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La Puente Union High School District, Calif.

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Identifiers-\*Armed Forces Qualifying Test

Funded under Title III of the Elementary and Secondary Education Act of 1965, the La Puente, California, continuation education project investigated (1) attitudes of former students concerning the success of the school in preparing them for entry into military service, (2) the minimal skills and knowledge required by each of the armed forces, (3) academic skills and social behavior required for eligibility for the draft, and (4) requisites for successful performance on military screening examinations. These were among the major findings and conclusions: (1) the Armed Forces Qualifying Test, consisting of subtests in vocabulary, arithmetic, patterns and figures, and tool recognition, is the most important examination for entry into the armed forces; (2) entry requirements are higher for females than for males, for enlistees than for draftees, and for high school nongraduates than for graduates; (3) general prerequisites for both sexes include good physical health, good moral character (honesty and trustworthiness), aptitude for training and instruction, and ability to accept authority, reason, live with others, and be motivated; (4) despite the views of military recruiters, respondents lacking diplomas reported no adverse effect on military experience; (5) the continuation school was providing some academic success but should be more strict. (ly)

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AC 004 072

Continuation Education  
System Development Project

Technical Report 1.2

STUDENT PERFORMANCE REQUIREMENTS:  
MILITARY SERVICE

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La Puente Union High School District  
La Puente, California  
1968

## FOREWORD

The CONTINUATION EDUCATION SYSTEM DEVELOPMENT PROJECT is operated by the La Puente Union High School District according to the terms of a grant award authorized by Title III of the Elementary and Secondary Education Act of 1965 (Public Law 89-10).

Over a four year period, September, 1967 through August, 1971, the PROJECT will develop a practical instructional system capable of continuous identification and efficient response to the most critical instructional needs of individual continuation high school students in La Puente.

Continuation high school students in La Puente are those who the traditional system has been unable to accommodate or who have been unable to accommodate the traditional system. Their usual label is "pushout" or "dropout."

The first project year (1967-68) has been spent identifying the instructional needs of these students.\* During

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\*Technical Reports in this phase of the study:

- (1.1) Present Student Characteristics
- (1.2) Student Performance Requirements: Military Situations
- (1.3) Student Performance Requirements: Other Educational Situations
- (1.4) Student Performance Requirements: Employment Situations
- (1.5) Performance Adequacy for Home and Community Living
- (1.6) Operational Limits
- (1.7) Instructional Needs

year two, an instructional program will be designed to meet those needs. Year three will see implementation and tryout of subsystems. Year four will provide for full system tryout with transfer of all functions to the permanent school staff.

Throughout the Project, system analysis and other modern management control and planning techniques will be employed. It is hoped that this new problem solving technology of the defense and aero-space industries can be applied as well to the problems of education.

It is the mission of the PROJECT not only to solve a particular set of problems in La Puente, but to provide a problem solving model for other school districts with similar conditions. Consequently, an effort has been made to describe procedures in such detail that they can be used as guidelines by others.

If further information or interpretation can be provided the PROJECT staff will be pleased to respond to your inquiries.

La Puente, California  
December, 1968

LEON EAST  
PROJECT DIRECTOR

## TABLE OF CONTENTS

### PROCEDURES

I.	Identification of Data Needed .....	2
II.	Instruments Developed and Used .....	5
III.	Collection Procedures Followed .....	7
IV.	Data Reduction .....	13
V.	Documentation and Revision .....	18

### CRITIQUE OF PROCEDURES

I.	Research Clearance .....	24
II.	Recruitment Personnel .....	24
III.	Entrance and Placement Tests .....	25
IV.	Former Valley High School Students .....	26
V.	Questionnaires .....	28
VI.	The Selective Service System .....	30

### FINDINGS

I.	Military Recruitment Findings .....	35
A.	Personal Interviews-Recruiting Stations .	36
B.	Analysis of Findings .....	46
II.	Analysis of Military Screening and Placement Tests .....	54
A.	Analysis of the Enlistment Screening Tests .....	57
B.	Analysis of the Armed Forces Qualifying Test .....	60
C.	Analysis of Women's Enlistment Screening Test .....	84
D.	Analysis of the Military Battery Placement Tests .....	91

III.	System Graduate Findings .....	111
	A. Questionnaire Data .....	111
	B. Analysis of Findings .....	113
IV.	Military Training Officers Questionnaire .....	116
	A. Review of Findings .....	116
	B. Analysis of Findings .....	122
V.	Selective Service System Data .....	125
	A. Excerpts From Correspondence .....	125
	B. Analysis of Findings .....	128
	SUMMARY OF FINDINGS .....	131

**TABLES**

I.	Bibliography .....	137
II.	Military Service: Letters and Questionnaires.	139
III.	Recruiting Offices: Letters and Questionnaires .....	159
IV.	Local Recruiting Offices .....	196
V.	Correspondence Relating to Text, "Practice for the Armed Forces Tests" .....	200
VI.	Correspondence from Selective Service System .	203
VII.	"Moral Standards for Induction and Enlistment"	209



# PROCEDURES



## Identification of Data Needed and Data Sources

On January 15, the task was assigned of identifying the behaviors required of continuation students for successful entry into the military. Data required to perform this task were determined to include:

1. The names and military addresses of former students at Valley High School now serving in the military. These names and addresses were compiled from the cumulative folders on record at Valley High, and from the parents of the students on active duty in the military.

2. Information revealing student attitudes concerning the ability of the continuation school to develop essential skills and knowledges required for entry into the military. This information was compiled by contacting the students now on active duty in the military, and requesting them to complete and return a questionnaire. It was determined by the Project staff that the information derived from the students concerning the ability of continuation school to develop entry level skills and knowledges should be compared to information from alternate sources which reveal the actual requirements. Such a comparison aids in the authentication process by acting as a cross-reference to other data sources.

3. Information from the military training officers of former students now on active duty in the military concerning the minimal skills and knowledges required upon entry into the military. Once student military addresses were compiled, the persons directly in charge of training the former students were contacted by letter and requested to fill out a questionnaire. The purpose of this was to reveal the actual, minimal standards for entry. These data became the basis for a comparison between the continuation students and non-continuation students.

4. Information from the military recruiters concerning the skills and knowledges required for entry into the military. Military recruiting offices at the district and national levels were contacted by letter and requested to fill out a questionnaire. This questionnaire was designed to reveal all entry level skills and knowledges. Local recruiters were interviewed personally. The reasons for contacting each branch of the military on three separate levels were: to authenticate the information received from each separate branch by comparing the responses from all three recruitment levels; to discover the most comprehensive list of standards available from this data source; and, to use this information in its totality to discover further data sources.

5. Information from the Selective Service System, at the local, district, state and national levels describing the

academic skills and social behaviors required by the system graduate to be eligible for the draft. As most local draft boards consider academic skills and social behaviors when determining student deferments, occupational deferments and induction priorities, the Project felt it important to include the Selective Service System as a data source. By contacting each of four levels of the Selective Service, the staff could obtain full information for authentication purposes.

6. Information from reference texts and materials to supplement information received from other data sources. Of special significance was the material concerning mental screening examinations, found in the text, Practice for the Armed Forces Tests.<sup>1</sup> Supplementary material on the Armed Forces Qualifying Test was found in the Department of Health, Education and Welfare Bulletin titled, How Good Are Our Schools? Armed Forces Qualification Test Provides a Clue.<sup>2</sup> The Dictionary of Occupational Titles, Volume II,<sup>3</sup> offered a frame of reference by which Armed Forces testing personnel described the skills and knowledges required to perform successfully on screening examinations. Another text, Appraising Vocational Fitness by Means of Psychological Tests,<sup>4</sup> by Donald E. Super and John O. Crites, offered a good basis for analyzing the Armed Forces Qualification Test. All of these materials produced a comprehensive description of military testing, including sample items. They also provided a basis

for correlating the findings regarding skills and knowledges to similar findings found in sections of the Project's research covering Employment Situations.<sup>5</sup>

7. Information from the Mental Testing Section of the Los Angeles Armed Forces Examining and Entrance Station. Personnel in this office authenticated Project findings concerning skills and knowledges required for successful performance on military screening examinations. These respondents also keyed their description to those found in the Dictionary of Occupational Titles, Volume II. Such an authentication and correlation was required to reduce findings in this area to a common language with findings from the Employment Situations section of the Project's research.

#### Instruments Developed and Used

To derive the data just described, several instruments were developed and employed by Project staff. Letters were written to the parents of former continuation education students now serving in the military (see Table II, 1, infra), to the students currently serving (see Table II, 2, infra), to their military training officers (see Table II, 4, infra), to military recruiters (see Table II, 6, infra), to the Selective Service System (see Table II, 8, infra), and, to the author of the text, Practice for the Armed Forces Tests (see Table V, infra). In addition, the following instruments were used:

1. System Graduate Military Questionnaire. This questionnaire was developed by the staff to survey former Valley High School students now serving in the military. (See Table II, 3, infra.) It contained twenty-three open-ended questions which allowed the former continuation education students to describe in their own words important skills and knowledges required for entry into the military. This questionnaire was two pages in length, and included a statement of purpose and instructions. It was mailed with a cover letter and a self-addressed, stamped returned envelope.

2. Military Training Officer Questionnaire. This questionnaire had twelve questions and was four pages in length. (See Table II, 5, infra.) It was designed to survey the military training officers directly in charge of the former students now serving in the military. It was also structured in an open-ended fashion, allowing for subjective responses. A statement of purpose and instructions, together with a cover letter and a self-addressed, stamped envelope, were included.

3. Military Recruitment Questionnaire. This ten question, four page questionnaire was similar in nature to those described above. (See Table II, 7, infra.) Its format was used to structure the personal interviews at the local recruitment level, and was mailed along with a cover letter, statement of purpose and instructions and a self-addressed, stamped



envelope to recruiters on the district and national military recruitment levels.

4. Military Recruitment Summary Table. This table was developed by the staff to offer a concise summary of the findings produced from the military recruitment interviews and questionnaires. (See Table IV, infra.)

5. Military Flow Charts. These charts were designed by the staff to offer a pictorial view of the various military paths open to a high school graduate and non-graduate in each branch of military surveyed (see p. 50, infra). They offer a concise overview of the skills and knowledges required for successful entry into each military branch.

#### Procedures Followed

On March 6, Project management approved plans for investigating the skills and knowledges required of system graduates for success upon entry into the military service of the United States.

Between March 6 - 8, appointments were made with the Army, Navy, Air Force and Marine Corps recruiting offices on the local recruitment levels in the La Puente and El Monte, California recruiting stations. From these initial contacts on the local level, national and district recruitment addresses were obtained. (See Table III, 1, infra.)

Between March 6 - 20, three questionnaires and a letter to the Selective Service System were designed. The System

Graduate Military Questionnaire was developed to elicit the views of Valley High School graduates now serving in the military. The Military Training Officer Questionnaire was designed to gain information from their respective training officers. The Military Recruitment Questionnaire was developed to obtain data from military recruitment officers at the district and national levels, and to serve as the format for local recruiting officer interviews. Each of these questionnaires was accompanied by a cover letter. The letter to the Selective Service System at the local, district, state and national levels was designed to solicit information concerning the draft.

Each of the above questionnaires was designed to allow for individual, subjective response. It was felt that by allowing the respondents the greatest possible latitude in answering, more complete and original data could be compiled. This explains the use of an open-ended type of questionnaire. It was decided that the communication to the Selective Service System should not include a questionnaire; that an open letter inviting response to certain general questions would produce a greater and freer response. Between March 11 - 20, the letters and military questionnaires were submitted to Project management for approval. Approval was granted.

During March 19 - 22, Project members received the cumulative folders of system graduates now in military service. A



list of ten students was compiled using the records provided by Valley High School. These records revealed only those former students who had dropped out of the continuation education program for the exclusive purpose of entering the military.

A letter to be sent to parents or guardians of these former students was developed by March 20. Its purpose was to update current military addresses. On March 21, this letter was submitted to Project management for approval. Approval was granted. The finalized letter was printed for mailing March 22. Of the ten families of the former students on active duty in the military, the Project was able to reach six of the parents over the telephone. The remaining four parents were contacted by mail.

On March 27, a letter to accompany the System Graduate Military Questionnaire was developed. It explained that the purpose of the questionnaire was to gain student views on what kinds of things a continuation high school could do better to prepare them for military service. On March 28, this letter was submitted to Project management for approval. Approval was granted.

By April 10, a response to all the parent letters had been received, and the Project had the current addresses of ten former students now in the military. Three of the ten students were at home on leave from the military, or were expected to

return home on leave in the near future. On April 10, the letters and questionnaires to students now serving in the military were mailed.

Between March 18 and 28, a Project member met with La Puente and El Monte Armed Forces recruiters to determine the specific skills and knowledges required by system graduates for entry into military service. The Military Recruitment Questionnaire was used to structure these personal interviews. The findings of these interviews were later compared to those produced by the questionnaires mailed to the district and national recruiting levels.

On March 18 - 19, envelopes containing the Military Recruitment Questionnaires were addressed. The questionnaires were printed for mailing on March 20. The questionnaires, cover letters and self-addressed, stamped return envelopes were mailed between March 20 - 22.

By March 11, Project members developed a letter to be mailed to the Military Training Officers of former Valley High School students presently on active duty in the Armed Forces. The letter would accompany the Military Training Officer Questionnaire. The purpose of this correspondence was to get from the officers a comparison between the basic skills and knowledges which the Valley High School students and those of other men under their command possess.

On March 12, the letter to be sent to the Military Training Officers was submitted to the Project management for approval. Approval was granted. During the week of March 13, the questionnaires, cover letters, and self-addressed, stamped return envelopes were mailed to the seven Military Training Officers.

Between March 11 - 13 letters to the local, district, state and national levels of the Selective Service System were addressed. On March 13, these letters, requesting information concerning skills and knowledges required by the draft, were mailed to the following addresses:

Local:	Director, Selective Service System San Gabriel Board 1448 South San Gabriel San Gabriel, California
District:	Director, Selective Service System Headquarters Southern Area 1206 Maple Street Los Angeles, California
State:	State Director of Selective Service System Sacramento, California
National:	General Louis Hershey National Director of Selective Service System Washington, D.C.

Prior to March 28, the Project obtained a copy of the text, Practice for the Armed Forces Tests. This test was used for analyzing the military screening and placement tests. On March 28, a letter was drafted to the author of this text, David R. Turner, inquiring if additional material relating to

his text has been published. This letter was submitted to the Project management for approval on the same day. Approval was granted, and the letter was mailed.

By April 10, the Project had received a reply from Mr. Turner, stating that his text was up-to-date, and that contemplated changes were minimal. By April 23, responses from the Selective Service System had been received. By April 30, questionnaires mailed to military recruitment officers, students and training officers had been returned.

