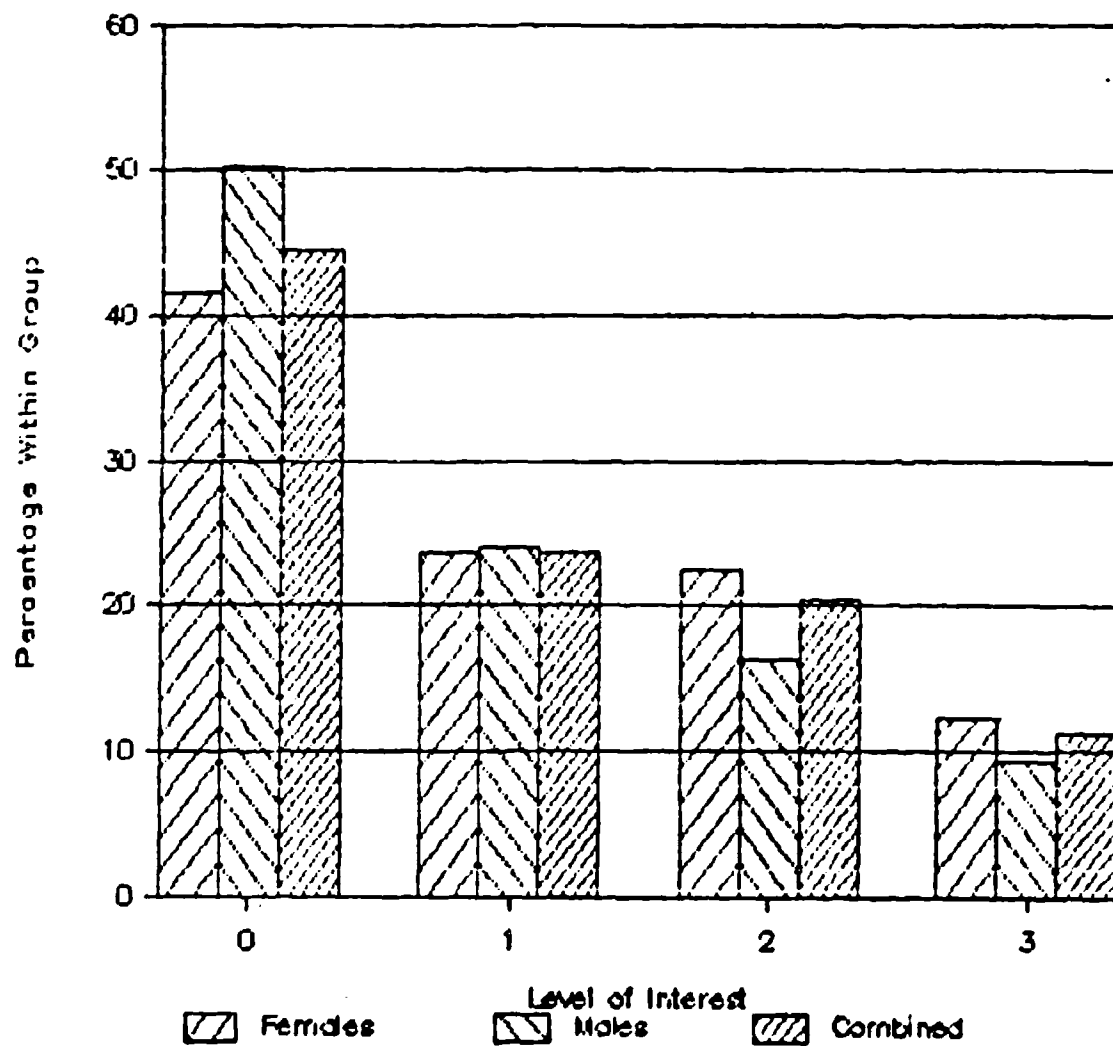
Figure 2. Histogram of Level of Interest by Sex of Respondent for Study 1

Tables 6 and 7 show the results of an analysis of variance to determine how interest was affected by gender, educational level at the time of testing, and educational level at the time of the interview. For the sample, females were more interested than males, on the average. Individuals who had taken the test as juniors displayed a higher mean level of interest than those who took the test as seniors. Also, those who were seniors at the time of the interview tended to show more interest than those who were recent high school graduates. To determine whether these mean differences did, in fact, reflect differences in the population, a three-way analysis of variance was performed, as shown in Table 7. None of the three main effects were statistically significant. Thus, there is no evidence to support a hypothesis that those who participate in the ACT as juniors are more (or less) likely to be interested than those who take the test as seniors. Also, there is no support for the notion that individuals from the college-bound population who are contacted as seniors will show more (or less) interest, on the average, than those who are contacted between nine months and one year following graduation.

The next set of analyses were performed to identify variables which could be used to predict whether an individual would be interested in language studies at the DLI and in military occupations requiring foreign language training. First, a one-way analysis of variance was performed for each categorical item from the telephone survey. The results of these analyses are shown in Table 8. A number of items were found to be significantly related to interest.

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Table 6

Means and Standard Deviations for Interest

by Gender and Sample Subgroup for Study 1

	Mean	S.D.
Gender		
Females	1.05	1.06
Males	.85	1.01
Educational Level when tested		
Juniors	1.11	1.18
Seniors	.94	1.00
Educational level when interviewed		
Seniors	1.03	1.11
Graduates	.85	.83
Total Sample	.98	1.05

Table 7

Analysis of Variance Results for Gender

and Sample Subgroup for Study 1

Source	SS	df	MS	F	p	R
Model	8.80	3	2.93	2.69	.090	.13
Gender	4.80	1	4.80	4.39	.074	.09
Educational level when tested	2.54	1	2.54	2.32	.256	.07
Educational level when interviewed	1.47	1	1.47	1.34	.494	.05
Error	547.07	501	1.09			
Total	555.87	504				

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Table 8

Analysis of Variance Results for

Categorical Variables for Study 1

	Variable	Response	n	Mean Interest	F	R
Item 1	Reasons for studying foreign language				5.57*	.10
a	Foreign language spoken in home	Yes	32	1.41		
		No	473	.96		
Item 1	Reasons for studying foreign language				11.04**	.15
b	Needed to fulfill a language requirement	Yes	268	.84		
		No	237	1.15		
Item 1	Reasons for studying foreign language				3.69	.09
c	Enjoyment	Yes	481	1.00		
		No	24	.58		
Item 1	Reasons for studying foreign language				.30	.02
d	Thought it would be easy	Yes	139	.94		
		No	366	1.00		
Item 1	Reasons for studying foreign language				11.30**	.15
e	Thought it would be useful in future career	Yes	369	1.08		
		No	136	.73		
Item 1	Reasons for studying foreign language				21.66**	.20
f	Interested in learning more about the culture	Yes	360	1.12		
		No	145	.65		
Item 1	Reasons for studying foreign language Other reasons				3.36	.08
		Yes	49	1.24		
		No	456	.96		
Item 4	Respondent's strong points in foreign language				.82	.04
a	Speaking	Yes	177	.93		
		No	328	1.02		
Item 4	Respondent's strong points in foreign language				.22	.02
b	Reading	Yes	281	1.00		
		No	224	.96		

* significant at p < .05
** significant at p < .01

Table 8 (continued)

Analysis of Variance Results for

Categorical Variables for Study 1

	Variable	Response	n	Mean Interest	F	R
Item 4	Respondent's strong points in foreign language				.04	.01
c	Writing	Yes	201	1.00		
		No	304	.98		
Item 4	Respondent's strong points in foreign language				.01	.00
d	Listening	Yes	122	.98		
		No	383	.99		
Item 4	Respondent's strong points in foreign language				8.70**	.13
e	Culture	Yes	113	1.24		
		No	392	.91		
Item 5	Studied other foreign languages				6.68*	.11
		Yes	103	1.22		
		No	398	.92		
Item 5.1	Additional foreign languages studied				1.46	.05
a	German	Yes	18	1.28		
		No	487	.97		
Item 5.1	Additional foreign languages studied				6.62*	.11
b	French	Yes	31	1.45		
		No	474	.95		
Item 5.1	Additional foreign languages studied				2.67	.07
c	Spanish	Yes	33	1.27		
		No	472	.96		
Item 5.1	Additional foreign languages studied				1.49	.05
d	Other	Yes	38	1.18		
		No	467	.97		
Item 6	Belonged to foreign language clubs in school				11.00**	.15
		Yes	222	1.15		
		No	280	.84		

* significant at p < .05
** significant at p < .01

Table 8 (continued)

Analysis of Variance Results for

Categorical Variables for Study 1

	Variable	Response	n	Mean Interest	F	R
Item 7	Planning to get more foreign language training				39.76**	.37
		Yes	280	1.27		
		Not sure	101	1.01		
		No	123	.33		
Item 7.1	Foreign language in which additional language training is planned				6.22*	.11
a	German	Yes	60	1.30		
		No	445	.94		
Item 7.1	Foreign language in which additional language training is planned				15.12**	.17
b	French	Yes	136	1.28		
		No	369	.88		
Item 7.1	Foreign language in which additional language training is planned				30.58**	.24
c	Spanish	Yes	135	1.40		
		No	370	.83		
Item 7.1	Foreign language in which additional language training is planned				1.74	.06
d	Other	Yes	58	1.16		
		No	447	.96		
Item 7.2	Where respondent plans to get additional foreign language training				1.42	.12
		College	262	1.26		
		Language school	2	.00		
		Live in foreign country	9	1.56		
		Other	7	1.57		
Item 8	How respondent expects to make use of foreign language skills				9.17**	.13
a	Teaching a foreign language	Yes	33	1.52		
		No	472	.95		

* significant at $p < .05$
** significant at $p < .01$

Table 8 (continued)

Analysis of Variance Results for

Categorical Variables for Study 1

	Variable	Response	n	Mean Interest	F	R
Item 8	How respondent expects to make use of foreign language skills				64.05**	.34
b	Career field with foreign language as a primary skill	Yes No	137 368	1.56 .77		
Item 8	How respondent expects to make use of foreign language skills				24.06**	.21
c	Career field with foreign language as a secondary skill	Yes No	337 168	1.14 .67		
Item 8	How respondent expects to make use of foreign language skills				10.75**	.14
d	Travel	Yes No	406 99	1.06 .68		
Item 8	How respondent expects to make use of foreign language skills				25.38**	.22
e	Reading for enjoyment	Yes No	256 249	1.21 .75		
Item 8	How respondent expects to make use of foreign language skills				2.31	.07
	Other	Yes No	30 475	1.27 .97		
Item 9	Plans for next fall				.66	.07
		College	479	.98		
		Vocational school	5	.60		
		Work	4	1.50		
		Other	12	1.17		
		No plans	5	.60		
Item 9.1	Certainty about plans for next fall				33.82**	.25
		Firm Not firm	443 55	.90 1.75		
Item 9.2	Respondent will attend college on a scholarship				1.69	.08
		Yes Maybe No	99 102 273	.98 1.14 .92		

* significant at p < .05
** significant at p < .01

Table 8 (continued)

Analysis of Variance Results for

Categorical Variables for Study 1

Variable	Response	n	Mean Interest	F	R
Item 9.4 Respondent plans to use educational grants to help finance education	Yes	167	1.16	4.46*	.14
	Maybe	81	.99		
	No	226	.84		
Item 10 Had investigated enlistment options in the military services	Yes	156	1.20	9.41**	.14
	No	348	.89		
Item 10.1 Had talked with a recruiter	Yes	111	1.17	4.45*	.09
	No	393	.93		
Item 10.2 Service represented by the recruiter a Army	Yes	68	1.00	.02	.01
	No	437	.98		
Item 10.2 Service represented by the recruiter b Navy	Yes	38	1.16	1.12	.05
	No	467	.97		
Item 10.2 Service represented by the recruiter c Air Force	Yes	35	1.11	.58	.03
	No	470	.97		
Item 10.2 Service represented by the recruiter d Marine Corps	Yes	26	1.31	2.61	.07
	No	479	.97		
Item 10.3 Recruiter discussed enlistment options that require foreign language training or foreign language training program at DLI	Yes	21	.81	2.91	.16
	No	99	1.25		
Item 11 Had received information about foreign language program at DLI	Yes	37	.91	1.09	.05
	No	461	1.00		

* significant at $p < .05$
** significant at $p < .01$

For example, individuals who stated that they planned to receive additional foreign language training showed a higher mean level of interest than those who did not. Similarly, individuals who planned to enter a career field with a foreign language as a primary skill were more interested than those who did not. Also, people who were uncertain about their plans for the coming year tended to show more of an interest than those who stated that their career plans were firm. Finally, of the students who plan to enter (or continue in) college next fall, those who plan to use educational grants to help finance their education were more interested than those who do not.