During the period of March 6 - April 30, several texts and periodicals were consulted by Project members to supplement other data sources. Of special significance was the material concerning mental screening examinations, found in the text, Practice for the Armed Forces Tests, referred to before. Supplementary background on the Armed Forces Qualifying Test was found in the Department of Health, Education and Welfare Bulletin entitled, How Good Are Our Schools? Armed Forces Qualification Test Provides a Clue. Other sources were Appraising Vocational Fitness by Means of Psychological Tests, by Donald E. Super and John O. Crites, which offered a good basis for analyzing the Armed Forces Qualification Test; and the Dictionary of Occupational Titles, Volume II, which offered a frame of reference by which Armed Forces testing personnel could describe the skills and knowledges required to perform successfully on screening examinations.

The information from these texts was employed to offer a complete description of military testing, including sample items, and to key the findings regarding skills and knowledges to those found in the Employment Situations part of the Project's research.

On July 3, an extensive interview was held with Major Burt, U. S. Army and Lieutenant Nagel, U. S. Army, both of the mental testing section, Los Angeles Armed Forces Examining and Entrance Station. The purpose of this interview was to authenticate data concerning the Armed Forces screening and placement tests. During this interview, the respondents were helpful in correlating Project findings and analyses with the General Educational Development Scale, found in the Dictionary of Occupational Titles. (See p. 20, infra.)

#### Reduction of Data

During the months of May, June, and July, data received from the former students, their training officers, the military recruiters and examiners, and the Selective Service System were reduced into written findings. These data were supplemented with textbook and other reference materials discussed earlier. The findings were divided into six sections, in the following manner:

1. Military Recruitment Data. The information received from the military recruiters which outlined the skills and



knowledges required for entry into the military served as a helpful introduction to this phase of the research. When it came time to reduce data, the recruitment interviews and questionnaires offered a good frame of reference within which staff could develop more detailed findings.

As the questionnaires were returned, it became evident that many of the answers were nearly identical; others were supplemental, and still others were contradictory. Personal interviews with the local recruiters resolved some of the conflicting statements. It was decided, however, that important distinctions between the national, district, and local replies should be preserved in the findings. Thus, a summary format was employed to give the reader, in table form, a digest of the questions used in the questionnaires and personal interviews, and the corresponding answers from each recruitment level responding.

It was decided to include a sample "classification policy," describing what happens to a new recruit upon "successful entry" into the military, at the conclusion of the table summarizing the data received from military recruiters. The term "successful entry" was defined by the Project as the ability to enlist or be inducted into the Armed Forces of the United States. Classification is one step beyond enlistment or induction, but is closely related to entry, especially in terms of the use of screening test scores.

Following the material on classification, four flow charts were included - one for each branch of the military. These charts are a very brief outline of the steps an enlistee and inductee takes to gain "successful entry." The charts were derived from the military recruitment findings.

At the conclusion of the military recruitment findings, a brief analysis is offered. This analysis serves as a summary of the important facts found in this section.

## 2. Analysis of the Military Placement and Screening Tests.

The findings discussed in this section came from several sources. The information received from the military recruiters concerning required testing, general test descriptions and passing scores served as a basis for the analysis. To this was added the information found in reference texts and materials as well as the information received from the mental testing section of the Armed Forces Examining and Entrance Station.

The findings in this section were organized according to the following outline:

- I. Analysis of the Enlistment Screening Test (EST)
  - A. Description
  - B. Scoring
  - C. Summary



II. Analysis of the Armed Forces Qualifying Test (AFQT)

A. Applicability

B. Content

1. Arithmetic subtest
2. Vocabulary subtest
3. Patterns and figures subtest
4. Tool recognition subtest

C. Administration

D. Scoring

E. Norms

F. Standardization

G. Validity

H. Summary

III. Analysis of the Women's Enlistment Screening Test (WEST)

A. Introduction

B. Subtests

1. Arithmetic subtest
2. Vocabulary subtest

C. Summary

IV. Analysis of the Military Battery Placement Tests

A. Introduction

B. The Navy Basic Test Battery (NBTB)

1. General classification subtest
2. Arithmetic subtest
3. The mechanical subtest
4. The clerical subtest

C. Summary

V. Conclusion

When describing the screening and placement tests, reference was made to the General Educational Development Scale (see p. 20, infra). The purpose of this reference was to relate military findings to the findings of the Employment Situations sections of this research. Descriptions of skills and knowledges required to successfully perform on the screening and placement tests, and descriptions of skills and knowledges required in employment situations included this common denominator to facilitate the compilation of "system performance characteristics" by Project staff.<sup>6</sup>

Since the combined analyses were of considerable length, an attempt was made to summarize important facts contained in each analysis. The conclusion represents a synthesis of these summaries, and highlights the important findings of this section.

3. System Graduate Data. Information received from former Valley High School students now serving in the military was the subject of this section. Since only two questionnaires were returned, it was decided to combine the responses in a question and answer format. Such a format, followed by a brief analysis of the data, presents the major highlights of this material with brevity and focus.

4. Training Officer Data. The questionnaires returned by training officers of former Valley High students contained information of a testimonial nature. It was decided that the

quotations contained in each questionnaire should be included in the findings to relieve the reader of referring to the Tables to discover respondent phraseology. Thus, the same question - answer format used in analyzing system graduate data was employed here. An analysis and summary concluded this section.

5. Selective Service System Data. The most substantial findings received from the Selective Service System came in the form of a communication from the office of the Assistant Secretary of Defense. It was determined that this communication should be the subject of this section. This communication which outlined moral standards for induction and enlistment was quoted. A brief analysis followed.

6. Summary of Findings. A brief summary of findings concluded the reduction of data.

#### Documentation and Revision

During the months of April, May, and June, data received was documented and authenticated by Project staff. The single most important authentication came from the interview with Army personnel at the mental testing section of the Los Angeles Armed Forces Examining and Entrance Station. This interview produced sufficient new data to require a complete rewrite of the military screening and placement test analysis.

Prior to this interview which was previously denied the Project analytical material relating to military testing was

limited to general test descriptions by military recruiters, and information from the text, Practice for the Armed Forces Tests. The interview with Major Burt and Lieutenant Nagel revealed additional information concerning General Educational Development (GED) subtest ratings, administration, scoring, norms, and standardization. The GED chart, found on the following page, was used by Major Burt and Lieutenant Nagel to describe prerequisite behaviors for success on the military screening and placement tests and each subtest of the AFQT, WEST and NBTB was described to Project staff by military testing personnel.

By August 16, documentation, authentication and revision of all military findings was complete.

## L REASONING DEVELOPMENT

6 Apply principles of logical or scientific thinking to a wide range of intellectual and practical problems. Deal with non-verbal symbolism (formulas, scientific equations, graphs, musical notes, etc.) in its most difficult phases. Deal with a variety of abstract and concrete variables. Apprehend the most abstruse classes of concepts.

5 Apply principles of logical or scientific thinking to define problems, collect data, establish facts, and draw valid conclusions. Interpret an extensive variety of technical instructions, in books, manuals, and mathematical or diagrammatic form. Deal with several abstract and concrete variables.

4 Apply principles of rational systems<sup>1</sup> to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Interpret a variety of instructions furnished in written, oral, diagrammatic, or schedule form.

<sup>1</sup>Examples of "principles of rational systems" are: Bookkeeping, internal combustion engines, electric wiring systems, house building, nursing, farm management, ship sailing.

## MATHEMATICAL DEVELOPMENT

Apply knowledge of advanced mathematical and statistical techniques such as differential and integral calculus, factor analysis, and probability determination, or work with a wide variety of theoretical mathematical concepts and make original applications of mathematical procedures, as in empirical and differential equations.

Perform ordinary arithmetic, algebraic, and geometric procedures in standard, practical applications.

## LANGUAGE DEVELOPMENT

Comprehension and expression of a level to--Report, write, edit articles for such publications as newspapers, magazines, and technical or scientific journals. Prepare and draw up deeds, leases, wills, mortgages, and contracts.--Prepare and deliver lectures on politics, economics, education, or science.--Interview, counsel, or advise such people as students, clients, or patients, in such matters as welfare eligibility, vocational rehabilitation, mental hygiene, or marital relations.--Evaluate engineering technical data to design buildings and bridges.

Comprehension and expression of a level to--Transcribe dictation, make appointments for executive and handle his personal mail, interview and screen people wishing to speak to him, and write routine correspondence on own initiative.--Interview job applicants to determine work best suited for their abilities and experience, and contact employers to interest them in services of agency.--Interpret technical manuals as well as drawings and specifications, such as layouts, blueprints, and schematics.



## REASONING DEVELOPMENT

- 3 Apply common sense understanding to carry out instructions furnished in written, oral, or diagrammatic form. Deal with problems involving several concrete variables in or from standardized situations.
- 2 Apply common sense understanding to carry out detailed but uninvolved written or oral instructions. Deal with problems involving a few concrete variables in or from standardized situations.

## MATHEMATICAL DEVELOPMENT

Make arithmetic calculations involving fractions, decimals and percentages.

Use arithmetic to add, subtract, multiply, and divide whole numbers.

## LANGUAGE DEVELOPMENT

Comprehension and expression of a level to--File, post, and mail such material as forms, checks, receipts, and bills.--Copy data from one record to another, fill in report forms, and type all work from rough draft or corrected copy.--Interview members of household to obtain such information as age, occupation, and number of children, to be used as data for surveys, or economic studies.--Guide people on tours through historical or public buildings, describing such features as size, value, and points of interest.

Perform simple addition and subtraction, reading and copying of figures, or counting and recording.

Comprehension and expression of a level to--Learn job duties from oral instructions or demonstration.--Write identifying information, such as name and address of customer, weight, number or type of product, on tags, or slips.--Request orally, or in writing, such supplies as linen, soap, or work materials.

- 1 Apply common sense understanding to carry out simple one- or two-step instructions. Deal with standardized situations with occasional or no variables in or from these situations encountered on the job.

## NOTES

1 David R. Turner, Practice for the Armed Forces Tests, (Arco Publishing, 1965), p. 9.

2 Richard D. deNeufville and Caryl Conner, How Good Are Our Schools? Armed Forces Qualification Test Provides A Clue, (U.S. Printing Office, Department of Health, Education and Welfare, October, 1966), p. 7.

3 Dictionary of Occupational Titles, Volume II, Third Edition, (Manpower Administration, U. S. Department of Labor, 1965), p. 4.

4 Donald Super and John Crites, Appraising Vocational Fitness by Means of Psychological Tests, Revised Edition, (New York, Harper and Brothers, 1962).

5 Continuation Education System Development Project, Student Performance Requirements, "Employment Situations," (La Puente Union High School District, La Puente, California, September, 1968).

6 Continuation Education System Development Project, System Performance Requirements, (La Puente Union High School District, La Puente, California, September, 1968).



# **CRITIQUE OF PROCEDURES**

### Research Clearance

In future studies of this type, it is imperative that an effort be made to secure a research clearance from the Department of Defense in Washington, D.C., prior to interviewing military personnel. Such a clearance would open many files and introduce relevant data which were not available to this Project. Unfortunately, this phase of the Project was not undertaken soon enough to produce such a clearance. Procedures involved to secure a research clearance from the Department of Defense take four to six months.

### Recruitment Personnel

Questionnaires employed in our survey to interview recruitment officers on the district and national levels were most helpful. For purposes of validation, however, questionnaires should inquire into the exact reference numbers of military manuals governing entrance requirements. Such references were not compiled by this Project.

Personal interviews on the local recruitment level produced the most vital data. During the personal interviews, the researcher was able to isolate pertinent data that was often overlooked by respondents to the questionnaires. Regulations which govern military entrance requirements were focused

upon more clearly during the personal interviews than in the questionnaires.

Recruiting personnel, especially on the local levels, were both gracious and helpful. Personnel change-over at this military level is constant, however, and this might affect the reliability of findings gathered in this way. Also, military regulations governing entrance are subject to change at any moment, depending upon military manpower requirements. This also makes the research in this area vulnerable. Research on military entrance, therefore, must be continuously updated.

#### Entrance and Placement Tests

The absence of a research clearance from Washington, D.C., seriously handicapped the Project's attempt to deliver a full and complete analysis of the military entrance and placement tests. The most serious shortcomings were involved in the description of the administration, scoring, norms, standardization, and validity of these examinations. To compensate for the absence of the research clearance, the Project consulted military testing personnel at the Los Angeles Examining and Entrance Station. These gentlemen were most helpful in filling in the gaps left by military recruiters at the local level. Perhaps their greatest contribution was in the form of the General Educational

Development descriptions they offered concerning the Armed Forces Qualifying Test and the Navy Basic Test Battery.

It must be remembered, however, that these descriptions came from a single source, and that other testing personnel at alternate Armed Forces Examining and Entrance Stations might have offered additional or alternative descriptions.

A second criticism of the analysis of the Armed Forces Entrance and Placement tests, is that the Project described only the Navy Basic Test Battery. This battery examination was selected for description because it is representative of battery examinations for all branches of the military. It is unfortunate, however, that the Army Qualification Battery (AQB) could not have been described more fully. The AQB is used on the screening level in cases of sub-standard performance on the AFQT. By not describing the AQB, and having to substitute a description of the NBTB, the Project was forced to infer a strong similarity between these batteries. While such an inference was permissible under the circumstances, it is not entirely accurate.

#### Former Valley High School Students

The Project was anxious to gather information on the views of former Valley High students now serving in the military. Considering the small number of responses, this

goal was not fully achieved. Only two responses were received from ten mailings.

Several reasons may account for this poor sampling. First, the records and addresses of former students of Valley High were not updated to include their military addresses. Also, these records revealed only those male students who dropped out of the continuation education program for the purpose of going into the military. There were ten such students in the past two years. The parents of these former students had to be contacted to verify current military addresses. The Project was unable to determine how many students other than the ten are now serving in the military.

Although military addresses were established, three of the ten students contacted by the Project were at home on leave from the military, or expected to return home on leave in the near future. Thus, the questionnaires sent to these students were mailed to their home addresses. It is suggested that all of the questionnaires should be directed to military addresses. The two completed questionnaires returned to the Project were received from military addresses. No questionnaires were returned from the students contacted at home.

Finally, the questionnaire's design may have placed the respondents under some burden in answering. The design

attempted to employ a short answer, open-ended type of format. It was felt that such a format would be easy to complete, would facilitate tabulation, and allow for individual expression. The questionnaire may have been slanted too far in the direction of open-endedness. The poor response may have been due in part to the extra effort required to complete the open-ended questionnaire.

It is suggested for future research that the questionnaire's format be as objective as possible. A check-off type of format would be very useful, allowing the respondent an effortless response. A self-addressed, stamped envelope must certainly be enclosed, so as to place little burden on the respondent in returning his answers.

#### Questionnaires

Generally, the response from the military training officers of system graduates now in the military indicated the performance levels of the system graduates. The open-ended approach used in the Military Training Officer Questionnaire was successful; the respondents were allowed to reply openly and display original thought in their replies. An exception to the desirability of the open-ended approach can be found in question 5. The question was designed to solicit a general description of basic skills and knowledges required to perform successfully the duties required of an entry level rank; such as a private, Grade E-1.



Instead, the response indicated basic skills and knowledges required to perform successfully the duties currently involved in the daily tasks and activities of an entry level person. Admittedly, this is a fine line, but the question should be either rephrased or complemented with another that aims to discover general background skills and knowledges which could be developed on the continuation high school level.

The open-ended questionnaire format may also be restrained in cases where the respondent is asked to compare individuals. For example, in question 5a and 5b, as well as question 6b of the Military Training Officer Questionnaire, it would have been helpful for tabulation purposes to have a scale upon which the respondent could have ranked the individual in comparison with others in the same environment. This type of question could have been used with equal success in the System Graduate Military Questionnaire and the Military Recruitment Questionnaire.

A further example is found in question 8 of the Military Training Officer Questionnaire. This question, which was aimed at discovering the aptitude and vocational record of the system graduate during prior military duty, produced vague responses. Once again, a check-off type of question might have been more successful in rating the performance of the system graduate in relation to his fellow servicemen.



The questionnaire directed toward the military training officer was one of the most revealing of the survey, and should certainly be included in future surveys of this type. The primary consideration in the future surveys should be to encourage as large a response as possible by mailing the questionnaire early, and, by running a careful check on military addresses. The questionnaire should employ an open-ended approach where possible to allow military training officers and others the opportunity to freely express themselves.

The Military Training Officer Questionnaire fell somewhat short of its designed purpose to compare the system graduate to non-system graduates in his environment. Concerning social behavior, comparative responses were received. Other skills and knowledges were not compared adequately for the purposes of this survey, and future surveys should include better instruments for comparison. Most important, there was no attempt to discover whether the system graduates described in this questionnaire were one and the same as those replying to the questionnaire directed to system graduates now serving in the military. A possible correlation in this regard would have been helpful.

#### The Selective Service System

Future inquiries into the minimal skills and knowledges required for entry into the military would best avoid the

Selective Service System as a source of information. By and large, this department had little to offer the researcher. The only information received in communication with the Selective Service System was the reply from the Department of Defense concerning moral standards for induction and enlistment. In future studies, this information could be solicited directly from the Defense Department. The Selective Service System at the national level volunteered no information on how local draft boards classify individuals eligible for the draft. The Selective Service System on the local level was unresponsive to Project correspondence. Perhaps future inquiries of the Selective Service might draw some response if they are sent only in conjunction with specific individual cases.

# FINDINGS

## MILITARY SITUATIONS: OUTLINE OF FINDINGS

### I. MILITARY RECRUITMENT FINDINGS

- A. Personal Interviews - Recruiting Stations
- B. Analysis of Findings

### II. ANALYSIS OF MILITARY SCREENING AND PLACEMENT TESTS

#### A. Analysis of Enlistment Screening Tests

- 1. Description
- 2. Scoring
- 3. Summary

#### B. Analysis of the Armed Forces Qualifying Test

- 1. Applicability
- 2. Content
- 3. Administration
- 4. Scoring
- 5. Norms
- 6. Standardization
- 7. Validity
- 8. Summary

#### C. Analysis of Women's Enlistment Screening Test

- 1. Introduction
- 2. Subtests
- 3. Summary

#### D. Analysis of the Military Battery Placement Test

- 1. Introduction

2. The Navy Basic Test Battery

3. Summary

III. SYSTEM GRADUATE FINDINGS

A. Questionnaire Data

B. Analysis of Findings

IV. MILITARY TRAINING OFFICERS' QUESTIONNAIRES

A. Review of Findings

B. Analysis of Findings

V. SELECTIVE SERVICE SYSTEM DATA

A. Excerpts from Correspondence

B. Analysis of Findings

## I. MILITARY RECRUITMENT FINDINGS

### A. Personal Interviews - Recruiting Stations

Each branch of the military service was contacted on the recruiting level to determine the fundamental skills and knowledges required by the system graduate for entry into the military. Replies to Project questionnaires were received from the district recruiting level headquarters of the Army, Navy, and Air Force. Replies were received from the national recruiting level headquarters of the Army, Air Force and Marine Corps. No reply was received from the national recruiting level of the Navy, or from the district recruiting level of the Marine Corps. On the local level, the Armed Forces recruiters of each branch were interviewed personally in the La Puente and El Monte, California recruiting stations. The following is a review of the results of the local interviews, and the questionnaires received from the district and national recruiting levels:



RESULTS OF MILITARY QUESTIONNAIRES AND LOCAL INTERVIEWS

QUESTION	ARMY	NAVY	MARINE CORPS	AIR FORCE
(1) Rank of person interviewed?	<u>National Reply</u> Sergeant Major  <u>District Reply</u> Captain  <u>Local Reply</u> Staff Sergeant Grade E-6  Private, Grade E-1  <u>National Reply</u> Yes, 60%  <u>District Reply</u> Yes, 80%  <u>Local Reply</u> Yes, over 1/2 depending on need.	<u>National Reply</u> No reply  <u>District Reply</u> Commander  <u>Local Reply</u> 1st Class Petty Officer, E-6  Seaman Recruit, Grade E-1  <u>National Reply</u> Yes, 5%  <u>District Reply</u> No.  <u>Local Reply</u> Yes, minimal 1966-less than 2,000* 1967-none	<u>National Reply</u> Colonel  <u>District Reply</u> No reply  <u>Local Reply</u> Gy. Sergeant Grade E-7  Private, Grade E-1  <u>National Reply</u> Yes, 5%  <u>District Reply</u> No.  <u>Local Reply</u> Yes, minimal 1966-less than 1% 1967-none	<u>National Reply</u> Lieutenant Colonel  <u>District Reply</u> Captain  <u>Local Reply</u> Tech. Sergeant Grade E-6  Airman Basic, Grade E-1  <u>National Reply</u> No.  <u>District Reply</u> No.  <u>Local Reply</u> Yes, minimal* less than 1%.
(2) Basic enlistee rank?				
(3) Acquire manpower through draft?				
(4) Do basic skills and knowledges required for an enlistee and a draftee differ?	<u>National Reply</u> No difference.			<u>National Reply</u> Yes-enlistees must score higher on AQT, 21 for high school grads and 31 for non-grads. Minimum for draftees is 10 and two 90's on AQB.

\*Project 1,000 recruits.



QUESTION	ARMY	NAVY	MARINE CORPS	AIR FORCE
(5) continued	<u>Local Reply</u> No-but prefer high school graduates.	<u>Local Reply</u> Yes-with exception of minimal number of recruits-less than 5%.	<u>Local Reply</u> No-but prefer high school graduates.	<u>Local Reply</u> Yes-with exception of minimal number of recruits less than 5%.
(6) Can the system graduate earn a high school diploma while in your branch?	Yes  (By satisfactorily passing the General Educational Development Exam) *	Yes	Yes	Yes
(7) Do you require satisfactory completion of a general aptitude test on the <u>local</u> screening level?	Yes-Army Enlistment Screening Test (EST) **	Yes-Navy Enlistment Screening Test (Applicant's Qualifying Test) **	Yes-Marine Corps Enlistment Screening Test (Applicant's Qualification Test) **	Yes-Air Force Enlistment Screening Test (Air Force Aptitude Test) **
(8) Nature of this test?	Forty-eight questions-30 minutes: questions on vocabulary, arithmetic, patterns and figures, tool recognition. Ninth grade aptitude.	Eighty-eight questions-60 minutes: questions on vocabulary, arithmetic, patterns and figures, tool recognition. Ninth grade aptitude.	Same as Navy.	Same as Army.
(9) Passing score. (Approximate)	Nineteen	Not given.	(EST) #4 - 20 (EST) #5 - 31	Ten

\*California will not accept the GED exam as a basis for granting diplomas unless the student has completed required course work as outlined under State Code.

\*\*These tests are for enlistees only.

QUESTION	ARMY	NAVY	MARINE CORPS	AIR FORCE
(10) Second test at Armed Forces examination stations?	Yes-AFQT, an extended version of the EST*	Same as Army.	Same as Army.	Same as Army.
(11) Passing score. (Approximate)	Draftees: 10 Enlistees: High School Graduate: 16 Non-grad: 31; or 16 and two 90's on AQB**	10-30 - Must re-test. 30 Pass	Same as Navy.***	Draftees: 10 and two 90's on the AQB. Enlistees: High School Graduate: 21; Non-grad: 31
(12) General skills, knowledges and behaviors desired.	<u>National Reply</u> Good physical health; pass necessary tests; good moral character.	<u>National Reply</u> No answer.	<u>National Reply</u> No answer.	<u>National Reply</u> No answer.
	<u>District Reply</u> Be able to receive training and instruction; accept authority and group living.	<u>District Reply</u> Good moral standards, good police record, good employment, school, personal references.		<u>District Reply</u> No answer

\*This test is administered to both enlistees and draftees.

\*\*For the Army, non-grad. enlistees must score two 90's on AQB and 100 percent in area of desired specialization in order to be trained in that area.

\*\*\*For the Marines, if the applicant scores within the 1-30 percentile range on the AFQT, he is given a differential aptitude test (AQB) and must score two 90's. This applies to both draftees and enlistees, high school graduates and non-graduates.



(12) continued

Local Reply: (Same for all branches.)  
 Ninth grade aptitude with an ability to learn. Basic reading, math and writing ability. Must read, write and speak English. Good moral character (trustworthy). Stress "motivational factor." Stress "reasoning ability" and "trainability."

(13) Refuse entry due to prior arrests and/or convictions.

National Reply  
 Yes.

National Reply  
 Yes-but no minimal exclusion-ary list.

National Reply  
 Yes-individuals with police records.

District Reply  
 Yes-two misdemeanors or one felony requires a waiver. Same for juveniles and adults.

District Reply  
 Yes-applicants awaiting trial, sentence or supervised probation; applicants placed on probation contingent upon enlistment.

District Reply  
 Yes-if six or more minor traffic violations in last year; or two or more minor non-traffic violations; or one or more misdemeanors; or one or more felonies or currently on probation.

Local Reply: (Same for all branches.)

Yes-if minimum of six moving traffic violations in past year, or conviction of a felony or misdemeanor involving moral turpitude.

(14) Exceptions.

National Reply  
 Waivers are considered for all whose record shows they have been rehabilitated.

National Reply  
 Each case considered on merits. We consider nature of offense, age when committed, punishment imposed, degree of rehabilitation. This is compared to applicant's test scores, physical rating, employment and education record.

National Reply  
 Waivers or moral disqualifications are made by U.S. Army Recruiting Service.



QUESTION

ARMY

NAVY

MARINE CORPS

AIR FORCE

(14) continued

District Reply  
Applicant must prove rehabilitation with letters of reference from school, probation officer, employer, etc.

District Reply  
Approval must be requested from higher authority. Under favorable recruiting climate, moral waivers are not readily given.

District Reply  
Waivers based on employer, professional and clergy recommendations, police report and local recruiters report to unit commander.

Local Reply: (Same for all branches.)

If minimum record is present, must submit an evaluation waiver request to recruiting headquarters; waivers often granted for certain crimes (e.g., burglary and robbery), but rarely narcotics, rape, homosexuality or child molestation. Standard employed - presently displaying good moral character with future propensity for same. Character references must accompany evaluation waivers.

(15) Further placement testing

Yes-Army Qualification Battery (AQB)

Yes-Navy Basic Test Battery (NBTB)

Yes-Marine Corps Basic Classification Test Battery (BCTB)

Yes-Airman Qualifying Examination (AQE). Two hours fifteen minutes - 210 questions.

(16) Subjects tested

Vocabulary  
Arithmetic Reasoning  
Pattern analysis  
Personality and combat efficiency  
Mechanical aptitude  
Clerical ability  
Radio aptitude  
General information  
Shop mechanics  
Automotive information

General Classification Test - verbal ability, comprehension of word meaning and verbal relationships; general intelligence  
Arithmetic Test - fundamental reasoning and problem solving  
Mechanical Test - basic mechanical and electrical knowledge

Verbal, arithmetic reasoning  
Pattern analysis  
Classification inventory  
Mechanical Aptitude  
Shop mechanics  
General information  
Clerical speed  
Radio code  
Automotive information  
Electronic information

Four aptitude clusters  
General; Administrative; Mechanical and Electronics. Testing - Arithmetic reasoning  
Technical electrical vocabulary - Electrical information - Background for current affairs - General mechanics - Mechanical principles



QUESTION	ARMY	NAVY	MARINE CORPS	AIR FORCE
(16) continued	Electrical in-formation categories are: Infantry, Electronics, Precision Maintenance, Motor Maintenance, Clerical, General Technical, Verbal, Arithmetic, Shop Mechanics, Pattern Analysis	<u>Clerical Aptitude Test - ability to check and sort numbers.</u>		Interpretation of data, Word knowledge, Tool functions, Pattern comprehension, Mechanical movements, Airmen arithmetic, Hidden figures
(17) Passing score (approximate)	Ninety or better in two areas; must score 100 in area of desired specialization	Not given.	Not given.	Sixty on electronic cluster. Forty on others.
(18) Do you enlist females?	Yes-Women's Army Corps (WAC)	Yes-Women accepted for voluntary emergency service (WAVES)	Yes-Women Marines (W.M.)	Yes-Women's Air Force (WAF)
(19) Screening test on local level	Yes-Women's Enlistment Screening Test (WEST)	Same as Army.	Same as Army.	Same as Army.
(20) Description	Twenty minutes- vocabulary and arithmetic only. 44 questions.	Same as Army.	Thirty minutes, 44 questions.	Same as Army.

QUESTION	ARMY	NAVY	MARINE CORPS	AIR FORCE
(21) Passing score	WEST #3 - 8 WEST #4 - 9	14	1:	14
(22) Other tests and description	Armed Forces Women's Selection Test (AFWST); consists of vocabulary, analogies, and arithmetic. 75 minutes, 100 questions. Twelfth grade aptitude required.*	AFWST	AFWST	AFWST plus completion of the AQE, with a passing score of 40 in each category.
(23) Passing score	30 on AFWST #5 34 on AFWST #6	42 on first part, 47 on second part	Same as Navy.	Same as Navy.
(24) Basic skills, knowledges and behaviors required of women?	(Same for all branches.) Must be 18 years old, and have written consent from parent if under 21. Must have high school diploma and 12th grade aptitude. Must have high school dependents, and be single. Character references required and very good moral character is a basic essential. May marry after enlistment.			
(25) Sample classification procedure for new recruits?	see Marine Corps example, next page.			