Next, zero-order correlations, as displayed in Table 9, were computed between the level-of-interest measure and the continuous variables from the telephone survey. Three of these variables are particularly noteworthy. First, the number of ways in which a respondent expected to make use of his or her foreign language skills showed a fairly strong correlation to interest. Also, the degree to which respondents enjoyed their language classes, as compared to their other high school classes, was moderately correlated with interest, as was the number of additional foreign languages which the respondent intends to study.

The relationships between interest and the six constructs employed in the survey instrument were examined to answer questions relating to market segmentation. The zero-order correlations between the six scales and the interest measure are shown in Table 10. Only the sixth scale (Prior knowledge of DLI or military

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Table 9

Correlations Between Interest and

Continuous Variables for Study 1

	Variable	r
Item 1	Number of reasons for studying foreign language	.14**
Item 2	Enjoyment of language classes compared to other high school classes	.28**
Item 3	Grades earned in language classes	.11**
Item 4	Number of strong points in foreign language	.06
Item 5.1	Number of additional foreign languages studied	.14**
Item 5.2	Number of years additional languages studied	.01
Item 7.1	Number of additional foreign languages in which respondent plans to have additional training	.30**
Item 8	Number of ways in which respondent expects to use foreign language skills	.41**
Item 10.2	Number of recruiters contacted by respondent	.05

** significant at p < .01

Table 10

Correlations Between Interview Scales

and Interest for Study 1

	Scale	r
1.	Desire to learn a foreign language	.41**
2	Perceived a need to learn a foreign language	.11*
3.	Language proficiency	.10*
4.	Need for financial aid to attend college	.10*
5.	Previous interest in military	.11*
6.	Prior knowledge of DLI or military occupations requiring foreign language training	-.05

* significant at $p < .05$
** significant at $p < .01$

occupations requiring foreign language training) was not significantly related to interest. Scales 2 through 5 were moderately related to interest, while the first scale (Desire to learn a foreign language) showed a fairly strong relationship with interest.

Table 11 shows the correlations between the interview scales. Most of the correlations are in the low to moderate range. However, the relationship between scale 1 (Desire to learn a foreign language) and scale 3 (Language proficiency) is somewhat stronger ($r = .31$). Similarly, there was a fairly strong relationship ($r = .33$) between scale 5 (Previous interest in the military) and scale 6 (Prior knowledge of DLI).

A regression analysis was performed to determine the relative contribution of scales 1 through 5[13] in predicting interest. The results of this analysis are shown in Table 12. Only scale 1 had a regression coefficient which was statistically significant. Thus, the regression analysis did not provide any additional insights that would be useful for purposes of market segmentation.

The final set of analyses for the telephone interview data involved a cluster analysis of individuals on the basis of the first five scale scores. The FASTCLUS procedure of the Statistical Analysis System was used to group survey respondents into relatively homogeneous subgroups. FASTCLUS uses a partitioning algorithm similar to that of MacQueen's (1967) k-means technique. Initially, cluster solutions were obtained with the number of clusters ranging

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[13]Scale 6 was not included in the analysis because it was not significantly related to interest (see Table 10).

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Table 11

Intercorrelations Between Interview

Scales for Study 1

	Scales				
Scales	1	2	3	4	5
2	.12				
3	.31	.11			
4	.05	.01	.05		
5	.08	.06	.03	.10	
6	.19	.05	.03	-.02	.33

Table 12

Regression of Interest on

Interview Scales for Study 1

Variable	Coefficient	t	p
Intercept	-.10	-0.43	.6672
Scale 1	.18	9.27	.0001
Scale 2	.08	1.43	.1511
Scale 3	-.04	-0.98	.3278
Scale 4	.05	1.70	.0892
Scale 5	.07	1.65	.1001

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from two to ten. A plot of the cubic clustering criterion against the number of clusters (see Figure 3) revealed a peak at three clusters, indicating that a good solution had been obtained.[14] The three resulting clusters contained 122, 208, and 175 individuals for clusters 1, 2, and 3, respectively.

Next, cluster centroids and the mean level of interest were computed for each of the 3 clusters, as shown in Table 13 and Figure 4. Also, cluster membership was cross-tabulated with interest, as displayed in Table 14 and Figure 5. As Figure 4 reveals, the three clusters have very similar profiles. The profile for cluster 2 is consistently lower than the profiles for clusters 1 and 3. However, the only sizeable difference was on scales 1 and 5. Also, as Figure 5 shows, individuals in cluster 2 are far less likely to show any interest than individuals in clusters 1 and 3. Since there is little separation between the profiles and a high degree of similarity between the clusters, in terms of the shape of their profiles, it appears that the cluster analysis does not provide much additional information that would be useful for market segmentation. Rather, it simply confirmed the findings of the previous analyses which showed that people who score higher on certain constructs are more likely to be interested.

Analyses of ACT assessment data

A number of variables from the ACT assessment file were also examined to determine their usefulness in predicting the level of

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[14]p. 420, SAS User's Guide: Statistics (1982 Edition).
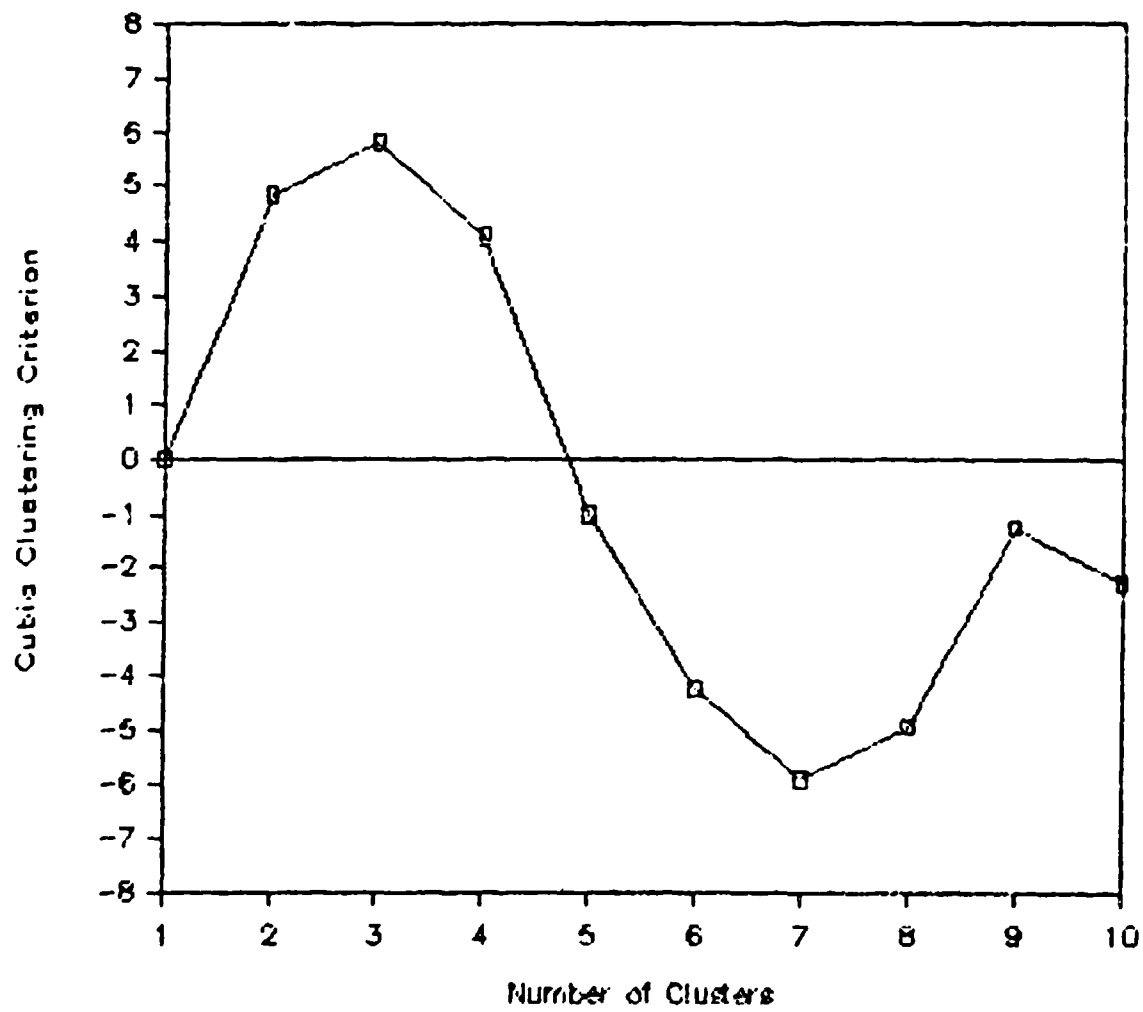
Figure 3. Plot of the Cubic Clustering Criterion on the Number of Clusters for Study 1