\*Also must complete AQB, scoring 90 or higher in two areas, one of which being General Technical Area.



Subject: Criteria for Classification of Enlisted Personnel\*

QUESTION

What are the criteria for classifying enlisted Marines?

CLASSIFICATION POLICY

1. Newly enlisted Marines are classified at one of the recruit depots. Classification is based on the results of a man's classification test scores, the particular skills he possessed, and the needs of the Marine Corps at the time.

2. Subsequent reclassification of enlisted Marines after recruit training is effected primarily on the basis of the man's demonstrated performance and Marine Corps needs.

RECRUIT CLASSIFICATION PROCEDURE

All Marine recruits shortly after their arrival at a recruit depot are administered a classification battery of II aptitude tests. These tests, in certain combinations, form the following aptitude-areas:

Infantry (IN)

Motor Maintenance (MM)

Armor, Artillery, and Engineer (AE)

Clerical (CL)

Electronic (EL)

General Technical (GT)

General Maintenance (GM)

On the basis of aptitude-area scores, experience, and other relevant information about the individual, a decision is made as to where the individual can best be assigned consistent with his talent and Marine Corps needs.

In brief, the classification procedure is as follows:

a. All recruits are administered the classification test battery (BCTB).

b. Recruits achieving a specified score in the GT aptitude-area are further administered the Electronics Technician Selection Test (ETST).

c. Recruits professing skill in certain occupations are tested using Oral Trade Tests.

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\*Courtesy, Marine Corps Recruiting Office.

d. Recruits indicating proficiency in typing or music are administered tests to measure ability in these areas.

e. Personnel scoring 110 or higher on Aptitude-Area GT and CL are administered the Language Aptitude Test (LAT). Recruits being considered for assignment in data processing are administered the Electronic Data Processing Test (EDPT).

f. Based on classification test scores, civilian skills, and Marine Corps needs, together with information provided from the Marine Corps automated recruit distribution process, recruits are recommended for assignment in one of the following four categories:

(1) Aviation - principally, those recruits who enlisted for aviation duty only.

(2) Directly to the job - those recruits who already possess a required skill or trade.

(3) Formal School - those who meet formal school prerequisites. For example, to qualify for the Basic Electronics Course, one must achieve a specified GT score and a prescribed ETST score.

(4) General Duty - for the majority of recruits. Recruits are assigned, whenever practicable, in their highest aptitude area.

In addition to aptitude-area score criteria, assignment takes into consideration such factors for example, as security clearance, citizenship, and physical characteristics.

Generally, after completing recruit training and individual combat training, and prior to joining their first permanent duty unit, MOS training is provided at Basic Specialist Training or at a formal school.

The foregoing has been concerned with initial classification testing in Recruit Training. In order to broaden the base of eligibility for retraining and advancement after recruit training, commanding officers, at their discretion, may authorize classification retesting subject to certain time limitations and provided the Marine is genuinely motivated.

## B. Analysis of Findings

An initial analysis of manpower provisions for the Armed Forces reveals that 60 to 80% of Army military personnel are acquired through the draft. Enlistees compose the majority of the ranks of other branches. Less than 5% of the recruits in the Navy, Air Force, and Marine Corps are draftees.

While national response from the Army indicates that the basic skills and knowledges required for an enlistee and a draftee are equal, evidence is contrary. Enlistees in the Army and Air Force must score six and ten points higher respectively than draftees on the Armed Forces Qualifying Test (AFQT). A draftee into the Army has no guarantee of the type of training he is to receive in military schools, whereas enlistees have a choice of schooling, provided they qualify for their choice.

The Navy, and also the Air Force, indicates that a high school diploma is a prerequisite to enlistment. Some men, however, are accepted into the Navy and Air Force without high school diplomas. These men are accepted under a special Department of Defense program as "Project 1,000 Recruits." The Army and Marine Corps also accept some men without high school diplomas. Both of these branches indicate a preference for high school graduates. All branches of the Armed Forces offer the non-graduate an opportunity to earn his General Educational Development (GED) equivalency.



Each branch of the Armed Forces administers pre-induction testing. At the local recruitment level, a short version of the Armed Forces Qualifying Test, call the Enlistment Screening Test (EST), is administered to reveal probable performance on the AFQT. Prospective enlistees are tested in four subject categories: vocabulary; arithmetic; patterns and figures; and, tool recognition. The tests range from one-half hour (Army and Air Force) to fifty minutes (Navy and Marine Corps) in duration, and passing scores range from ten out of forty-eight (Air Force), to thirty-one out of eighty-eight (Marine Corps).

At the Armed Forces Examining and Entrance Station, each enlistee and draftee must take the AFQT. This test is an hour in length, and covers the same subject areas found in the Enlistment Screening Test. Passing scores vary according to the educational status of the applicant and the branch of the service. Generally, a passing score of 10% is the standard for draftees into the Army and Air Force. The Navy and Marine Corps demand higher standards, requiring about 30% to pass. The Army and Air Force require higher scores for enlistees (high school graduates) than draftees. The passing score for enlistees is about 20%. A non-high school graduate enlistee must attain an even higher score, which is generally about 30% in each branch of the service. Alternate forms of testing, called "differential aptitude tests," are administered to applicants who fail to meet the minimum AFQT standards.



The Armed Forces report general prerequisite skills/ aptitude and knowledges required to perform successfully on the AFQT to be a ninth grade scholastic skills/aptitude, and a ninth grade ability in reading and writing English. Other prerequisites required for successful entry into the military include: good physical health\*, ability to receive training and instruction ("trainability-aptitude to learn"); ability to accept authority; to live with others, to reason, to be motivated; and, to have good moral character (as evidenced by being trustworthy).

Good moral character is measured by the absence of prior arrests and/or convictions. If the individual has a minimum of six moving traffic violations within the past year, or has a record of conviction of a felony or misdemeanor involving moral turpitude, he must undergo a waiver procedure. Under this procedure, the local recruiting officer must submit evaluation waiver requests to the national recruiting headquarters. Waivers are often granted for certain crimes, such as burglary and robbery. Rarely are they granted in cases involving narcotics, rape, homosexuality, or child molestation.

A basic standard of morality necessary for entry into the military is employed by all branches. This standard is based upon whether or not the individual is presently

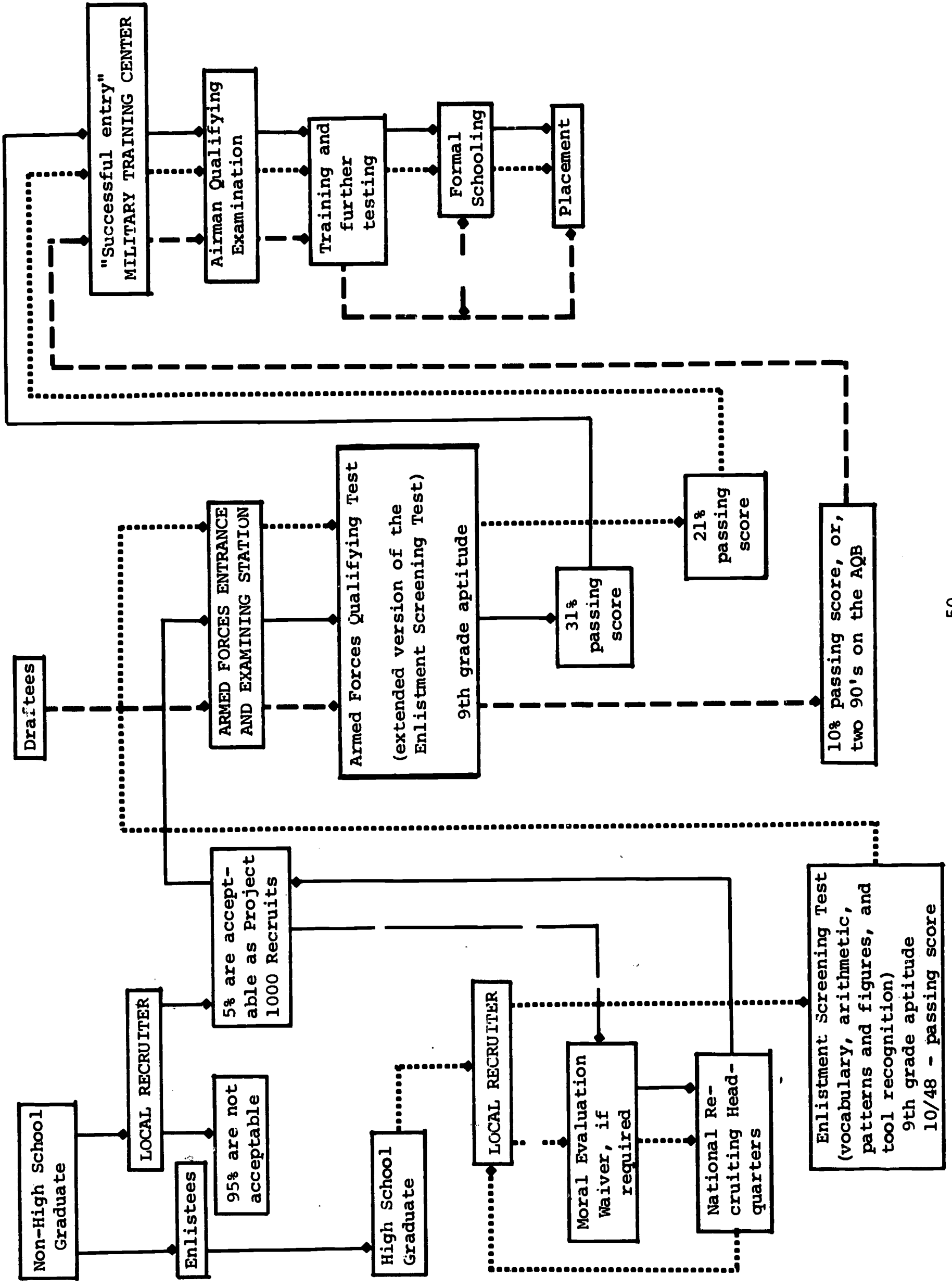
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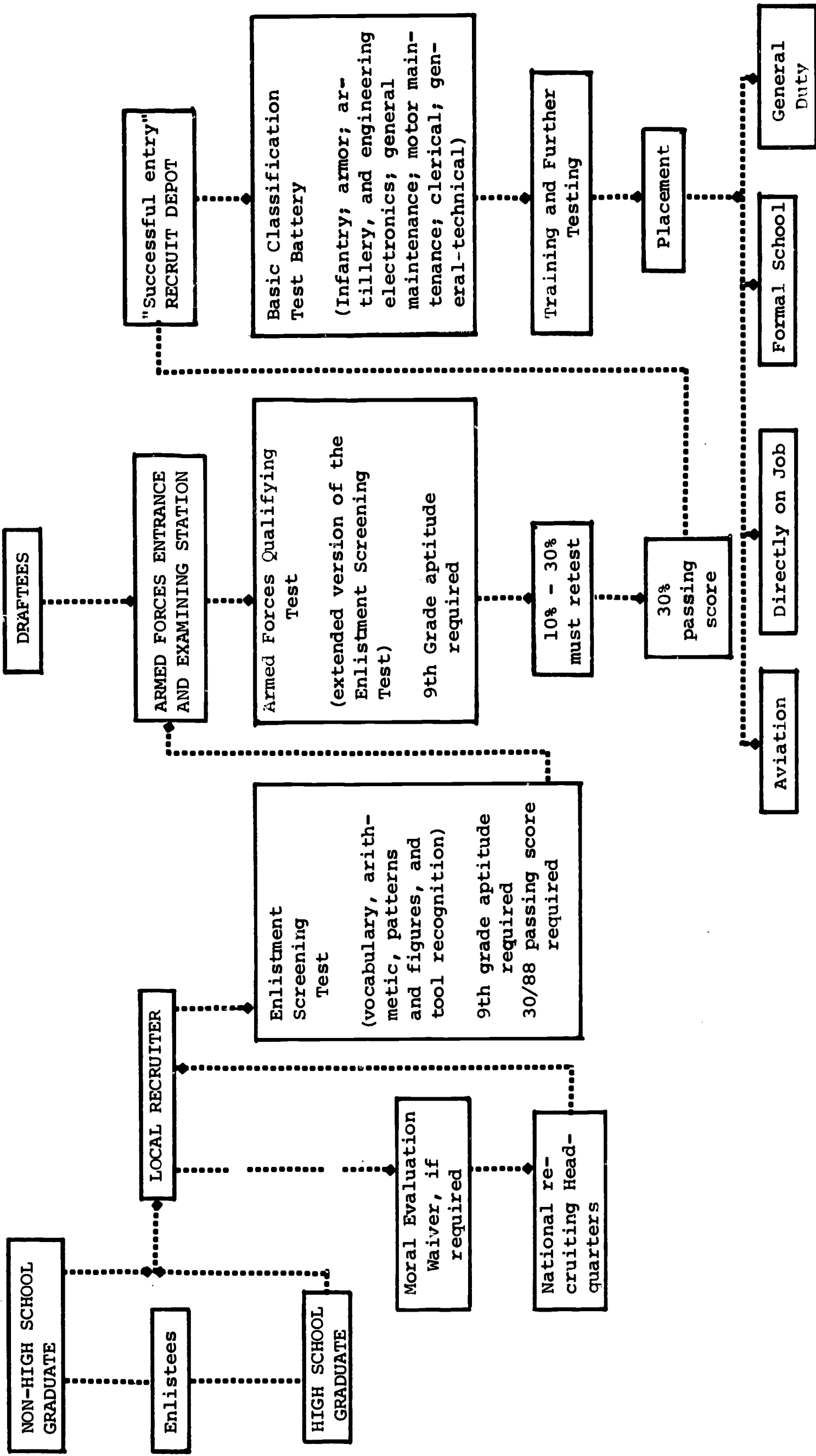
\*Physical standards for acceptance into the Armed Forces will not be dealt with in this study. For a review of these standards, consult Chapter 2, Army Regulation 40-501.

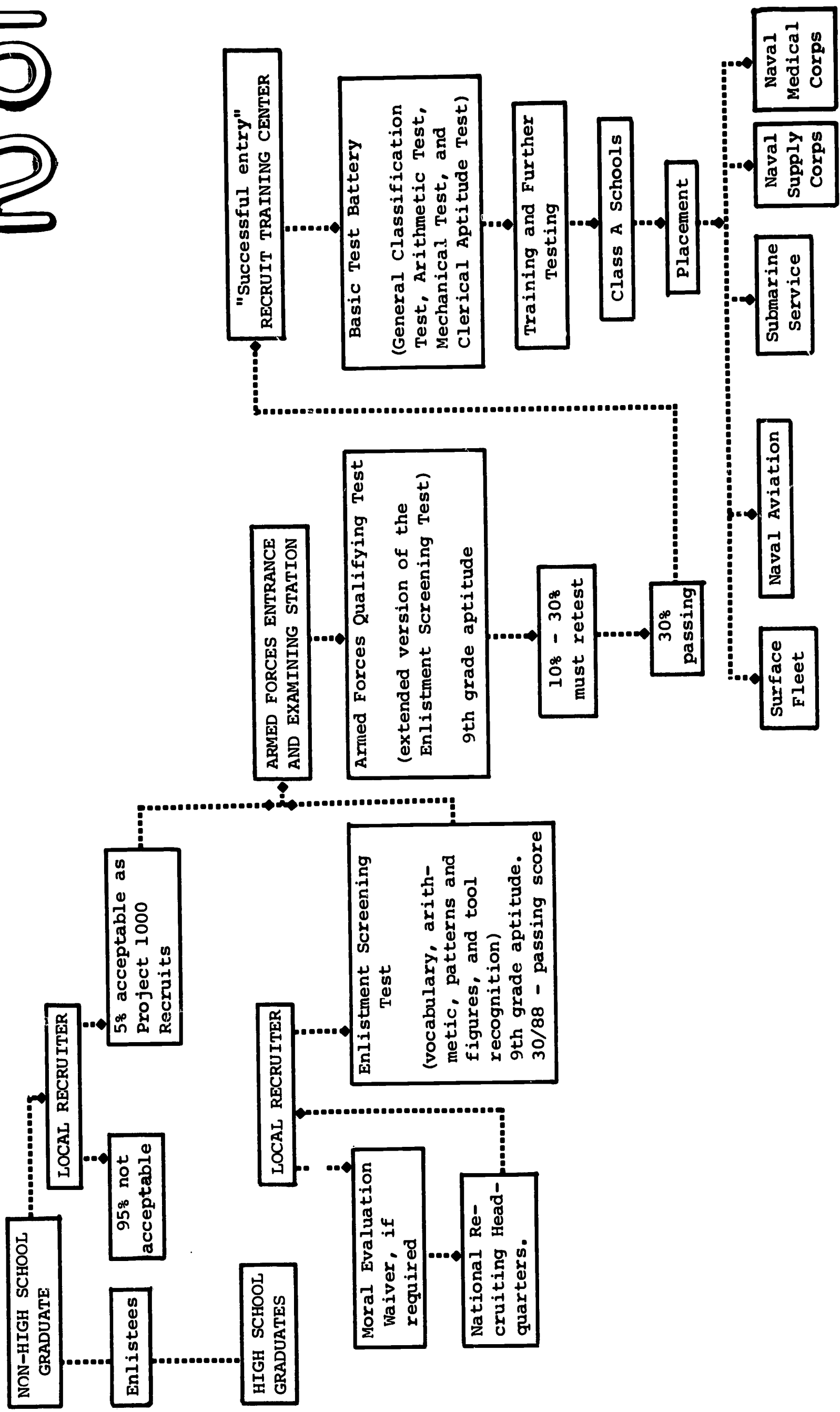
displaying good moral character, with a future propensity for the same. This in turn is measured by character references from the applicant's community. A more detailed discussion of the social entry requirements will be found in the Selective Service System analysis later in this report.

It is important to stress that the minimal skills and knowledges required for entry into the military are substantially higher in the case of females than in the case of males. In the case of female applicants, a twelfth grade aptitude is required, as opposed to a ninth grade aptitude in the case of males. Females must be eighteen years of age and have written consent from each parent if they are under twenty-one. Females must have a high school diploma, and they may not have dependents upon entry. Finally, each female applicant must submit character references attesting to the applicant's good moral character, regardless of the absence of prior arrests and/or convictions.

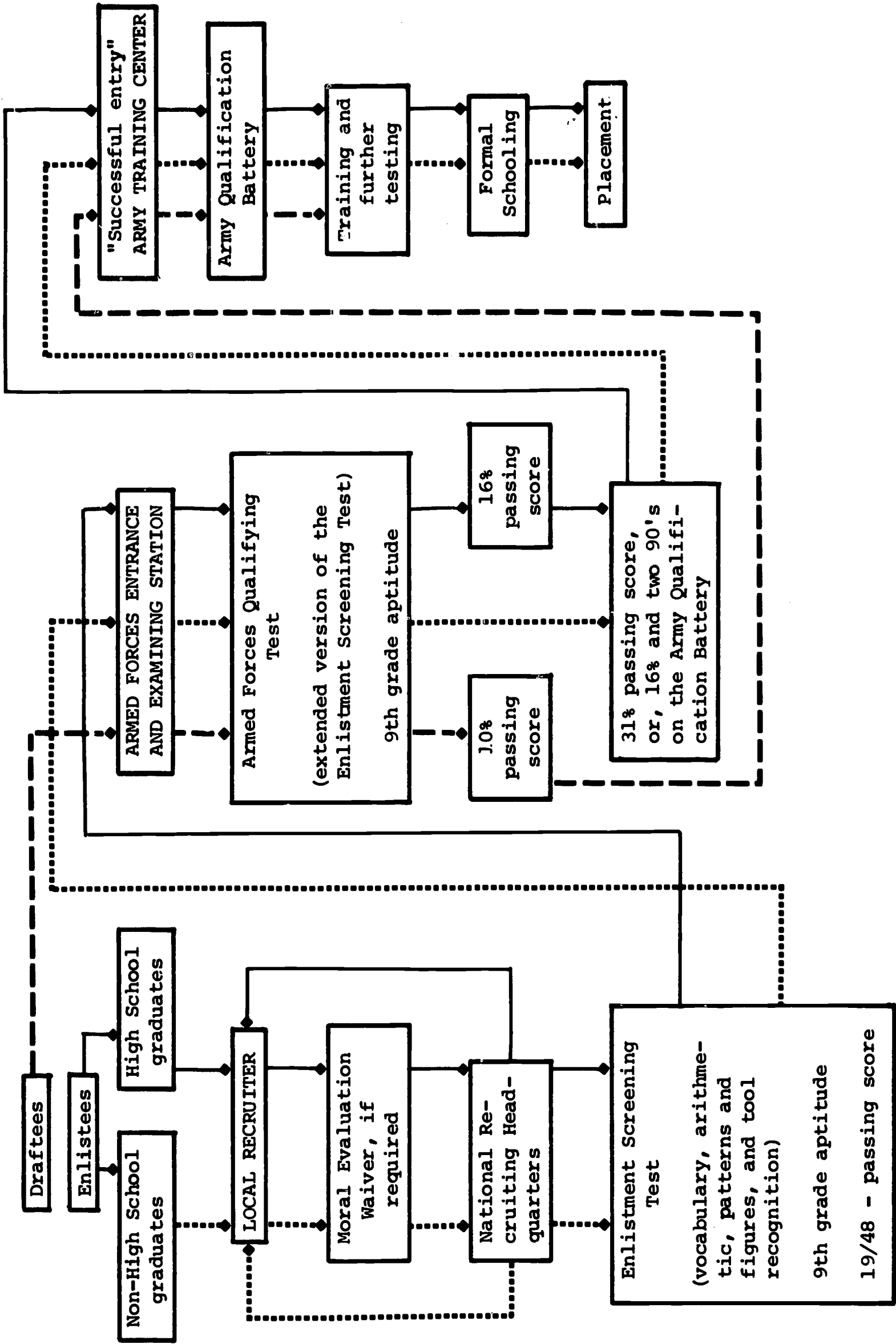
The following charts show the process involved in successful entry into the Armed Forces.







ARMY





## II. ANALYSIS OF MILITARY SCREENING AND PLACEMENT TESTS

The task of this section is to analyze the military screening and placement tests. Preparing continuation students with the fundamentals for successful performance on these tests is an important objective of the Continuation Education Program.

As a matter of screening procedure prior to entry into the Armed Forces, the Military administers a series of examinations to the enlistee and/or draftee. These screening and placement examinations attempt to discover whether or not the prospective entrant possesses the minimal skills and knowledges required for an entry level position in military service.

The standard group of tests designed to screen and place the individual for military service are as follows:

ARMY: the Enlistment Screening Test (EST), administered to prospective male enlistees on the local Army recruitment level; the Women's Enlistment Screening Test (WEST), administered to female enlistees on the local recruitment level; the Armed Forces Qualifying Test (AFQT), administered to male enlistees and inductees at the Armed Forces Examining and Entrance Station; the Armed Forces Women's Selection Test (AFWST) administered to female enlistees at the Armed Forces Examining and Entrance Station; and the Army Qualification Battery (AQB),

administered to enlistees and inductees at the Armed Forces Examining and Entrance Station and/or upon entry into the Army Basic Training Center.

NAVY: the Applicant's Qualifying Test (AQT), administered to prospective male enlistees on the local Naval recruitment level; the Women's Enlistment Screening Test (WEST), administered to female enlistees on the local recruitment level; the Armed Forces Qualifying Test (AFQT), administered to male enlistees and inductees at the Armed Forces Examining and Entrance Station; the Armed Forces Women's Selection Test (AFWST), administered to female enlistees at the Armed Forces Examining and Entrance Station; and the Navy Basic Test Battery (NBTB), administered to enlistees and inductees upon entry into the Navy Recruit Training Center.

MARINE CORPS: the Applicant's Qualifying Test (AQT), administered to prospective male enlistees on the local Marine Corps recruitment level; the Women's Enlistment Screening Test (WEST), administered to female enlistees on the local recruitment level; the Armed Forces Qualifying Test (AFQT), administered to male enlistees and inductees at the Armed Forces Examining and Entrance Station; the Armed Forces Women's Selection Test (AFWST), administered to female enlistees at the Armed Forces Examining and Entrance Station; and the Marine Corps Basic Classification Test Battery (MCBCTB), administered to enlistees and inductees upon entry into the Marine Corps Recruit Depot.

AIR FORCE: the Air Force Aptitude Test (AFAT), administered to prospective male enlistees on the local Air Force recruitment level; the Women's Enlistment Screening Test (WEST), administered to female enlistees on the local recruitment level; the Armed Forces Qualifying Test (AFQT), administered to male enlistees and inductees at the Armed Forces Examining and Entrance Station; the Armed Forces Women's Selection Test (AFWST), administered to female enlistees at the Armed Forces Examining and Entrance Station; and the Airman Qualifying Examination (AQE), administered to enlistees and inductees upon entry into the Air Force Military Training Center.

The following analysis will focus upon the Armed Forces Qualifying Test, and the Navy Basic Test Battery. The AFQT is the single most important examination bearing upon entry into the military. It is administered to every enlistee and inductee prior to entry into each branch of the Armed Forces. The NBTB is a representative sample of placement battery testing administered in each branch of the military. The analysis of this latter test is an example of what the system graduate will encounter upon entry into the military, prior to job placement.

A summarization of the enlistment screening tests will also be given. These tests, administered on the local recruitment levels for each branch of the military, are merely short forms of the AFQT. Their purpose is to discover the probable

performance by enlistees on the AFQT. Discussion of these tests will, therefore, be brief.

The analysis of the Armed Forces Women's Selection Test will also be brief, as will the analysis of its predecessor on the local recruitment level, the Women's Enlistment Screening Test. The WEST is merely a short form of the AFWST, and the AFWST can in turn be compared to the AFQT.

Finally, wherever possible, correlations will be drawn between fundamental skills and knowledges prerequisite to successful performance on the military tests, and descriptive factors of the various levels of General Educational Development (GED). (See "Procedures," p. 20, supra.) The GED descriptors will be helpful in relating these findings with other parts of the Project's research.

#### A. Analysis of the Enlistment Screening Tests

The initial mental screening device facing an enlistee seeking entry into the military is the Enlistment Screening Test. This test is administered at the local recruiting office during the preliminary stages of enlistment. The EST is not mandatory, and certain men who enlist, such as college graduates, do not have to take it. However, the test does have widespread use among local military recruiters to determine whether or not the enlistee possesses basic skills and knowledges which will allow him to perform satisfactorily on the Armed Forces Qualifying Test.

Thus, the term "screening" refers to probable performance on the AFQT, and failure to perform successfully on the EST will not preclude the applicant from enlistment. Such failure will, however, indicate to the recruiter that the applicant is not ready for the AFQT. In such a case, the recruiter will encourage the applicant not to submit to the AFQT without further preparation.\*

#### 1. Description

Each branch of the military has its own name for the Enlistment Screening Test. The Army refers to this test by its own name; the Navy calls it the Applicant's Qualifying Test; the Marine Corps refers to the Applicant's Qualification Test; the Air Force calls it the Air Force Aptitude Test. While the test is referred to by various names, it is, nevertheless, nearly the same for each branch of the military. It is a short form of the Armed Forces Qualifying Test, and it is a practice examination.

The Enlistment Screening Test is a paper and pencil measure of basic ability and is designed to discover the applicant's "aptitude to learn." It is forty-eight questions in length and thirty minutes in duration for the Army and Air Force, and eighty-eight questions in length and sixty minutes in duration for the Navy and Marine Corps.

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\*Two of the recruiters interviewed on the local level indicated that they will tutor the applicant in his areas of weakness in order to prepare him to score successfully on the AFQT. This practice is discretionary, and local recruiters will refrain from so doing unless they feel the applicant is outstanding in other areas; such as attitude, motivation, moral character, etc.



While the EST is currently under close supervision by the military and could not be released to this Project for analysis, certain descriptive features can be outlined. The test is distributed equally into four subject areas: vocabulary; arithmetic; patterns and figures; and, tool recognition. As such, it is a short form of the Armed Forces Qualifying Test which is discussed later. According to the military recruiters, (see p. 40, supra), a ninth grade or above scholastic aptitude and achievement level and the ability to read, write and speak English are the only prerequisites for successful completion of the EST.

## 2. Scoring

Each branch of the military has established its own minimum score on the EST. These scores must be achieved before the enlistee is allowed to submit to the Armed Forces Qualifying Test. For the Army, a passing score of approximately nineteen right answers out of forty-eight questions is the present criteria used to determine if the applicant possesses the minimum skills and knowledges required to succeed on the AFQT. The Navy would not release its passing score to this Project. The Marine Corps requires approximately twenty to thirty right answers out of eighty-eight questions, depending on the test form administered. The Air Force requires ten out of forty-eight on their EST.