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Table 13

Cluster Centroids and Mean Interest Values

for the Three Cluster Solution for Study 1

	Mean Values		
	Cluster		
Variable	1	2	3
Scale 1	6.01	4.32	7.19
Scale 2	2.02	1.49	2.38
Scale 3	5.28	4.78	5.74
Scale 4	2.20	1.61	1.96
Scale 5	2.18	0.08	0.12
Interest	1.20	0.58	1.32
	Standard Deviations		
Scale 1	2.37	1.64	2.12
Scale 2	0.75	0.76	0.63
Scale 3	1.16	0.88	0.90
Scale 4	1.61	1.58	1.62
Scale 5	1.50	0.30	0.33
Interest	1.10	0.89	1.03
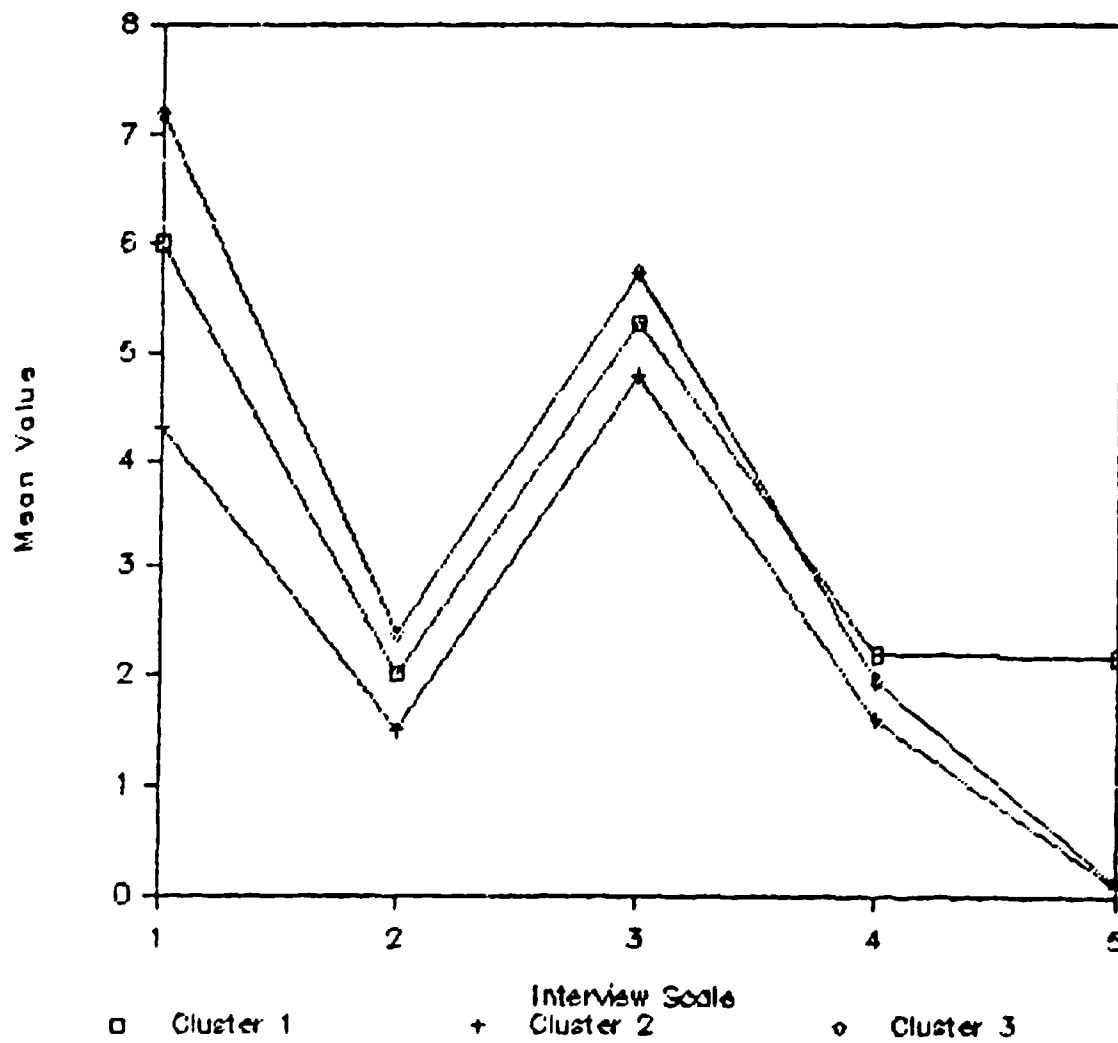
Figure 4. Plot of Cluster Centroids for Study 1

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Table 14

Cross-tabulation of Interest by

Cluster Membership for Study 1

	Frequencies		
	Cluster		
Interest	1	2	3
0	44	134	47
1	30	38	52
2	28	26	49
3	20	10	27
	Percentages Within Cluster		
0	36	64	27
1	25	18	30
2	23	3	28
3	16	5	15
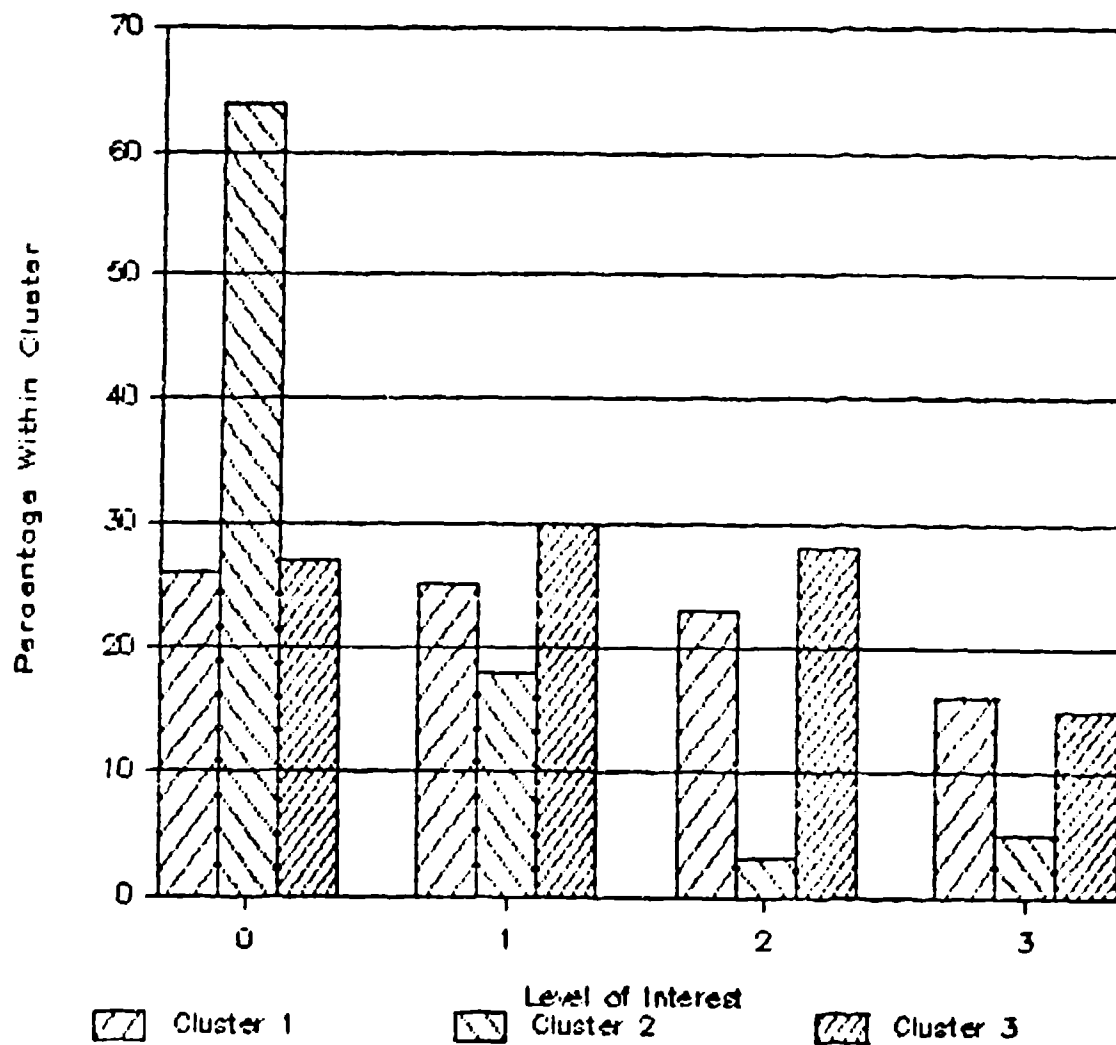
Figure 5. Histogram of Level of Interest by Cluster for Study 1

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interest generated by the telephone approach to information dissemination. Table 15 shows the results for chi-square tests for independence and the associated contingency coefficient for each cross-tabulation. The cross-tabulations for these variables are shown in Tables D-3 through D-11 of Appendix D.

Of the nine items examined, only one had a significant chi-square value. This was item 27, which dealt with interest in studying in a foreign country. For females and for the combined sample, those who had given an affirmative response to this item on the SPS tended to show more interest and were more likely to request recruiter contact than those who did not (see Table 16). While the results were similar for males (treated separately), the relationship was not strong enough to be statistically significant. However, this may have been due to a lack of statistical power for the test resulting from the relatively small sample size for males.

B. Study 2

The overall effectiveness of the mail-out approach was evaluated by examining the return rates for the business reply cards (BRC), as shown in Table 17. In all, 847 BRC were returned out of the 43,848 that were sent out. However, only 746 were found to match the names from the mailing lists[15]. Thus, one lead resulted for

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[15]A substantial portion of the mismatches were due to siblings of the addressee returning the BRC. Another sizeable portion of mismatches resulted from the use of nicknames combined with changed addresses (especially for graduates), illegible handwriting, etc.).

Table 15

Relationship of Interest to Selected

Student Profile Items for Study 1

Item Number	Item	Males		Females		Combined	
		Chi-square	Contingency Coefficient	Chi-square	Contingency Coefficient	Chi-square	Contingency Coefficient
14	How sure are you about your current choice of program of study?	2.87	.13	3.03	.10	1.18	.05
15	How sure are you about your first occupational choice?	8.18	.22	4.89	.12	2.94	.08
19	I need help deciding on my educational and career plans.	0.75	.07	2.95	.09	1.05	.05
27	Interested in studying in a foreign country during undergraduate years in college.	6.10	.19	12.62**	.19	20.08**	.20
56	I expect to apply for financial aid to attend college	2.53	.12	3.07	.10	2.74	.07
57	I expect to work while attending college.	2.14	.11	6.38	.14	7.45	.12
58	About how many hours per week do you expect to work while attending college?	10.17	.24	14.56	.21	9.94	.14
59	Please indicate, as accurately as possible, your family's income.	34.41	.42	32.57	.31	32.79	.25
63	How far away do you live from the college you expect to attend?	10.25	.24	16.81	.22	14.82	.17

* significant at $p < .05$
** significant at $p < .01$

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Table 16

Relationship Between Interest and

Student Profile Section Item 27 for Study 1

Item 27: Interested in studying in a foreign country during under-
graduate years in college.

	Males			
	Interest			
Response	0	1	2	3
Yes	38	29	21	13
No	58	21	14	8

	Females			
	Interest			
Response	0	1	2	3
Yes	33	25	27	15
No	51	23	17	9

	Combined			
	Interest			
Response	0	1	2	3
Yes	35	26	25	14
No	54	22	16	8

Note: Numbers are percentages of people at each interest level
within a response category.

Table 17

Cross-tabulation of Interest by

Gender of Respondent for Study 2

Females		
Response	Frequency	Percent
BRC[1] not returned	25,602	98.35
BRC returned	430	1.65
Males		
BRC not returned	17,500	98.23
RC returned	316	1.77
Combined		
BRC not returned	43,102	98.30
BRC returned	746	1.70

[1]Business reply card

every 58.78 individuals contacted by mail. Since the average cost per contact was $0.05[16], the overall cost per lead was approximately $3.

A total of 30 Army enlistments resulted from the 746 leads forwarded to recruiters. Thus, a conservative estimate of the enlistment rate for the mailout approach is 0.07 percent. However, it was expected that some of the individuals in the treatment group who did not return a business reply card, might have been interested enough in the information they had received to contact their local recruiters. Thus, it was also necessary to determine the number of individuals in the entire treatment group who enlisted. In matching the treatment group with the military enlistment file, it was found that 116 Army enlistments had come from this group of 43,848. The more optimistic estimate of the enlistment rate for the mailout approach is, then, 0.26 percent. In comparing this figure with the enlistment rate of 0.13 percent for the control group, it is clear that the mailout approach is also effective in improving the enlistment rate of individuals in the target segment of the college-bound population. However, the 0.26 percent enlistment rate for the mailout group is considerably lower than the 1.19 percent resulting from the telephone approach.

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[16]This estimate was based on the expectation that ACT records will continue to be used as the basis of other mail campaigns for the college-bound market. Thus, there would be no additional cost for acquiring names. The estimated cost per contact, for this study, includes printing of the letter, fact sheet and business reply card, and preparation for bulk mailing.

In addition to determining the effectiveness of the overall interview, it was necessary to examine the response rates for males and females separately as well as those for seniors and recent graduates. Out of 17,816 males and 26,032 females who were contacted, 316 males and 430 females returned a BRC. Thus, the contacts/leads ratios were 56.38/1 for males and 60.54/1 for females. The cost was $3 per lead for both males and females. The breakdown of interest by educational level is given in Table 18. A total of 503 seniors (out of 29,498) and 243 graduates (out of 14,350) returned a BRC. The resulting contacts/ leads ratios were 58.64/1 for seniors and 59.05/1 for graduates. The cost per lead was approximately $3 for both groups. Table 19 gives a three-way cross-tabulation of interest by gender by level of education. Again, only minor differences in response rates are evident. Finally, a log-linear model was used to test for the effects of gender and level of education, as shown in Table 20. The chi-square values for both main effects and the interaction were non-significant. Thus, there are no differences in the effectiveness of the mailout approach between males and females or seniors and graduates.