## 3. Summary

The Enlistment Screening Test is a practice



examination administered on the local recruitment level. This examination is administered only to prospective enlistees. It is a short form of the Armed Forces Qualifying Test. The same subject categories are tested in both examinations; i.e., arithmetic, vocabulary, patterns and figures, and tool recognition. The EST's range from thirty minutes to an hour in duration, and from forty-eight to eighty-eight questions in length. Passing scores range from ten right answers out of forty-eight questions in the Air Force and twenty out of eighty-eight in the Marine Corps, to nineteen out of forty-eight in the Army. Failure to achieve these minimal scores will not preclude the applicant from gaining entry into the military. But failure on the EST is a strong indication of probable failure on the AFQT. Prerequisite skills and knowledges needed to score successfully on the EST include a ninth grade aptitude, intelligence and achievement level in the English language. A more complete analysis of the subject matter found on the EST is discussed in the following analysis of the Armed Forces Qualifying Test.

## B. Analysis of the Armed Forces Qualifying Test

### 1. Applicability

"The most relevant index for appraising the quality of education in a community is the degree to which it provides the basic knowledge and skills that are required in our contemporary world. AFQT results tell a great deal more

than the number of men who are not qualified intellectually to enter the Armed Forces. These same young men are equally unqualified to become contributing members of our work force. They have not been educated to provide for themselves and their families.

"'Today's military rejects include tomorrow's hardcore unemployed,' said President John F. Kennedy. 'The young man who does not have what it takes to perform military service is not likely to have what it takes to make a living.

"The rejection rate on the AFQT is not an infallible guide, but it is impressive evidence of the failure of many schools. The grown man who cannot pass the AFQT is in serious trouble. This test does not measure innate intelligence or scholastic aptitude; it measures precisely those skills and knowledges that are important in terms of job and income."<sup>1</sup>

## 2. Content

While a copy of this examination, as well as others described herein, was not made available to this Project by the military, the content can be analyzed with the help of the sample questions taken from Practice for the Armed Forces Tests.<sup>2</sup>

The AFQT is divided into four subject categories. There are twenty-five questions in each of the following categories: arithmetic, vocabulary, patterns and figures, and

tool recognition. The test is on the ninth grade achievement level, and is described as a "test of trainability."\*

The following analysis of each subtest category will attempt to describe the minimal skills and knowledges required for successful performance.

#### ARITHMETIC SUBTEST

In the twenty-five questions involving mathematical ability, the examinee must display skills in the addition, subtraction, multiplication and division of whole numbers. He must also be prepared to identify the processes necessary to solve the arithmetic problems. According to military sources, a reading vocabulary and arithmetic aptitude of about the sixth grade is required for successful performance in this subtest. Referring to the standardized table explaining the various levels of General Educational Development (GED), the examinee must perform on Level 2 of the Mathematical Development Scale.<sup>3</sup>

The following thirteen arithmetic problems are samples taken from Practice for the Armed Forces Test and How Good Are Our Schools? Armed Forces Qualification Test Provides A Clue.<sup>4</sup>

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\*Information relative to "test of trainability" was supplied by Major Burt and Lieutenant Nagel of the Mental Testing Section, Los Angeles Armed Forces Examining and United States Army Entrance Station.

Example #1

A train was going to Cleveland which was 85 miles away. It broke down 20 miles from Cleveland. To find out how far it had traveled would you (a) Add (b) Subtract (c) Multiply (d) Divide.

Example #2

A camp has 316 men in four equal groups. To find how many men are in each group, would you (a) Add (b) Subtract (c) Multiply (d) Divide.

Example #3

The base pay for a Technical Sergeant is \$30 more per month than for a Sergeant whose base pay is \$60 per month. What is the base pay per month of a Technical Sergeant. (a) \$72 (b) \$90 (c) \$126 (d) \$130.

Example #4

If a machine gun cost \$9000, how many machine guns can be bought for \$63,000. (a) 4 (b) 7 (c) 9 (d) 11.

Example #5

Some rounds of ammunition were divided equally among 9 men. Each man received 7 rounds. To find how many rounds of ammunition were divided, would you (a) Add (b) Subtract (c) Multiply (d) Divide.

Example #6

Your car has gone 140 miles on ten gallons of gas. To find out how many miles you get to the gallon, would you (a) Add (b) Subtract (c) Multiply (d) Divide.

Example #7

A tank runs at the rate of 40 miles an hour. To find how far it would go in five hours, would you (a) Add (b) Subtract (c) Multiply (d) Divide.

Example #8

Sands has 7 neckties and Fields has 9. To find how many neckties both men have together, would you (a) Add (b) Subtract (c) Multiply (d) Divide.

Example #9

To find the volume of a pit 7' x 5' x 30', would you (a) Add (b) Subtract (c) Multiply (d) Divide.

Example #10

A man went to target practice 8 times. He scored 192 in all. To find his average score for each time, would you (a) Add (b) Subtract (c) Multiply (d) Divide.

Example #11

A man attended target practice 8 times. He score 192 in all. What was his average score for each time (a) 19 (b) 24 (c) 29 (d) 37.

Example #12

A man took out a \$9000 life insurance policy. The rate was \$21 per \$1000. What was the annual premium of this policy? (a) \$179 (b) \$189 (c) \$192 (d) \$201.

Example #13

If a watch at 6 o'clock is held horizontally so that the hour hand is pointing due south then the minute hand would be pointing (a) north (b) south (c) east (d) west.

Example #14

If 12 men are needed to run 4 machines, how many men are needed to run 20 machines? (a) 24 (b) 48 (c) 60 (d) 80.

VOCABULARY SUBTEST

The Vocabulary Subtest of the Armed Forces Qualifying Test requires the ability to find synonyms and/or analogies for certain English words considered to be on approximately the sixth grade vocabulary level. This section is arranged in a multiple choice framework, and the examinee must select the word which most closely corresponds to the vocabulary word given in

each sentence. Referring to the standardized table explaining the various levels of the GED, the examinee must perform on Level 1.5 of the Language Development Scale.

The following thirteen vocabulary problems are samples taken from the same two sources previously indicated.

Example #1

A soldier's FINAL statement refers to the one which is (a) first (b) latest (c) important (d) last.

Example #2

A soldier who is CONSIDERATE in his dealings with others is (a) prompt (b) neglectful (c) thoughtful (d) industrious.

Example #3

A CRAFTY scheme is one which is (a) meager (b) difficult (c) sly (d) artistic.

Example #4

A Company Commander RECOMMENDS a man when he (a) commands him (b) praises him (c) corrects him (d) reproaches him.

Example #5

A DETOUR is a (a) man at work (b) bridge out (c) road machine (d) bypass.

Example #6

A soldier PURCHASES a discharge if he (a) loses it (b) sells it (c) buys it (d) seeks it.

Example #7

An assembly for purposes of social DIVERSION is one for (a) hard work (b) discipline (c) training (d) entertaining.

Example #8

A soldier who is FAIR MINDED is (a) unreasonable (b) blond (c) prejudiced (d) just.



Example #9

A SEMI-ANNUAL settlement of clothing account means one that takes place (a) once in two years (b) twice in two years (c) once a year (d) twice a year.

Example #10

A relative DESIGNATED by a soldier is one who is (a) loyal (b) devoted (c) crafty (d) named.

Example #11

The SPEED LIMIT in a district refers to the (a) lowest speed allowed (b) highest speed allowed (c) average speed (d) highest speed possible.

Example #12

IMPULSIVE behavior means (a) generous (b) forcible (c) amicable (d) rash.

Example #13

An INITIAL clothing allowance provided the soldier means (a) small (b) sufficient (c) beginning (d) late.

Example #14

There will be VARIABLE winds means (a) shifting (b) chilling (c) steady (d) mild.

Example #15

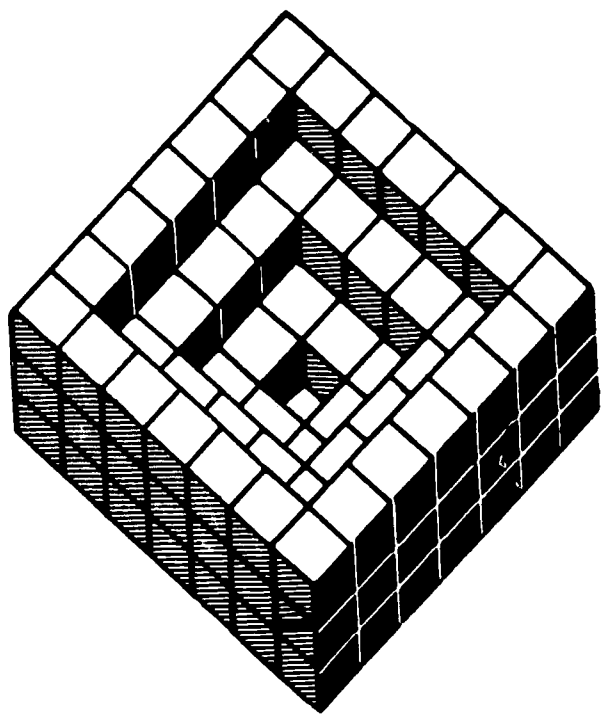
He is a man of great VIGOR means (a) wickedness (b) strength (c) reputation (d) wisdom.

PATTERNS AND FIGURES SUBTEST

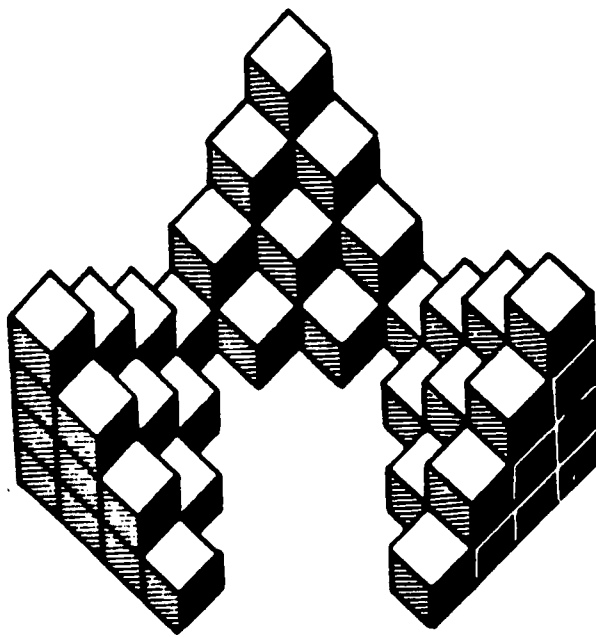
The Patterns and Figures Subtest of the AFQT consists of exercises in depth perception, mechanical ability and general reasoning at about the ninth grade level. These are tested in four ways: cube counting, solid figure turning, view questions, and spatial relationship questions. The latter three methods

predominate in this subtest. Referring to the Standardized Table explaining the various levels of the GED, the examinee must perform on Level 3.0 of the Reasoning Development Scale.

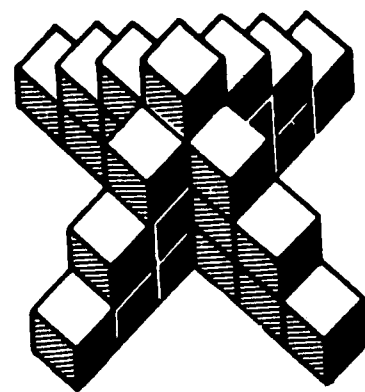
In the cube counting or block counting portion of the Pattern and Figures Subtest, a configuration of square and rectangular boxes are arranged in various orders, and the examinee is asked to find how many boxes are present in each picture. To accomplish this task, the examinee must be able to read and comprehend English on the sixth grade level, count figures, and perceive depth in various settings, requiring a general reasoning development on the 3.0 GED level. The following are examples of the cube counting portion of the Patterns and Figures Subtest:



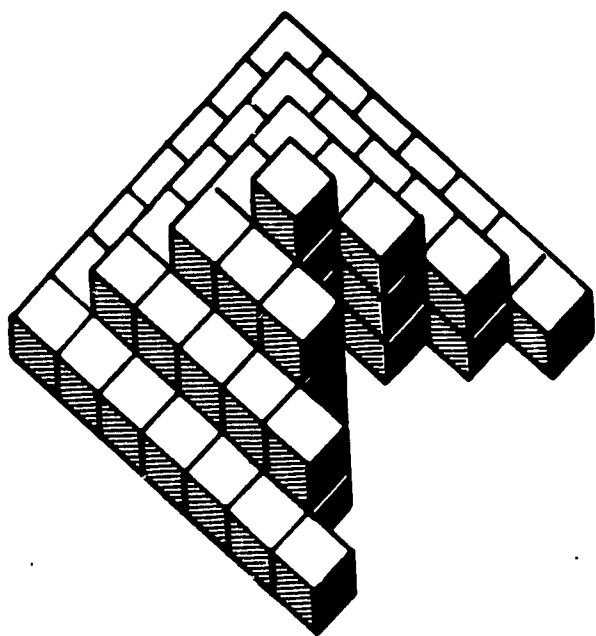
1



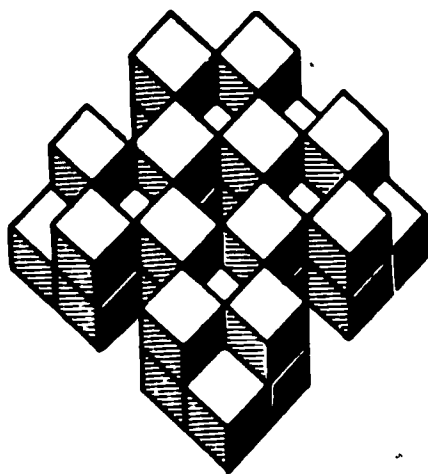
2



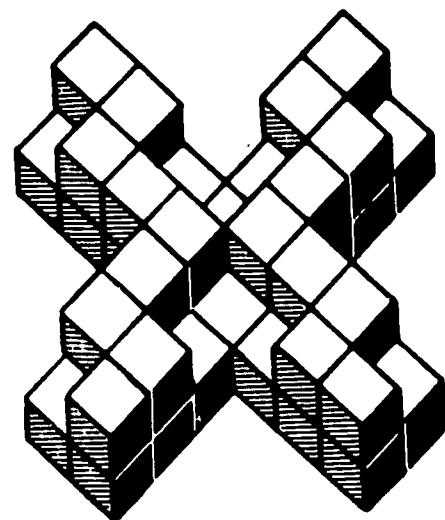
3



4



5

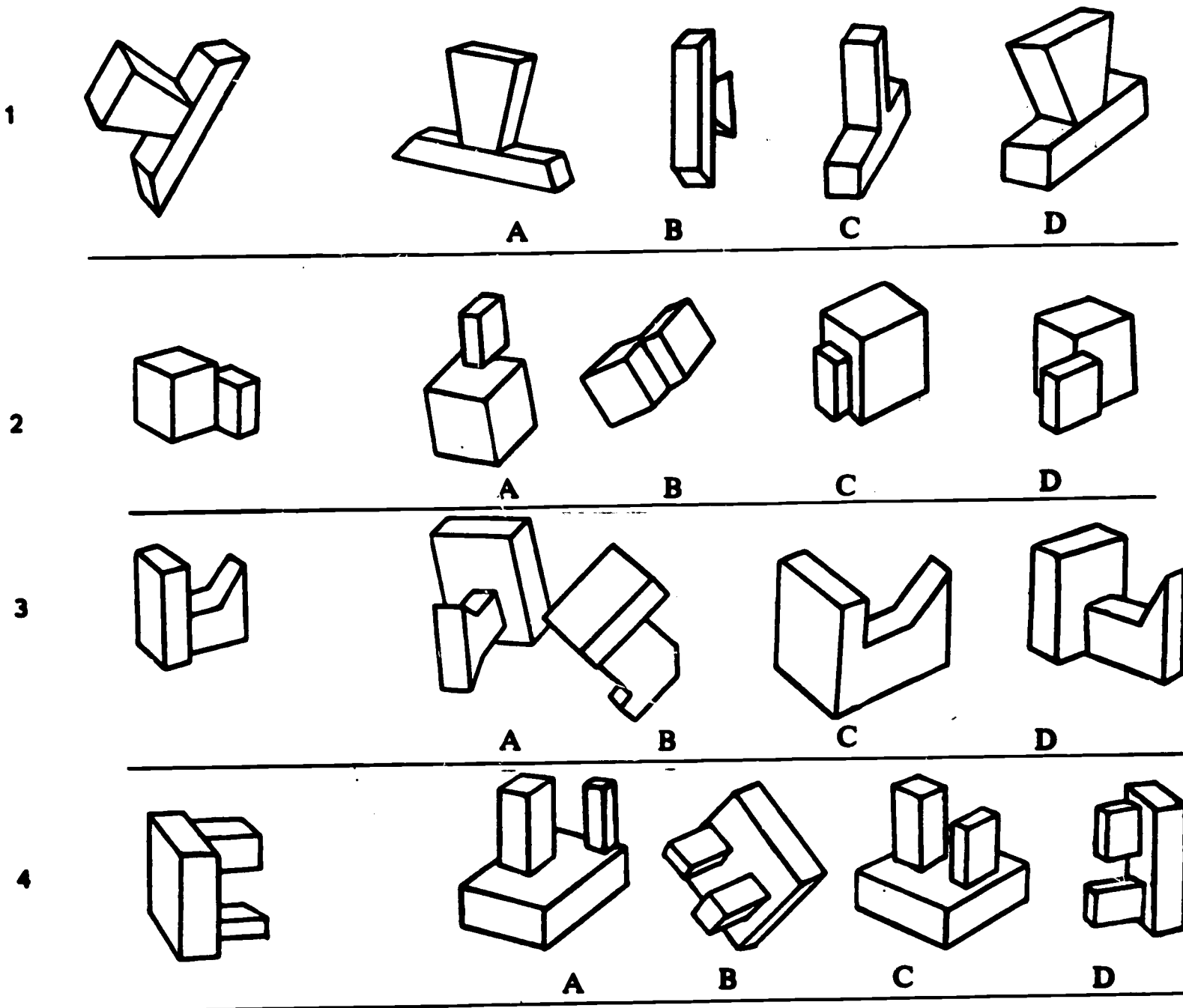


6

The solid figure turning portion of the Patterns and Figures Subtest consists of solid figures used to explore reasoning development, depth perception, and mechanical aptitude. It is a test of general and mechanical intelligence.

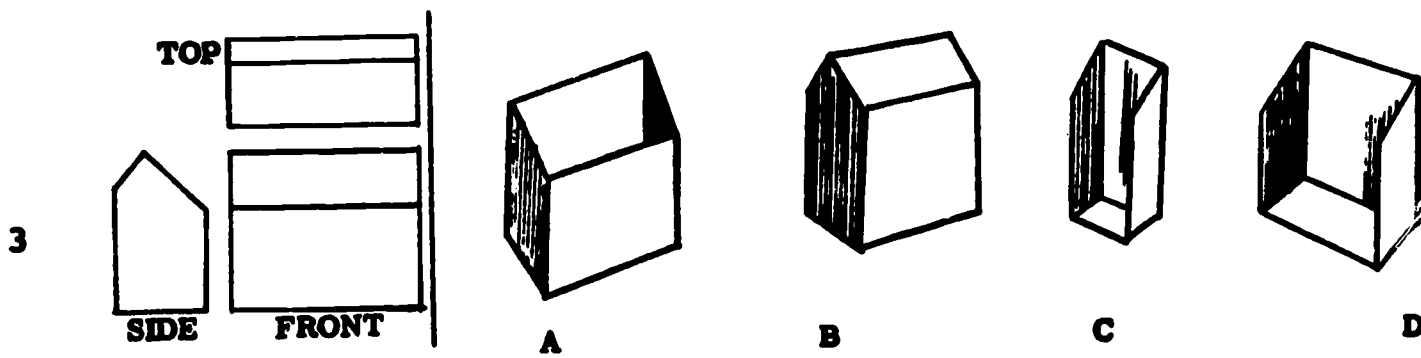
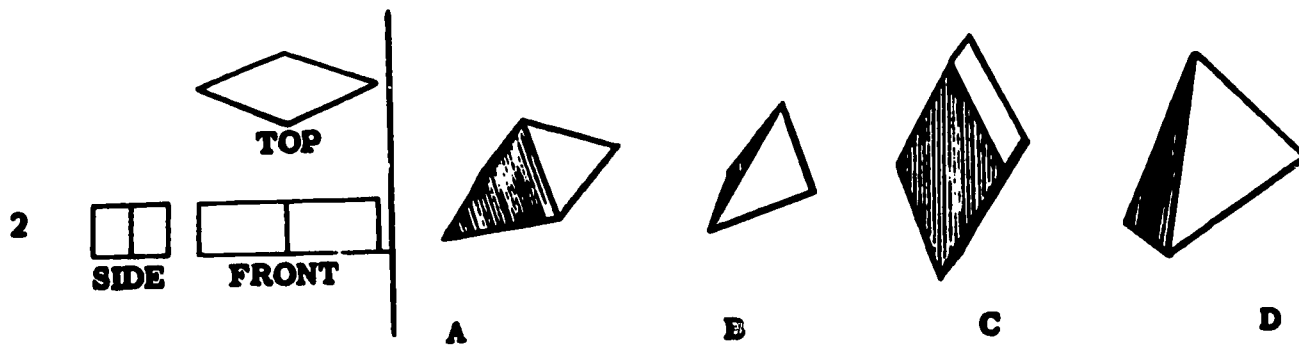
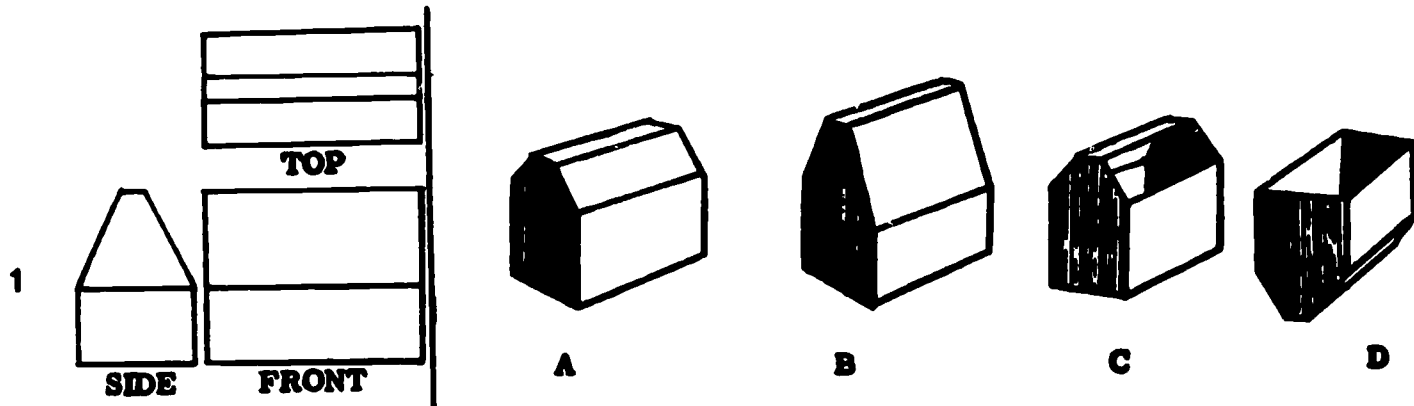
The drawings in the following sample questions represent figures made of cubes or other forms glued together. The problem involves finding the one out of four figures lettered A, B, C, and D, which is the figure at the left turned in a different position. Some of the figures must be turned over to be correct, others must be turned around, and still others may have to be both turned over and around. As in other portions of the Pattern and Figures Subtest, the solid figure portion requires a 3.0 GED reasoning development level, and reading ability on the sixth grade level.

The following are examples of the solid figure turning portion of the Patterns and Figures Subtest.



The view question portion of the Patterns and Figures Subtest is very similar to the solid figure turning exercise; the examinee is asked to select one drawing out of four which would have the same top, front, and side views as shown in the drawing at the left. This test is likewise used to explore reasoning development, depth perception, and mechanical aptitude, on a 3.0 GED reasoning development level, and sixth grade reading level.

The following are examples of the view question portion of the Patterns and Figures Subtest:

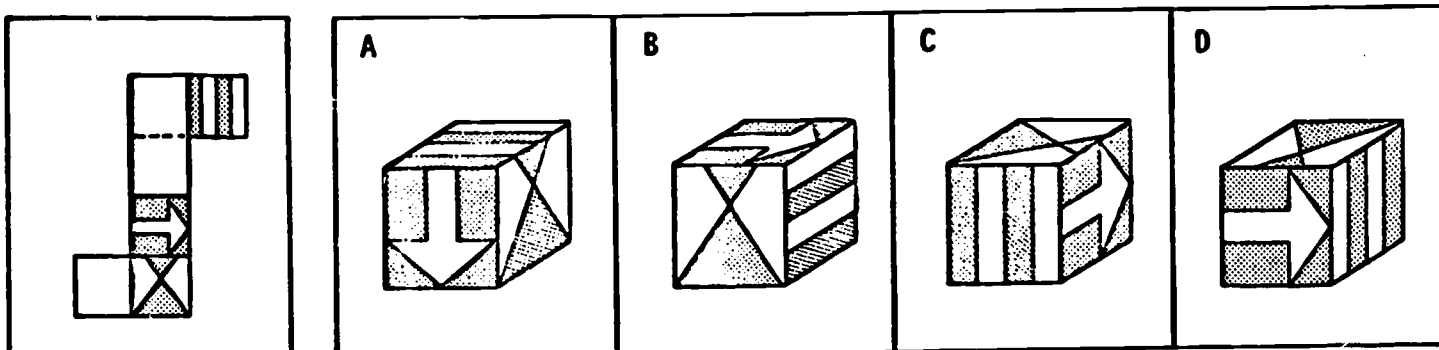


The spatial relationship portion of the Patterns and Figures Subtest is a hybrid of the view question and solid figure turning type problems. The examinee is again asked to select one drawing out of four which would have the same top, front, and side views as shown in the drawing at the left. This test is also used to explore reasoning development, depth perception, and mechanical aptitude, on a 3.0 GED reasoning development level, and sixth grade reading level.



The following is an example of the spatial relationship portion of the Patterns and Figures Subtest:

*Spatial Relationships*



TOOL RECOGNITION SUBTEST

The final portion of the AFQT involves hand tool recognition. The questions in this subtest are of a practical nature. In a typical question, the applicant is shown pictures of various tools and implements, and he must match those which are used together. Alternate questions require the applicant to define tool usage and to match specific job situations to the exact tool which would best perform the described task.

The Tool Recognition Subtest is perhaps the most challenging on the AFQT. Some of the tools encountered on this subtest are basic to almost every mechanical task and present little difficulty in answering questions concerning their use and application. Other tools may be very unfamiliar to the examinee or may have some specialized use outside his own knowledge or trade. It is for this reason that success on the Tool Recognition Subtest is largely dependent upon the examinee's

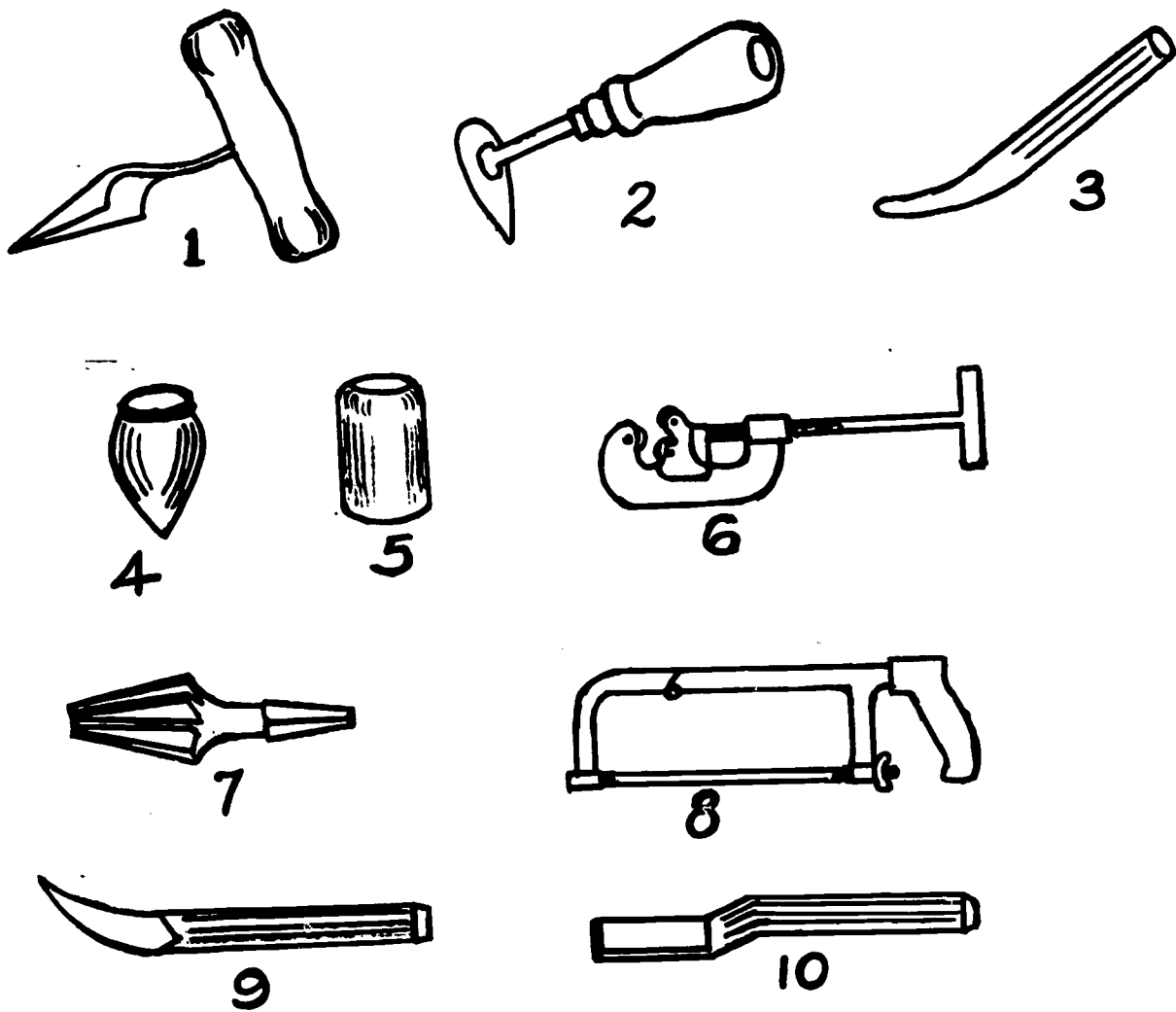


prior exposure to the use of hand tools in various mechanical and electrical operations.