The remaining analyses involved the same variables from the ACT assessment file that were examined in Study 1. Chi-square values and contingency coefficients showing the relationship of each variable to interest generated by the mailout are shown in Table 21. Seven of the nine variables were related to interest at better than chance levels. However, the magnitude of the contingency coefficients shows that these relationships are not of

Table 18

Cross-tabulation of Interest by

Level of Education for Study 2

Juniors (1983-1984) - Seniors (1984-1985)		
Response	Frequency	Percent
BRC not returned	28,995	98.29
BRC returned	503	1.71
Seniors (1983-1984) - Graduates (1984-1985)		
BRC not returned	14,107	98.31
BRC returned	243	1.69

Table 19

Cross-tabulation of Interest by Gender of
Respondent by Level of Education for Study 2

	Juniors (1983-1984) - Seniors (1984-1985)			
	Gender			
	Females		Males	
Response	Frequency	Percent	Frequency	Percent
BRC not returned	16,836	98.38	12,159	98.18
BRC returned	278	1.68	225	1.82
	Seniors (1983-1984) - Graduates (1984-1985)			
BRC not returned	8,766	98.30	5,341	98.32
BRC returned	152	1.70	91	1.68

Table 20

Log-linear Model for Effects of Gender of Respondent
and Level of Education on Interest for Study 2

Source	Chi-square	p
Intercept	10098.99	.0001
Gender	0.36	.5504
Level of Education	0.04	.8347
Interaction	0.66	.4153
Likelihood Ratio	0.00	1.0000

Table 21

Relationship of Interest to Selected

Student Profile Items for Study 2

Item Number	Item	Males		Females		Combined	
		Chi-square	Contingency Coefficient	Chi-square	Contingency Coefficient	Chi-square	Contingency Coefficient
14	How sure are you about your current choice of program of study?	2.67	.01	6.94	.02	9.27**	.02
15	How sure are you about your first occupational choice?	5.91	.01	9.93**	.01	15.81**	.02
19	I need help deciding on my educational and career plans.	0.63	.01	0.59	.01	1.28	.01
27	Interested in studying in a foreign country during undergraduate years in college.	88.42**	.07	111.18**	.07	192.93**	.07
56	I expect to apply for financial aid to attend college.	3.28	.01	12.99**	.02	15.25**	.02
57	I expect to work while attending college.	7.02**	.02	30.95**	.04	35.88**	.03
58	About how many hours per week do you expect to work while attending college?	16.72**	.03	35.46**	.04	48.92**	.03
59	Please indicate, as accurately as possible, your family's income.	18.73	.03	24.54**	.03	38.44	.03
63	How far away do you live from the college you expect to attend?	3.63	.01	6.73	.02	8.87	.01

* significant at p < .05
** significant at p < .01

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any practical significance. This is further demonstrated in Tables 22 through 28 which provide a breakdown of interest within response categories for each of the seven items. Thus, none of these items would be of use in market segmentation when using a mailout approach.

Table 22

Relationship Between Interest and

Student Profile Section Item 14 for Study 2

Item 14: How sure are you about your current choice of program of study?

	Males	
	Interest	
Response	0	1
Very sure	98.0	2.0
Fairly sure	98.3	1.6
Not sure	98.4	1.6

	Females	
	Interest	
Response	0	1
Very sure	98.1	1.9
Fairly sure	98.4	1.6
Not sure	98.7	1.3

	Combined	
	Interest	
Response	0	1
Very sure	98.1	1.9
Fairly sure	98.3	1.7
Not sure	98.6	1.4

Note: Numbers are percentages of people at each interest level within a response category.

Table 23

Relationship Between Interest and

Student Profile Section Item 15 for Study 2

Item 15: How sure are you about your first occupational choice?

	Males	
	Interest	
Response	0	1
Very sure	98.0	2.1
Fairly sure	98.2	1.8
Not sure	98.6	1.3

	Females	
	Interest	
Response	0	1
Very sure	98.0	2.0
Fairly sure	98.3	1.7
Not sure	98.7	1.3

	Combined	
	Interest	
Response	0	1
Very sure	98.0	2.0
Fairly sure	98.3	1.7
Not sure	98.7	1.3

Note: Numbers are percentages of people at each interest level within a response category.

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Table 24

Relationship Between Interest and

Student Profile Section Item 27 for Study 2

Item 27: Interested in studying in a foreign country during undergraduate years in college.

Males		
	Interest	
Response	0	1
Yes	97.0	3.0
No	98.9	1.1

Females		
	Interest	
Response	0	1
Yes	97.5	2.5
No	99.1	0.9

Combined		
	Interest	
Response	0	1
Yes	97.3	2.7
No	99.0	1.0

Note: Numbers are percentages of people at each interest level within a response category.

Table 25

Relationship Between Interest and

Student Profile Section Item 56 for Study 2

Item 56: I expect to apply for financial aid to help meet college expenses.

	Males	
	Interest	
Response	0	1
Yes	98.1	1.9
No	98.6	1.4

	Females	
	Interest	
Response	0	1
Yes	98.2	1.8
No	98.9	1.1

	Combined	
	Interest	
Response	0	1
Yes	98.2	1.8
No	98.8	1.2

Note: Numbers are percentages of people at each interest level within a response category.

Table 26

Relationship Between Interest and

Student Profile Section Item 57 for Study 2

Item 57: I expect to work while attending college.

	Males	
	Interest	
Response	0	1
Yes	98.0	2.0
No	98.6	1.4

	Females	
	Interest	
Response	0	1
Yes	98.0	2.0
No	98.9	1.1

	Combined	
	Interest	
Response	0	1
Yes	98.0	2.0
No	98.8	1.2

Note: Numbers are percentages of people at each
       interest level within a response category.

Table 27

Relationship Between Interest and

Student Profile Section Item 58 for Study 2

Item 58: About how many hours per week do you plan to work during your first year of college?

	Males	
	Interest	
Response	0	1
None	98.6	1.4
1-10	98.3	1.7
11-20	98.2	1.8
21-30	97.4	2.6
31 or more	96.2	3.8

	Females	
	Interest	
Response	0	1
None	98.9	1.1
1-10	98.1	1.9
11-20	98.2	1.8
21-30	97.7	2.3
31 or more	95.9	4.1

Note: Numbers are percentages of people at each interest level within a response category.

Table 27 (continued)

Relationship Between Interest and

Student Profile Section Item 58 for Study 2

Item 58: About how many hours per week do you plan to
work during your first year of college?

	Combined	
	Interest	
Response	0	1
None	98.8	1.2
1-10	98.2	1.8
11-20	98.2	1.8
21-30	97.5	2.5
31 or more	96.0	4.0

Table 28

Relationship Between Interest and

Student Profile Section Item 59 for Study 2

Item 59: Please estimate as accurately as possible your family's income.

	Males	
	Interest	
Response	0	1
Less than $6,000	96.7	3.3
$ 6,000-$11,999	96.6	3.4
$12,000-$17,999	97.9	2.1
$18,000-$23,999	98.3	1.7
$24,000-$29,999	98.0	2.0
$30,000-$35,999	98.5	1.5
$36,000-$41,999	98.3	1.7
$42,000-$49,999	98.5	1.5
$50,000-$59,999	98.4	1.6

	Females	
	Interest	
Response	0	1
Less than $6,000	97.9	2.1
$6,000-11,999	97.4	2.6
$12,000-$17,999	98.0	2.0
$18,000-23,999	97.9	2.1
$24,000-$29,999	98.1	1.9
$30,000-$35,999	98.7	1.3
$36,000-$41,999	98.5	1.5
$42,000-$49,999	98.7	1.3
$50,000-$59,999	98.6	1.4

Note: Numbers are percentages of people at each interest level within a response category.

Table 28 (continued)

Relationship Between Interest and

Student Profile Section Item 59 for Study 2

Item 59: Please estimate as accurately as possible your
family's income.

	Combined	
	Interest	
Response	0	1
Less than $6,000	97.5	2.5
$6,000-11,999	97.1	2.9
$12,000-$17,999	97.9	2.1
$18,000-23,999	98.0	2.0
$24,000-$29,999	98.0	2.0
$30,000-$35,999	98.6	1.4
$36,000-$41,999	98.4	1.6
$42,000-$49,999	98.6	1.4
$50,000-$59,999	98.5	1.5

IV. CONCLUSIONS

A. Two Approaches for Disseminating Information

A major focus of this research was to examine the effectiveness of two approaches for disseminating information about Army opportunities to the college-bound population. In both approaches (i.e. telephone and mail contact) the information was tailored to a specific segment of the college-bound market. For both pilot studies, the target segment of the population was high school seniors and recent graduates with at least three years of foreign language training. The information provided to these individuals dealt with foreign language training at the Defense Language Institute, MOS requiring foreign language training, and educational benefits offered by the Services (especially the Army's VEAP).

Clearly, the most important considerations in comparing the two approaches are those which would facilitate recruitment planning. Table 29 provides a comparison based on three important criteria: 1) the number of individuals who must be contacted in order to generate one lead, 2) the number of leads required to obtain one enlistment, and 3) the number of individuals who must be contacted in order to obtain one enlistment. Interval estimates are provided for the third criterion, based on the conservative and optimistic

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Table 29

Summary of Effectiveness of Telephone Versus

Mailout Approach to Information Dissemination

	Contacts/Leads Ratios	
	Approach	
Sample Subgroup	Telephone	Mailout
Gender		
Males	10.69/1	56.38/1
Females	8.15/1	60.54/1
Educational level		
Seniors	6.91/1	58.64/1
Graduates	62.50/1	59.05/1
Gender by educational level		
Male seniors	8.93/1	55.04/1
Male graduates	23.00/1	59.69/1
Female seniors	6.22/1	61.56/1
Female graduates	---	58.67/1
Total sample	8.86/1	58.78/1
	Leads/Enlistments Ratios	
Gender		
Males	8.00/1	19.75/1
Females	20.50/1	30.71/1
Total sample	14.25/1	24.87/1

Note: No leads were generated from the group of female graduates in Study 1.

Table 29 (continued)

Summary of Effectiveness of Telephone Versus

Mailout Approach to Information Dissemination

| | | Contacts/Enlistments Ratios | |
| | | Approach | |
Sample Subgroup		Telephone	Mailout
Gender			
Males	minimum	42.75/1	193.65/1
	maximum	85.50/1	1113.50/1
Females	minimum	167.00/1	1084.67/1
	maximum	167.00/1	1859.43/1
Total sample	minimum	84.17/1	378.00/1
	maximum	126.25/1	1461.60/1

estimates of the number of enlistments which can be directly attri-
buted to the two pilot studies[17]. In Table 30, the two approaches
are compared in terms of the cost of each lead and the cost per
enlistment. Again, interval estimates are given for the cost per
enlistment. The most obvious conclusions from Tables 29 and 30 are
that telephone contact is more efficient in producing leads and
enlistments, while the mailout approach is more cost effective. It
is also important to note that effectiveness, especially for the
telephone approach, varies considerably by sample subgroup. Both
approaches seem to be more effective in generating enlistments
among males than among females. However, this may be due, in part,
to restrictions on the enlistment of females into MOS requiring
foreign language training.

B. Use of Predictors in Market Segmentation

In addition to comparisons of telephone and mailout approaches
to information dissemination, this research focused on a market
segmentation approach to recruiting college-bound young people.
Specifically, the appropriate degree of segmentation was examined.
For both studies, the target segment of the population was defined,
a priori, as high school seniors and recent graduates with three or

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[17]The conservative estimates are based on the number of
enlistments from the 57 individuals (from the telephone survey)
who requested to be contacted by a recruiter and from the 746
(from the mailout) who returned business reply cards. The optimistic
estimates are based on the number of enlistments from the entire
treatment group for each study.

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Table 30

Summary of Costs for Telephone Versus

Mailout Approach to Information Dissemination

Cost Per Lead (in dollars)		
	Approach	
Sample Subgroup	Telephone	Mailout
Gender		
Males	86	3
Females	65	3
Educational level		
Seniors	55	3
Graduates	520	3
Gender by educational level		
Male seniors	71	3
Male graduates	184	3
Female seniors	50	3
Female graduates	---	3
Total sample	72	3
Cost Per Enlistment		
Gender		
Males	minimum	342	10
	maximum	684	56
Females	minimum	1,336	54
	maximum	1,336	93
Total sample	minimum	673	19
	maximum	1,010	73

Note: Figures represent estimated additional dollar cost
if ACT records are used as the basis of other mail
campaigns for the college-bound market.

more years of foreign language training. The question, then, was whether further segmentation would be worthwhile. That is, if demographic variables, personal characteristics, interests, etc., may be used to identify segments of the college-bound population who are more likely to be interested in Army service, then more emphasis could be placed on contacting such groups.

Analyses of telephone survey data

A series of statistical analyses was performed on the telephone survey data from Study 1. Analysis of variance and correlational techniques were used to examine the relationship of each item in the survey to the amount of interest generated by the telephone approach. A large number of the survey items were found to be significantly related (both in a statistical and a practical sense) to interest. One way of summarizing the results of these analyses is to synthesize them into a profile of the respondents who showed the most interest in the DLI and in military occupations requiring foreign language training. In studying Tables 8 and 9, the profile of these individuals that emerged is as follows:

1. they tend to have a strong interest in studying languages (e.g. they had studied or had planned to study more than one foreign language, they wanted a career that would utilize their foreign language skills),

2. they tend to be somewhat uncertain about their plans for the succeeding year,

3. they plan to use educational grants to help finance their education (not necessarily scholarships or student loans), and

4. they had previously considered military service (although they had not necessarily talked with a recruiter).

A second series of analyses was performed on the telephone survey data, using a set of six constructs developed from the individual items in the survey instrument. The items were grouped into underlying constructs on an a priori basis. The constructs included:

1. Desire to learn a foreign language,

2. Perceived a need to learn a foreign language,

3. Language proficiency,

4. Need for financial aid to attend college,

5. Previous interest in the military, and

6. Prior knowledge of the DLI or military occupations requiring foreign language training.

The first five constructs were significantly related to interest. Furthermore, the correlation coefficient for the first construct was considerably higher than those of the other five, indicating that desire to learn a foreign language is perhaps the best predictor of interest generated by the telephone approach.

These results, for the most part, simply confirm the results of analyses performed on the individual survey items. The intent in developing these constructs, however, was to have a limited number of variables which would adequately represent the content of

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the telephone interview. Thus, a manageable number of variables could be used in additional analyses which might provide useful results for a more refined approach to market segmentation. This expectation was not fulfilled; neither the regression analysis nor the cluster analysis performed on the five constructs yielded results that would be of much use for further market segmentation. Thus, apparently, the initial level of market segmentation could not be substantially improved upon, based on these data.

Analyses of Student Profile Section data

Data from the ACT assessment file were examined for two reasons. First, all variables which were found to be significant predictors of interest could be used in market segmentation. That is, such variables could be used to select a subset of the target segment of the population which would be expected to yield the greatest number of leads. Then, recruiting efforts for a given type of MOS would be concentrated on the individuals in that group. For instance, suppose that individuals who gave affirmative responses to SPS item 15 (I need help deciding on my educational and career plans) tend to show more interest in the DLI than those who gave negative responses. In this case, only individuals with three or more years of foreign language training who had answered, "Yes," to item 15 would be contacted and given information about the DLI, etc. The use of additional segmentation of the college-bound market would be more efficient in terms of contacts per lead and cost per lead than segmentation solely on the basis of foreign language training.

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The second reason for using these data was to examine the possible moderating role of the information dissemination approach on the relationship between interest and each variable. This was accomplished by comparing the degree of association of each variable with interest for the telephone interview sample with that of the mailout sample.

It was expected that the information derived from these analyses might be some of the most useful from the two studies. However, the results were somewhat dissappointing. Of the nine SPS items examined, only one was significantly related to interest where the telephone approach to information dissemination was employed. For this item (item 27), it was found that those who were interested in studying in a foreign country during their undergraduate years in college tended to show more interest in the DLI. For the mailout study, seven of the nine SPS items were related to interest at a statistically significant level. However, none of the relationships were strong enough to be of any practical significance for use in market segmentation. Again, variance was limited to some degree by the initial record selection process.

Therefore, only item 27 could be used in the manner described above and only if information were to be disseminated by telephone. Thus, the method of information dissemination does appear to moderate, to some degree, the relationship between interest in studying in a foreign country and interest in the DLI. This seems to imply that individuals who are contacted by telephone are more likely to perceive Army service and foreign language training as a

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means of achieving their goals of traveling abroad than those who are contacted by mail. One possible reason for this apparent moderator effect may be that individuals who were contacted by telephone were more attentive and gave more thought to the information they received than people who received the same information by mail.

C. Implications for Future Research

A number of important issues were raised in this research. While many questions have been answered about information dissemination and market segmentation, with regard to recruiting the college-bound, a few caveats should be noted.

First, there is no way, on the basis of this research, to separate the effects of the different types of information presented. That is, all individuals in the treatment group, for both studies, received information about the DLI, military occupations requiring foreign language training, and educational benefits for military service. Thus, there is no way to determine whether one type of information generated more interest than the others or the combination of different types of information was responsible for the effect. It was assumed that providing all three types of information to people with language backgrounds would generate more interest than just providing information about educational benefits. However, this assumption has not been tested. Since the Army recently has established a mailout campaign for informing the college-bound

about educational benefits, it would be a relatively simple matter to study this issue. A second treatment group could be selected consisting of individuals with three or more years of foreign language study. This group would receive materials which only dealt with educational benefits and their response rate could be compared to that of the treatment group in Study 2.

A second caveat is that this research does not provide any means of separating the effects of conducting a survey (as opposed to simply providing information) from the effect due to method of disseminating information. That is, it cannot be determined from Study 1 what the effects fo the telephone approach would be if no survey were conducted. Conversely, a mail survey might have yielded greater returns in Study 2 than simply providing information. It may be that members of the college-bound population are more receptive to information after they have answered questions which deal with their own interests, career plans, etc. This issue could be explored by conducting a telephone campaign which would not include a survey (i.e. which simply provided information) and an additional mailout campaign in which the treatment group would receive a questionnaire with the same questions used in the telephone interviews in Study 1 (in addition to information about the DLI). This would yield a fully-crossed experimental design that would provide the basis for a definitive answer to this question.

Finally, it was assumed that market segmentation on the basis of foreign language training would be more effective in generating interest in the DLI, etc., than providing the same information to

the entire college-bound population. There is no reason to suspect that this assumption is erroneous. Nevertheless, it has not yet been tested.

Regardless of the caution that must be taken in interpreting the results of this report, it is clear that the methods used in reaching the college-bound population are promising. Thus, the most important direction for future research would be to extend the approach to other types of technical or other specialized skill requirements.

D. Application to Recruiting Practice

If the approach presented here is found to be equally effective for other types of occupations, then it might be worthwhile to establish special recruiting efforts or activities for MOS where there is a growing need for technical or other specialized skills. As the pool of high quality young people decreases in size, the establishment of special recruiting activities may become necessary for meeting manpower requirements. Even at this time, there may be a number of MOS in which it would be worthwhile to expend more resources in attracting college-bound young people.

Furthermore, it is likely that the number of leads generated and even the number of contracts would be greater, under such a system, than was evident in this research. There are two reasons for this hypothesis. First, in the studies reported here, there was a time lag of four to ten weeks between the time that the leads

were generated and the time the recruiters contacted each lead. This was due, in large part, to the fact that in the context of a research project it was not feasible to process the leads and send them on to recruiters on a case by case basis. Rather, the 803 leads generated by the two pilot studies were processed in three batches, several weeks apart. As a result, a number of these leads may have "cooled off" by the time they were contacted by a recruiter. If an activity were established for generating and processing these leads, the response time would be shortened considerably, since this would be one of th. primary responsibilities for such an activity.

Secondly, the number of leads and contracts could be expected to increase if the activity were either: 1) to include recruiters who have special knowledge of the MOS and special skills and training programs for which the activity is recruiting, or 2) be responsible for providing more information to field recruiters about these MOS and training programs at the time that the leads are forwarded to the field. The assumption here is that collegebound young people who are attracted to the Army primarily because of a particular type of skill training will expect their recruiters to be able to answer all of their questions about that training and the related MOS. If recruiters are unable to provide this type of information, they may be less likely to perceive military service as being congruent with their interests, career goals, etc.

The first alternative, that of having recruiters who specialize in recruiting the college-bound for certain MOS, is advantageous in

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that it gives the prospect a sense of being important to the Army.
The obvious disadvantage is that it is more costly. However,
it would obviously not be necessary to place such specialists in
each recruiting station. In fact, it would probably be sufficient,
in most recruiting battalions, to give the responsibility for
college-bound recruiting (for MOS requiring special kinds of skills
or aptitudes) to a handful of special recruiters.

If this alternative were considered to be infeasible, then
it would clearly be essential to provide recruiters with more
information about these types of opportunities than they are cur-
rently using. One alternative would be to develop a series of
presentations for the Joint Optical Information Network which would
be targeted toward the interests, career plans, etc. of the college-
bound. It would be neccessary, in such presentations, to provide
more in-depth information about each type of training program and
military occupation for which college-bound young people would be
best suited.

Finally, a special activity for college-bound recruiting
could be given the responsibility for identifying MOS and skill
areas where the need for college-bound young people is greatest.
In addition, there would be the responsibility for developing
materials for each MOS and skill area and deciding on the appropriate
approach to be taken in making initial contacts. The telephone
approach could be employed for MOS undergoing a serious manpower
shortage, when the cost per lead is less important. The establish-
ment of such a recruiting activity would permit the development of

an exemplary recruiting format which could be altered for recruit-
ment in specific MOS. This alternative would provide the flexibility
required for changing personnel needs as well as a structured
approach to be taken for effective recruitment.

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Materials Used in Study 1

Telephone Interview Guidelines
for College-Bound Study

Name of student _____

Address _____

_____

Telephone number __(_____)_____

SSN of student _____

Language _____

Sample   Junior (83-84)/Senior (84-85)   _____

                Senior (83-84)/Graduate (84-85) _____

                Senior (84-85)   _____

Date contacted _____

Send information sheet?   Yes _____   No _____

Follow-up Call   No call   _____

                  Recruiter   _____

                  Interviewer _____

Initials of Interviewer _____

Hello, I'm _____, calling from the Defense Language Institute in Monterey, California. I'm calling you because the Educational Opportunity Service of the American College Testing program identified you as an individual who has studied foreign languages in high school. We are interested in knowing more about the interests and career plans of students who have foreign language competencies. This call is part of a study we are conducting to gather such information.

If I may, I would like to ask you a few questions about your language studies and your plans for applying your foreign language skills.

1. I see that you have studied (German/French/Spanish/Other). Which of the following answers describe your reasons for studying (German/French/Spanish/Other)? Please respond with a yes or a no for each answer.

   a. (German/French/Spanish/Other) is spoken in my home.
   b. I needed to fulfill a language requirement.
   c. I thought I would enjoy it.
   d. I thought it would be easy.
   e. I thought it would be useful in my future career.
   f. I was interested in learning more about the culture.

   Are there any other reasons that I didn't mention?

2. Compared to your other high school classes, did you enjoy your language classes

   a. more?
   b. about the same?
   c. not as much?

3. What kinds of grades did you earn in your language classes?

   a. A's
   b. A's and B's
   c. B's
   d. B's and C's
   e. C's
   f. C's and D's
   g. D's

4. Out of the following language skills, tell me which ones are your strong points in (German/French/Spanish/Other):

   a. Speaking
   b. Reading
   c. Writing
   d. Listening
   e. Culture

5. Have you studied any other foreign languages?

   a. No   (Go to Question 6)
   b. Yes   (Go to Question 5.1)

   5.1 What were they?

       a. German
       b. French
       c. Spanish
       d. Other _____

   5.2 For how many years did you study them?

       a. 1 year
       b. 2 years
       c. 3 years
       d. 4 years or more

6. Do you belong to any foreign language clubs in school?

   a. No
   b. Yes

7. Are you planning to get more foreign language training?

   a. No   (Go to Question 8)
   b. Not sure (Go to Question 8)
   c. Yes   (Go to Question 7.1)

   7.1 In what languages?

       a. German
       b. French
       c. Spanish
       d. Other _____

   7.2 Where do plan to get this training?

       a. College
       b. Special school for languages
       c. Plan to live in a foreign country
       d. Other _____

A-3

8. Which of the following answers describe how you expect to make use of your foreign language skills? Please respond with a yes or no for each answer.

 a. Teaching a foreign language.
 b. Career field with a foreign language as a primary skill (for instance, as a translator).
 c. Career field with a foreign language as a useful secondary skill (for instance, international business).
 d. Travel
 e. Reading for enjoyment.

 Are there any other ways in which you expect to make use of your foreign language skills?

9. What are your plans for next fall?

 a. College
 b. Vocational school
 c. Work
 d. Other _____
 e. No plans (Go to Question 10)

 9.1 Are these plans firm, or is there a chance that you might change your mind?

  a. Firm.
  b. Might change mind.

 If student does not plan to go to college next fall, go to question 10.

 9.2 Will you be attending college on a scholarship?

  a. No
  b. Maybe
  c. Yes

 9.3 Do you plan to use student loans to help finance your education?

  a. No
  b. Maybe
  c. Yes

9.4 Do you plan to use educational grants to help finance your education?

    a.   No
    b.   Maybe
    c.   Yes

10. In thinking about what you will do after high school, have you investigated enlistment options in the military services?

    a.   No   (Go to Question 11)
    b.   Yes   (Go to Question 10.1)

10.1 Have you talked with a recruiter?

    a.   No   (Go to Question 11)
    b.   Yes   (Go to Question 10.2)

10.2 Which service did the recruiter represent?

    a.   Army
    b.   Navy
    c.   Air Force
    d.   Marine Corps

10.3 Did the recruiter discuss the enlistment options that require foreign language skills or tell you about the foreign language training program at the Defense Language Institute?

    a.   No   (Go to Question 11)
    b.   Yes   (Go to Question 12)

11. Has anyone talked to you about the foreign language training program at the Defense Language Institute?

    a.   No
    b.   Yes

You may be interested in learning more about foreign language training at DLI. We have an information sheet which tells more about the Defense Language Institute. Would you like for me to send a copy to your home?

a. No   (Go to closing)
b. Yes   (Go to Question 12.1)

12.1 After you have had a chance to look over the information sheet, would you be interested in having a military recruiter call you to talk further about these subjects?

   a.   No   (Go to Question 12.2)
   b.   Yes   (Go to closing)

12.2 Would you prefer, then, to have me call you again after you have looked at the information sheet?

   a.   No
   b.   Yes

Thank you for taking the time to respond to our survey. We appreciate your cooperation.

(Also, if student has requested an information sheet:)

I will be sending the information sheet right away.

ENLISTMENT OPTIONS

Most of the jobs that require foreign language skills are in Military Intelligence specialties. The first 18-24 months of the enlistment are spent receiving basic (combat) training, foreign language training at the DLI and 4-16 weeks of technical training in Military Intelligence. Approximately half of first assignments for active duty enlistments are to overseas locations.

	Months of Full Time Active Duty Obligation		Number of Openings Expected FY85 & FY86		Enlistment Bonus	College Funds
	Active Option	Reserve Option	Active Option	Reserve Option		
ARMY • Intelligence Analyst • Voice Intercept Operator	48	18-24	4-1500 each year	6-700 each year	up to $8,000	In addition to pay, tuition assistance and other benefits that are available to you during your time in military service, the Veterans' Educational Assistance Program (VEAP) matches 2 for 1 the dollars that you put aside for college up to your maximum contribution of $2,700. The Army has a special college fund that pays cash bonuses of up to $12,000 (in addition in VEAP). By taking advantage of these benefits you can accumulate $20,000 or more to fund a college education.
NAVY • Cryptologic Technician • Linguist	48	18-24	6-300 each year	>50 each year	...	
AIR FORCE • Cryptologic Linguist • Countermeasure Intelligence	48	18-24	>250 each year	6-20 each year	up to $1,000	
MARINES • Cryptologic Linguist • Intercept Operator	48-72	...	>200 each year	...	up to $5000	

*Money is received on a monthly basis, and is prorated based on contribution and number of months of participation.

- The Defense Language Institute (DLI) is a Department of Defense school located on the Presidio of Monterey overlooking the bay in Monterey, California. It is a year-round school with approximately 3000 students in residence at any given time

- The DLI has 32 language departments—— largest departments at the present time are Russian, German, Arabic, Spanish, and Korean. A recent poll of students in classes at the DLI showed the following enrollment distribution. Russian 25%, German 16%, Arabic 13%, Spanish 11%, Korean 10%, Czech 6%, Chinese 3%, and Polish 2%

- Basic courses in the less difficult languages are 24 weeks long. In the more difficult languages, such as Korean and Arabic, the basic course is 47 weeks long. If the job requires a more advanced proficiency, there are advanced language courses which require an additional 24 to 37 weeks.

- The language training program is called PSI——Progressive Skills Integration——and stresses integration of grammer, vocabulary, and pronunciation into the four communication skill areas of "speaking", "listening", "reading", and "writing".

- The faculty is nearly 100% native speakers in the languages they are teaching. Each course has a Foreign Language Training Non-Commissioned Officer (FLTN) who acts as a teaching assistant to build the language bridge in the other direction——i.e., the FLTNs are native speakers in English and have proficiency in the foreign language that is being taught.

- To enhance knowledge and understanding of foreign cultures, the course work also covers value systems, behavior patterns, institutions, geography, and political, economic, and social systems. Field trips, dance groups, and other activities that help the student to understand foreign cultures are encouraged and supported.

- No more than 10 students are assigned to a classroom. Each day there are 6 hours of class time (running from 8-11, and from 12.30 to 5.30) and 2-3 hours of assigned homework. Physical training and other military job obligations are scheduled in 1-2 hour blocks before and after class sessions. Students share living quarters on the Presidio of Monterey and are assigned quarters based on language and on service membership.

- To enter the DLI language training program you must:

  * be a member of the Armed services. or an employeo of the Department of Defense in a job requiring foreign language proficiency;

  * achieve a minimum score of 89 on the Defense Language Aptitude Battery which can be administered at the Military Enlistment Processing Station or at military installations having a test control office;

  * be a high school graduate or held an equivalent diploma;

  * have entered a contractual arrangement with a military service to attend the DLI in order to fill a job which requires foreign language communication skills

- The DLI is accredited by the Western Association of Schools and Colleges. Students can earn up to 24 semester hours of college credit for their foreign language training

Guidelines for Follow Up Call
for Telephone Interview Sample

Name of student   _____

Date contacted   _____

Recruiter contact   Yes   _____

                      No   _____

Initials of caller   _____

A-1C

Hello, this is _____ calling from the Defense Language Institute in Monterey, California. I talked to you a few weeks ago as part of a survey of students with foreign language competencies, and you had expressed an interest in receiving some information about the DLI.

1. First of all, did you receive the information sheet describing the DLI and educational benefits for military enlistment?

    a. Yes (Go to Question 2)
    b. No

        Well there must have been some mistake, then. I will look up your address and send a copy to you this week. (No further questions)

2. Have you had a chance to look over the material yet?

    a. Yes (Go to Question 3)
    b. No   (Go to Question 2.1)

    2.1 Would you like me to call back in a few days, after you have had a chance to read it?

        a. Yes (Close the interview)

            Fine, then I'll talk to you again in a few days. (No further questions)

        b. No   (Go to closing)

            Alright. Thank you again for having participated in our survey.

3. Did the information sheet answer most of your questions about the DLI, or should we have included more information?

    a. Enough information provided.
    b. Need to provide more information.

        What other kinds of information should be included?

A-11

4. Now that you know a little bit about the Defense Language Institute and military occupations requiring foreign language skills, would you be interested in being contacted by a recruiter?

   a. Would like to talk to a recruiter.

      Fine, then you can expect to be contacted within a few weeks by a recruiter in your area.

   b. Does not want to be contacted.

      Alright. Thank you again for taking the time to participate in the survey.

RECRUITER REPLY FORM

Please fill in the information below for contacts from the USAREC sponsored survey of college bound youth. Return to:

> Dr. Ray Zimmerman
> Naval Postgraduate School
> Code 54Zn
> Monterey, CA   93943.

Name of student (or recent graduate)

_____

Social security number of student (or recent graduate)

_____

Date contacted (YYMMDD)

_____

What are your impressions about the quality of this contact, compared to contacts from the usual sources?

How far in the recruiting process have you been able to take this contact?

_____

Name and rank of recruiter

_____

Address of recruiter

_____

_____

_____

Telephone number of recruiter

_____

Recruiting Battalion

_____

A-13

Data Coding for Study 1

Measure of Level of Interest Used in Study 1

Score	Explanation
0	Respondent was not interested in the DLI and did not want to receive any follow-up materials.
1	Respondent was interested in receiving follow-up materials, but did not desire any further contact.
2	Respondent wanted to receive follow-up materials and was interested in being contacted again by the interviewer.
3	Respondent wanted to receive follow-up materials and was interested in being contacted by an Army recruiter.

Computation of Scales Derived from

Telephone Interview Questions

1. Desire to learn a foreign language

Variable		Weight
Question 1	Reason for studying foreign language	
1c	Thought it would be enjoyable	1
1f	Interested in learning more about the culture	1
Question 2	Enjoyment of language classes compared to other high school classes	
2a	More	1
2b	About the same	.5
Question 5.1	Additional foreign languages studied	
5.1a	German	1
5.1b	French	1
5.1c	Spanish	1
5.1d	Other	1
Question 6	Belonged to foreign language clubs in school	
6b	Yes	1
Question 7.1	Foreign language in which additional language training is planned	
7.1a	German	
7.1b	French	
7.1c	Spanish	
7.1d	Other	
Question 8	How respondent expects to make use of foreign language skills	
8a	Teaching a foreign language	
8b	Career field with foreign language as a primary skill	
8d	Travel	
8e	Reading for enjoyment	

2. Perceived a need to learn a foreign language

Variable		Weight
Question 1	Reason for studying foreign language	
1b	Needed to fulfill a language requirement	1
1e	Thought it would be useful in future career	1
Question 8	How respondent expects to make use of foreign language skills	
8c	Career field with foreign language as a secondary skill	1

B-2

3.   Language proficiency

Variable			Weight
Question 3		Grades earned in language classes	
	3a	A's	4
	3b	A's and B's	3.5
	3c	B's	3
	3d	B's and C's	2.5
	3e	C's	2
	3f	C's and D's	1.5
	3g	D's	1
Question 4		Respondent's strong points in foreign language	
	4a	Speaking	1
	4b	Reading	1
	4c	Writing	1
	4d	Listening	1
	4e	Culture	1

4.   Need for financial aid to attend college

Variable			Weight
Question 9.3		Respondent plans to use student loans to help finance education	
	9.3b	Maybe	1
	9.3c	Yes	2
Question 9.4		Respondent plans to use educational grants to help finance education	
	9.4b	Maybe	1
	9.4c	Yes	2

Computation of Scales Derived from

Telephone Interview Questions (continued)

5. Previous interest in military

	Variable	Weight
Question 10.1	Had talked with a recruiter	
	10.1b Yes	1
Question 10.2	Military service considered	
	10.2a Army	1
	10.2b Navy	1
	10.2c Air Force	1
	10.2d Marine Corps	1

6. Prior knowledge of DLI or military occupations requiring foreign language training

	Variable	Weight
Question 10.3	Recruiter discussed enlistment options that require foreign language training or foreign language training program at DLI	
	10.3b Yes	1
Question 11	Had received information from some source about foreign language program at DLI	
	11b Yes	1

Materials Used in Study 2

DEFENSE LANGUAGE INSTITUTE
FOREIGN LANGUAGE CENTER
PRESIDIO OF MONTEREY, CALIFORNIA 93944-5006

REPLY TO
ATTENTION OF:

Office of the Dean

January 15, 1985

Herzlichen Glückwunsch!

I am writing to you because you have begun to develop a skill in foreign language while in high school. Your name came to me as a result of your participation in the Educational Opportunity Service of the American College Testing Program in which you indicated that you have studied German. I would like to make you aware of an opportunity to expand your foreign language skills while in military service. The rewards can be considerable.

The Defense Language Institute (DLI) in Monterey, California, provides intensive training in more than thirty different languages in courses varying from six months to two years in length. Graduates of the program also obtain:

- one month or more of technical training in a military intelligence specialty,

- college credit for the training received,

- on-the-job experience applying foreign language skills, and

- money for attending college during and after military service in addition to pay and other benefits.

Participating in this program provides an opportunity to take a break between high school and college, obtain financial independence, travel abroad, and expand foreign language skills. Overall it provides a unique opportunity for self-improvement and the chance to think through educational and career decisions for the future. Each of the Military Services currently has openings in occupational specialties that require foreign language skills. A thumbnail sketch of these jobs is enclosed with this letter. I have also enclosed a brief description of the DLI and its language training program.

The DLI is well known and well respected nationally and internationally. It offers one of the best foreign language training programs available anywhere. I encourage you to consider becoming one of our students. If you would like to obtain more information about the DLI and the military specialties that use foreign language skills, complete and return the enclosed post card at your earliest opportunity.

Sincerely,

Ray T. Clifford
Dean

C-1

THE DEFENSE LANGUAGE INSTITUTE
FOREIGN LANGUAGE CENTER

- The Defense Language Institute (DLI) is a Department of Defense school located on the Presidio of Monterey overlooking the bay in Monterey, California. It is a year-round school with approximately 3000 students in residence at any given time.

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- The faculty is nearly 100% native speakers in the languages they are teaching. Each course has a Foreign Language Training Non-Commissioned Officer (FLTN) who acts as a teaching assistant to build the language bridge in the other direction——i.e., the FLTNs are native speakers in English and have proficiency in the foreign language that is being taught.

- To enhance knowledge and understanding of foreign cultures, the course work also covers value systems, behavior patterns, institutions, geography, and political, economic, and social systems. Field trips, dance groups, and other activities that help the student to understand foreign cultures are encouraged and supported.

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    - achieve a minimum score of 89 on the Defense Language Aptitude Battery which can be administered at the Military Enlistment Processing Station or at military installations having a test control office;

    - be a high school graduate or hold an equivalent diploma;

    - have entered a contractual arrangement with a military service to attend the DLI in order to fill a job which requires foreign language communication skills.

- The DLI is accredited by the Western Association of Schools and Colleges. Students can earn up to 24 semester hours of college credit for their foreign language training.

ENLISTMENT OPTIONS

	Months of Full Time Active Duty Obligation		Number of Openings Expected FY85 & FY 86		Enlistment Bonus	College Funds
Most of the jobs that require foreign language skills are in Military Intelligence specialties. The first 18-24 months of the enlistment are spent receiving basic combat training, foreign language training at the DLI and 4-16 weeks of technical training in Military Intelligence. Approximately half of first assignments for active duty enlistments are to overseas locations.	Active Option	Reserve Option	Active Option	Reserve Option		In addition to pay, tuition assistance and other benefits that are available to you during your time in military service, the Veterans Educational Assistance Program (VEAP) matches 2 for 1 the dollars that you put aside for college up to your maximum contribution of $2,750. The Army has a special college fund that pays cash bonuses of up to $12,000 for participation in VEAP. By taking advantage of these benefits you can accumulate $20,000 or more to fund a college education.
ARMY • Intelligence Analyst • Voice Intercept Operator	48	18-24	6-1500 each year	6-700 each year	up to $8,000	
NAVY • Cryptologic Technician • Linguist	48	18-24	6-300 each year	>50 each year	...	
AIR FORCE • Cryptologic Linguist • Countermeasure Intelligence	48	18-24	>250 each year	6-20 each year	up to $1,000	
MARINES • Cryptologic Linguist • Intercept Operator	48-72	...	>200 each year	...	up to $5000	

*Money is received on a monthly basis, and is prorated based on contribution and number of months of participation.

C-3

Supplemental Tables

Table D-1

Crosstabulation of Interest by

Sample Subgroup for Females in Study 1

	Frequencies			
	Interest			
Sample Subgroup	0	1	2	3
Juniors when tested/ seniors when interviewed	37	16	13	22
Seniors when tested/ graduates when interviewed	34	26	19	0
Seniors when tested/ seniors when interviewed	68	37	43	19

Percentages Within Subgroup				
Juniors when tested/ seniors when interviewed	42	18	15	25
Seniors when tested/ graduates when interviewed	43	33	24	0
Seniors when tested/ seniors when interviewed	41	22	26	11

Table D-2

Crosstabulation of Interest by

Sample Subgroup for Males in Study 1

	Frequencies			
	Interest			
Sample Subgroup	0	1	2	3
Juniors when tested/ seniors when interviewed	21	10	7	4
Seniors when tested/ graduates when interviewed	18	16	10	2
Seniors when tested/ seniors when interviewed	47	15	11	10
Percentages Within Subgroup				
Juniors when tested/ seniors when interviewed	50	24	17	10
Seniors when tested/ graduates when interviewed	39	35	22	4
Seniors when tested/ seniors when interviewed	57	18	13	12

Cross-tabulation of Interest by
Student Profile Section Item 14 for Study 1

Item 14: How sure are you about your current choice of program of study?

Males

Response	Interest			
	0	1	2	3
Very sure	28	11	9	8
Fairly sure	43	23	14	6
Not sure	14	7	5	2

Females

Response	Interest			
	0	1	2	3
Very sure	49	30	27	12
Fairly sure	59	34	37	21
Not sure	30	13	11	7

Combined

Response	Interest			
	0	1	2	3
Very sure	77	41	36	20
Fairly sure	102	57	51	27
Not sure	44	20	16	9

Table D-4

Cross-tabulation of Interest by

Student Profile Section Item 15 for Study 1

Item 15: How sure are you about your first occupational choice?

	Males			
	Interest			
Response	0	1	2	3
Very sure	24	7	7	8
Fairly sure	41	27	14	6
Not sure	20	7	6	2
	Females			
	Interest			
Response	0	1	2	3
Very sure	37	27	19	9
Fairly sure	64	33	37	17
Not sure	37	17	19	15
	Combined			
	Interest			
Response	0	1	2	3
Very sure	61	34	26	17
Fairly sure	105	60	51	23
Not sure	57	24	25	17

Table D-5

Cross-tabulation of Interest by

Student Profile Section Item 19 for Study 1

Item 19: I need help deciding on my educational and occupational plans.

	Males			
	Interest			
Response	0	1	2	3
Yes	42	22	15	7
No	43	18	13	9

	Females			
	Interest			
Response	0	1	2	3
Yes	78	41	38	27
No	60	38	37	14

	Combined			
	Interest			
Response	0	1	2	3
Yes	120	63	53	34
No	103	56	50	23

Table D-6

Cross-tabulation of Interest by

Student Profile Section Item 27 for Study 1

Item 27:   Interested in studying in a foreign country during
undergraduate years in college.

	Males			
	Interest			
Response	0	1	2	3
Yes	24	18	13	8
No	61	22	15	8
	Females			
	Interest			
Response	0	1	2	3
Yes	55	41	45	25
No	84	38	28	15
	Combined			
	Interest			
Response	0	1	2	3
Yes	79	59	58	33
No	145	60	43	23

Table D-7
Cross-tabulation of Interest by
Student Profile Section Item 56 for Study 1

Item 56: I expect to apply for financial aid to help meet college
expenses.

	Males			
	Interest			
Response	0	1	2	3
Yes	70	37	23	12
No	16	4	4	4
	Females			
	Interest			
Response	0	1	2	3
Yes	105	65	57	36
No	32	14	17	5
	Combined			
	Interest			
Response	0	1	2	3
Yes	175	102	80	48
No	48	18	21	9

Table D-8
Cross-tabulation of Interest by
Student Profile Section Item 57 for Study 1

Item 57: I expect to work while attending college.

	Males			
	Interest			
Response	0	1	2	3
Yes	46	24	18	11
No	39	16	9	5

	Females			
	Interest			
Response	0	1	2	3
Yes	74	45	42	31
No	64	34	32	·10

	Combined			
	Interest			
Response	0	1	2	3
Yes	120	69	60	42
No	103	50	41	15

Table D-9

Cross-tabulation of Interest by

Student Profile Section Item 58 for Study 1

Item 58: About how many hours per week do you plan to work during your first year of college?

Males

Response	Interest			
	0	1	2	3
None	28	12	10	5
1-10	19	11	2	4
11-20	26	15	12	5
21-30	11	3	3	1
31 or more	1	0	0	1

Females

Response	Interest			
	0	1	2	3
None	52	21	28	9
1-10	35	22	17	12
11-20	48	30	21	16
21-30	3	5	7	3
31 or more	0	0	1	0

Combined

Response	Interest			
	0	1	2	3
None	80	33	38	14
1-10	54	33	19	16
11-20	74	45	33	21
21-30	14	8	10	4
31 or more	1	0	1	1

Table D-10

Cross-tabulation of Interest by

Student Profile Section Item 59 for Study 1

Item 59: Please estimate as accurately as possible your family's income.

	Males			
	Interest			
Response	0	1	2	3
Less than $6,000	0	2	1	0
$ 6,000-$11,999	3	1	0	4
$12,000-$17,999	5	5	1	0
$18,000-$23,999	9	3	5	3
$24,000-$29,999	10	6	4	3
$30,000-$35,999	13	7	4	2
$36,000-$41,999	10	4	4	0
$42,000-$49,999	18	6	4	1
$50,000-$59,999	11	5	2	2
$60,000 and over	3	0	2	1

Table D-10 (continued)

Cross-tabulation of Interest by

Student Profile Section Item 59 for Study 1

Item 59: Please estimate as accurately as possible your family's income.

	Females			
	Interest			
Response	0	1	2	3
Less than $6,000	0	1	0	2
$6,000-11,999	5	3	3	0
$12,000-$17,999	7	9	4	2
$18,000-23,999	11	9	8	3
$24,000-$29,999	21	10	9	5
$30,000-$35,999	16	16	16	7
$36,000-$41,999	17	6	6	2
$42,000-$49,999	24	7	13	10
$50,000-$59,999	22	10	6	5
$60,000 and over	6	5	7	1

Table D-10 (continued)

Cross-tabulation of Interest by

Student Profile Section Item 59 for Study 1

Item 59: Please estimate as accurately as possible your family's income.

	Combined			
	Interest			
Response	0	1	2	3
Less than $6,000	0	3	1	2
$6,000-11,999	8	4	3	4
$12,000-$17,999	12	14	5	2
$18,000-23,999	20	12	13	6
$24,000-$29,999	31	16	13	8
$30,000-$35,999	29	23	20	9
$36,000-$41,999	27	10	10	2
$42,000-$49,999	42	13	17	11
$50,000-$59,999	33	15	8	7
$60,000 and over	9	5	9	2

Table D-11

Cross-tabulation of Interest by

Student Profile Section Item 63 for Study 1

Item 63: How far away do you live from the college you expect to attend?

	Males			
	Interest			
Response	0	1	2	3
Less than 10 miles	10	5	7	3
10-25 miles	6	6	3	0
26-100 miles	15	6	6	3
More than 100 miles	35	15	6	8
No particular college in mind yet	19	9	6	2

	Females			
	Interest			
Response	0	1	2	3
Less than 10 miles	16	8	7	8
10-25 miles	17	14	7	2
26-100 miles	27	22	11	13
More than 100 miles	47	23	32	11
No particular college in mind yet	31	12	17	7

	Combined			
	Interest			
Response	0	1	2	3
Less than 10 miles	26	13	14	11
10-25 miles	23	20	10	2
26-100 miles	42	28	17	16
More than 100 miles	82	38	38	19
No particular college in mind yet	50	21	23	9

Table D-12

Cross-tabulation of Interest by

Student Profile Section Item 14 for Study 2

Item 14: How sure are you about your current choice of program of study?

Males

Response	Interest	
	0	1
Very sure	6113	124
Fairly sure	8339	145
Not sure	2918	46

Females

Response	Interest	
	0	1
Very sure	9419	180
Fairly sure	11314	185
Not sure	4674	61

Combined

Response	Interest	
	0	1
Very sure	15532	304
Fairly sure	19653	330
Not sure	7592	107

Table D-13

Cross-tabulation of Interest by

Student Profile Section Item 15 for Study 2

Item 15: How sure are you about your first occupational choice?

Males		
	Interest	
Response	0	1
Very sure	4930	103
Fairly sure	8495	157
Not sure	3890	54

Females		
	Interest	
Response	0	1
Very sure	7328	147
Fairly sure	11828	199
Not sure	6179	80

Combined		
	Interest	
Response	0	1
Very sure	12258	250
Fairly sure	20323	356
Not sure	10069	134

Table D-14

Cross-tabulation of Interest by

Student Profile Section Item 19 for Study 1

Item 19: I need help deciding on my educational and occupational plans.

Males		
	Interest	
Response	0	1
Yes	8878	153
No	8588	162

Females		
	Interest	
Response	0	1
Yes	13750	223
No	11784	206

Combined		
	Interest	
Response	0	1
Yes	22628	376
No	20372	368

Table D-15

Cross-tabulation of Interest by

Student Profile Section Item 27 for Study 2

Item 27: Interested in studying in a foreign country during undergraduate years in college.

Males		
	Interest	
Response	0	1
Yes	6161	192
No	11279	123

Females		
	Interest	
Response	0	1
Yes	12115	314
No	13365	115

Combined		
	Interest	
Response	0	1
Yes	18276	506
No	24644	238

Table D-16

Cross-tabulation of Interest by
Student Profile Section Item 56 for Study 2

Item 56: I expect to apply for financial aid to help
meet college expenses.

	Males	
	Interest	
Response	0	1
Yes	13838	262
No	3559	51

	Females	
	Interest	
Response	0	1
Yes	20398	373
No	5049	55

	Combined	
	Interest	
Response	0	1
Yes	34236	635
No	8608	106

Table D-17
Cross-tabulation of Interest by
Student Profile Section Item 57 for Study 2

Item 57: I expect to work while attending college.

Males		
	Interest	
Response	0	1
Yes	11315	227
No	6063	87

Females		
	Interest	
Response	0	1
Yes	15715	322
No	9734	108

Combined		
	Interest	
Response	0	1
Yes	27030	549
No	15797	195

Table D-18

Cross-tabulation of Interest by

Student Profile Section Item 58 for Study 2

Item 58: About how many hours per week do you plan to work during your first year of college?

Males

	Interest	
Response	0	1
None	5187	76
1-10	4028	68
11-20	6072	112
21-30	1729	46
31 or more	252	10

Females

	Interest	
Response	0	1
None	8277	
90		
1-10	6842	131
11-20	8269	154
21-30	1695	40
31 or more	256	11

Combined

	Interest	
Response	0	1
None	13464	166
1-10	10870	199
11-20	14341	266
21-30	3424	86
31 or more	508	21

Table D-19

Cross-tabulation of Interest by

Student Profile Section Item 59 for Study 2

Item 59: Please estimate as accurately as possible your family's income.

	Males	
	Interest	
Response	0	1
Less than $6,000	289	10
$ 6,000-$11,999	635	22
$12,000-$17,999	1103	24
$18,000-$23,999	1806	32
$24,000-$29,999	2193	45
$30,000-$35,999	2327	36
$36,000-$41,999	1651	29
$42,000-$49,999	4410	67
$50,000-$59,999	2645	42

	Females	
	Interest	
Response	0	1
Less than $6,000	556	12
$6,000-11,999	1178	32
$12,000-$17,999	1953	40
$18,000-23,999	2745	60
$24,000-$29,999	3041	60
$30,000-$35,999	3315	44
$36,000-$41,999	2209	34
$42,000-$49,999	5613	72
$50,000-$59,999	4146	60

Cross-tabulation of Interest by

Student Profile Section Item 59 for Study 2

Item 59: Please estimate as accurately as possible your family's income.

Combined		
	Interest	
Response	0	1
Less than $6,000	845	22
$6,000-11,999	1813	54
$12,000-$17,999	3056	64
$18,000-23,999	4551	92
$24,000-$29,999	5234	105
$30,000-$35,999	5642	80
$36,000-$41,999	3860	63
$42,000-$49,999	10023	139
$50,000-$59,999	6791	102

Table D-20
Cross-tabulation of Interest by
Student Profile Section Item 63 for Study 1

Item 63: How far away do you live from the college you expect to attend?

Males		
	Interest	
Response	0	1
Less than 10 miles	1511	33
10-25 miles	1564	32
26-100 miles	2701	40
More than 100 miles	6667	123
No particular college in mind yet	4962	84

Females		
	Interest	
Response	0	1
Less than 10 miles	2317	46
10-25 miles	2573	57
26-100 miles	4491	70
More than 100 miles	9025	142
No particular college in mind yet	6959	112

Combined		
	Interest	
Response	0	1
Less than 10 miles	3828	79
10-25 miles	4137	89
26-100 miles	7192	110
More than 100 miles	15692	265
No particular college in mind yet	11921	196

Unclassified
SECURITY CLASSIFICATION OF THIS PAGE

AD-A165512

REPORT DOCUMENTATION PAGE

1a REPORT SECURITY CLASSIFICATION	1b RESTRICTIVE MARKINGS
Unclassified	

2a SECURITY CLASSIFICATION AUTHORITY	3 DISTRIBUTION/AVAILABILITY OF REPORT
	DISTRIBUTION STATEMENT A
2b DECLASSIFICATION/DOWNGRADING SCHEDULE	Approved for public release
	Unlimited Distribution Unlimited

4 PERFORMING ORGANIZATION REPORT NUMBER(S)	5 MONITORING ORGANIZATION REPORT NUMBER(S)
NPS54-85-005	

6a NAME OF PERFORMING ORGANIZATION	6b OFFICE SYMBOL (If applicable)	7a NAME OF MONITORING ORGANIZATION
Naval Postgraduate School		

6c ADDRESS (City, State and ZIP Code)	7b ADDRESS (City, State and ZIP Code)
Monterey, CA 93943	

8a NAME OF FUNDING/SPONSORING ORGANIZATION	8b OFFICE SYMBOL (If applicable)	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
U.S. Army Recruiting Command (USARCPAE-RS)		84-8

8c ADDRESS (City, State and ZIP Code)	10 SOURCE OF FUNDING NUMBERS			
	PROGRAM ELEMENT NO	PROJECT NO	TASK NO	WORK UNIT NO

11 TITLE (Include Security Classification)

Recruitment of College-Bound Youth Through Use of the ACT Assessment File

12 PERSONAL AUTHOR(S)

Ray Zimmerman and Dona Zimmerman

13a TYPE OF REPORT	13b TIME COVERED	14 DATE OF REPORT (Year, Month, Day)	15 PAGE COUNT
Technical	FROM 7/84 TO 7/85	July 1985	

16 SUPPLEMENTARY NOTATION

17 COSATI CODES			18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB GROUP	Recruiting; Market Segmentation; College-Bound Recruiting

19 ABSTRACT (Continue on reverse if necessary and identify by block number)

The purpose of this study was to examine the effectiveness of using the American College Testing (ACT) assessment records in recruiting "college-bound" young people to fill highly specialized enlisted positions. Two exploratory studies were conducted to examine the utility of telephone interviews and mail campaigns in stimulating interest among high school students and recent graduates in foreign language training at the Defense Language Institute (DLI).

In the first study, 505 high school students and recent graduates, who had studied a foreign language for three or more years, were interviewed by telephone. The purpose of the interviews was to: 1) collect information pertaining to respondents' language background, career plans, and interest in pursuing additional foreign language studies, and 2) provide information to interested respondents about foreign language training programs at the DLI and MOS requiring foreign language training. Interested respondents received additional information about the DLI and the Veterans Educational Assistance

20 DISTRIBUTION/AVAILABILITY OF ABSTRACT	21 ABSTRACT SECURITY CLASSIFICATION
☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS	

22a NAME OF RESPONSIBLE INDIVIDUAL	22b TELEPHONE (Include Area Code)	22c OFFICE SYMBOL

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Program through the mail.

In the second study, 43,848 high school students and recent graduates, with foreign language backgrounds, received information through the mail regarding foreign language training at the DLI and MOS requiring foreign language training. Those who returned business reply cards were sent additional information.

The major conclusions from the study are that: 1) both the telephone and mailout approaches are very effective in attracting individuals from the target segment of the college-bound market, 2) the telephone approach is more efficient than the mailout approach in generating enlistments, but also more costly, and 3) in addition to foreign language background, interest in studying abroad may be used as a criterion in selecting names from ACT if individuals are to be contacted by telephone.

Implications for future research and recommendations for recruiting practice are discussed.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1986—641-050/20283

SUPPLEMENTARY

INFORMATION

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY RECRUITING COMMAND
Fort Sheridan, Illinois   60037-6000

Change 1   1 May 1986

Effective Upon Receipt
Recruitment of College-Bound Youth Through
Use of the ACT Assessment File

USAREC Study Report 85-1, July 1985, is changed as follows:

1. Remove old pages and insert new pages as indicated below:
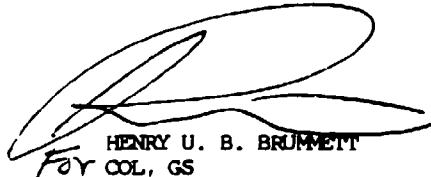
Remove Pages   Insert Pages
    xi - xv . . . . xi - xv

2. File this change sheet in front of study for reference purposes.

FOR THE COMMANDER:

                                HENRY U. B. BRUMMETT
                        For COL, GS
                                Director, Program Analysis and Evaluation

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