The skills and knowledges required for satisfactory completion of the Tool Recognition Subtest are not adaptable to definition according to grade level achievement, aptitude or GED. Generally, the best preparation for this subtest is specific vocational training embracing two or more years of shop classes. (Of course, mechanical ability is also developed in a student's extra-curricular activities.)

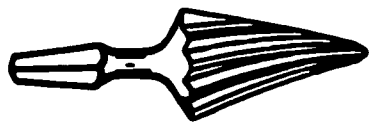
The ability to perceive depth and to associate related tools and/or mechanical parts is crucial to successful performance on the Tool Recognition Subtest. This knowledge, or aptitude, is dependent upon the examinee's prior exposure to mechanical process and/or his mechanical reasoning ability. In addition, the examinee must be able to read and understand English on about the ninth grade level. He must be able to compare the symbol of a tool with a written explanation of a job task.

Descriptions involving technical language such as, "measuring the diameter of a rod to be cut down to 0.726 inches on a lathe," or "tightening a coupling on a piece of 1 inch conduit" are often used. Thus, a knowledge of tool use must be combined with an equal familiarity with terms such as "diameter, conduit, circumference, cylinder," etc. The following are samples from the Tool Recognition Subtest.

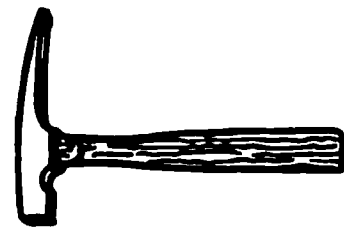


45. The tool that is used for boring out a hole in a lead pipe for a branch connection is numbered (A) 2 (B) 7 (C) 1 (D) 9
46. Irregularities and flatness in a lead pipe are removed best by the use of tool numbered (A) 5 (B) 9 (C) 4 (D) 3
47. The tool best used to turn and flare out a cut hole in a lead pipe into which a branch connection is to be wiped is number (A) 3 (B) 9 (C) 1 (D) 7
48. Steel pipe is best cut by using tool numbered (A) 8 (B) 6 (C) 9 (D) 2
49. Caulking a lead joint between the bell and spigot of a soil pipe is usually done by using tool numbered (A) 9 (B) 3 (C) 2 (D) 10

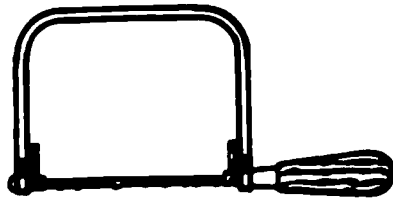
50. To remove the burr on the inside of a pipe caused by a cutter is usually done by using tool numbered (A) 2 (B) 7 (C) 1 (D) 9
51. The tool that is used to shave or scrape lead pipe and sheet lead in preparation for soldering is numbered (A) 10 (B) 1 (C) 9 (D) 2



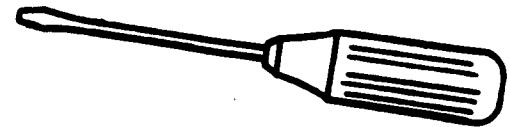
39. The tool shown above is a  
 (A) countersink (C) star drill  
 (B) counterbore (D) burring reamer



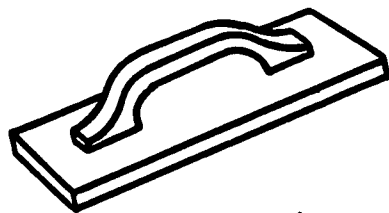
42. The hammer shown above would be used by a  
 (A) carpenter (C) tinsmith  
 (B) bricklayer (D) plumber



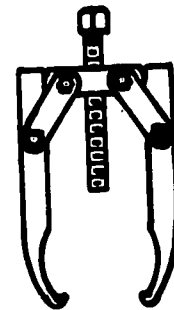
40. The saw shown above would be used to cut  
 (A) curved designs in thin wood  
 (B) strap iron  
 (C) asphalt tiles to fit against walls  
 (D) soft lead pipe



43. The tool shown above is used to  
 (A) thread a hole to receive a stud bolt  
 (B) tighten a wire on a terminal  
 (C) enlarge the top of a metal hole  
 (D) make an opening for a lock



41. The tool shown above is a  
 (A) float (C) hawk  
 (B) finishing trowel (D) roofing seamer



44. The tool shown above is used to  
 (A) remove a taper-fit collar  
 (B) fill cracks in old brickwork  
 (C) couple iron pipe  
 (D) compress a light spring

### 3. Administration

The AFQT is the mental test which every male must take before induction, or prior to enlistment. It is administered at the Armed Forces Examining and Entrance Station. It is the first examination encountered by inductees being processed by their draft boards. It is the second test for most enlistees who have already scored successfully on the EST at the local recruiting station.

Administration of the AFQT takes fifty minutes and employs 100 questions. It is given by all branches of the service.

The current version of the AFQT covers four subject areas: arithmetic, vocabulary, patterns and figures, and mechanical ability. There are twenty-five questions in each category. Questions are arranged in cycles of increasing difficulty in each of the four test areas. It is a "spiral omnibus" test emphasizing power rather than speed. The Army says it is not an intelligence test nor does it measure educational attainment as such, although both education and intelligence affect the ability to score well on the test.

### 4. Scoring

Most data regarding the scoring of the AFQT was derived from the U. S. Department of Health, Education and Welfare bulletin How Good Are Our Schools? Armed Forces Qualification Test Provides A Clue.<sup>5</sup> This bulletin indicates that

there is a positive correlation between AFQT scores and education. The youth's score on the AFQT depends on several factors: on the level of his educational attainment; on the quality of his education (quality of his school facilities); and, on the knowledge he gained from his educational training in and outside of school. These are interrelated factors, which vary with the youth's socio-economic and cultural environment, in addition to his innate ability to learn.

Each of the Armed Services has its own minimum score on the AFQT. These scores are adjusted from time to time in accordance with the manpower requirements of the service. For instance, the Army currently has several minimal raw scores based on a maximum score of one-hundred. A draftee must score 10% in order to be found mentally acceptable for entry into the Army. An enlistee who possesses a high school diploma must attain a score of 16%. An enlistee who is a non-high school graduate must score 31%; or 16% on the AFQT, and 90% in at least two sections of the Army Qualification Battery, which will be described later. The Army further requires the non-high school graduate to score 100% in the section of the AQB which relates to the field of specialization requested by the enlistee if he is to qualify for schooling in that field.

Raw scores on the AFQT are computed by subtracting one-third of an examinee's mistakes from his total correct answers, a procedure adopted to compensate for lucky guesses.

To supply meaning to the scoring and to simplify comparisons, the raw score is converted into a percentile score which theoretically establishes the examinee's relative standing in the whole draft age population. (These relative standings are based on norms established during World War II. They have never been updated.)

The type of score used on the AFQT is plotted on a percentile scale measuring from the lowest possible score of one to the highest score of one-hundred.

<u>Percentile Score</u>	<u>Meaning of Score</u>
99	Higher than 99% of examinees
98	Higher than 90% of examinees
--	--
50 (Median)	Higher than 50% of examinees
--	--
6	Higher than 6% of examinees
5	Higher than 5% of examinees
--	--
1	Higher than 1% of examinees

On the basis of percentile scores as demonstrated above, men are classified into one of five following mental groups:



<u>Mental Group</u>	<u>Percentile Score</u>
I	93-100
II	65-92
III	31-64
IV	10-30
V	0-9

Groups I, II, III automatically meet mental standards for military service. Data here relate only to acceptance-rejection on the basis of mental test scores. Total rejection rates are actually higher than those that appear here, as some men may be disqualified for medical reasons.

Under the Universal Military Training and Service Act, men in mental group V are considered unfit for military service unless their education or occupation background seems to indicate they should not have failed the test. In such cases, there is "terminal screening" and, if its findings are at variance with the test score, the examinee is declared "administratively acceptable" and classified 1-A. Last year, in 1966, about 3000 young men entered the Army this way.\*

Procedures for group IV vary accordingly to the Army's manpower needs. Currently, all group IV's who score above the sixteenth percentile and have completed high school are accepted for military service. All other men in group IV

\*This was authenticated by Major Burt and Lt. Nagel of the Mental Testing Section, Los Angeles Armed Forces Examining and U.S. Army Entrance Station.

take additional aptitude tests called the AQB. Failing scores on the AQB result in a "trainability limited" classification.

A new program initiated by the Defense Department takes an additional group of men in mental group IV (about 100,000 annually) and provides them with basic literacy training to enable them to qualify for military service. This program is known as "Project 1000."

Rejectee figures include all those men in group V except those administratively acceptable, and all group IV's who were given the AQB and failed. Scores in mental group IV are roughly equivalent to what an employer might expect of a job applicant with an eighth grade education. Those in group V are equivalent to what he might expect of a man with less than a fifth grade education. The Census Bureau defines the latter as functionally illiterate.

#### 5. Norms

Percentile normative data concerning the AFQT has not been compiled by the Armed Forces. However, there is a high correlation between the five mental groups used for classification purposes on the AFQT and the five levels of aptitude described by the GED scale. The Armed Forces have authenticated this correlation.

The following Dictionary of Occupational Titles aptitude scale can be correlated with the five AFQT mental groupings:<sup>6</sup> (1) The top 10% of the population. This segment

of the population possesses an extremely high degree of aptitude. (2) The highest third exclusive of the top 10% of the population. This segment of the population possesses an above average or high degree of aptitude. (3) The middle third of the population. This segment of the population possesses a medium degree of aptitude, ranging from slightly below to slightly above average. (4) The lowest third exclusive of the bottom 10% of the population. This segment of the population possesses a below average or low degree of aptitude. (5) The lowest 10% of the population. This segment of the population possesses a negligible degree of aptitude.

Applying this scale to the AFQT mental groupings, the applicant must be in the middle third of the population and possess a medium degree of aptitude or above to score successfully on the AFQT.

#### 6. Standardization

According to information received from the Los Angeles Armed Forces Examining and Entrance Station, the AFQT has not been standardized.

#### 7. Validity

The AFQT was devised as a measure of learning ability and "trainability." It is used as a predictor of success in military training. The AFQT has not been correlated with intelligence tests.

Success in training is the most commonly used criterion for validation of the AFQT. While no validation

results have been tabulated by the Armed Forces, they have judged the AFQT to be a successful measure of trainability. Trainability, according to the GED refers to "the amount of time required to learn the techniques, acquire information, and develop the facility needed for average performance in a specific job-worker situation."<sup>7</sup> For the military, this time has been defined as over 30 days up to and including 3 months (for basic military training), which is a GED level 3 of specific vocational preparation.

#### 8. Summary

The AFQT is the single most important mental examination bearing upon entry into the military. It is administered to every male seeking entry into each military branch. The AFQT is divided into four subtests. There are twenty-five questions in each of the following subtests: arithmetic, vocabulary, patterns and figures, and tool recognition.

To succeed on the arithmetic subtest, the examinee must display skills in addition, subtraction, multiplication and division of whole numbers. He must be able to identify the processes necessary to solve arithmetic problems. A reading and arithmetic aptitude of the sixth grade, and the ability to perform on level 2 of the GED Mathematical Development Scale are requisite to successful performance on this subtest.

To succeed on the vocabulary subtest, the examinee must display skills in finding synonyms for certain English words considered to be on or below the sixth grade

vocabulary level. The examinee must perform on level 1.5 of the GED Language Development Scale.

Success on the patterns and figures subtest requires skills in depth perception, mechanical aptitude and general reasoning development on or below the ninth grade level. The examinee must perform on level 3.0 of the GED Reasoning Development Scale in exercises involving cube counting, solid figure turning, view questions, and spatial relationship questions.

The tool recognition subtest involves tool matching, tool description and tool usage. Success on this subtest is largely dependent upon the examinees prior exposure to the use of hand tools in various mechanical and electrical operations and the degree of mechanical aptitude which would normally develop after two or more years of shop classes. A ninth grade mechanical vocabulary is required.

The AFQT requires fifty minutes to administer one-hundred questions. The test is given at Armed Forces Examining and Entrance Stations. The Army says that the test is not an intelligence test, nor does it measure educational attainment as such, although both education and intelligence affect the ability to score well on the test. In short, it is a test of "learning ability" and "trainability."

Raw scores on the AFQT are computed by subtracting one-third of an examinee's mistakes from his total correct



answers, a procedure adopted to compensate for lucky guesses. The raw score is then converted into a percentile score that theoretically established the examinee's relative standing in the whole draft age population. The type of score used on the AFQT is plotted on a percentile scale measuring from the lowest possible score of one to highest score of one-hundred.

On the basis of this percentile score, men are classified into one of five mental groups. Groups I, II, and III automatically meet mental standards for military service. Men in mental group V are considered unfit for military service unless their education or occupational background seems to indicate they should not have failed the test. Procedures for group IV vary accordingly to military manpower requirements. Generally, non-high school graduates scoring below the sixteenth percentile are excluded from military service. However, a score in the tenth to the thirtieth percentile with a score of two or more nineties in the Army Qualification Battery will meet current mental qualifications.

While normative information on the AFQT was not made known to this survey, it has been determined that the examinee must be in the middle third of the population and above and possess a medium degree of aptitude to score successfully on the AFQT. Generally, a ninth grade aptitude and achievement level is sufficient for success.

Validation of the AFQT is measured in terms of success in training on a level 3 (thirty days up to and includ-



ing three months for basic military training) of the GED scale of specific vocational preparation.

C. Analysis of Women's Enlistment Screening Test (WEST) and the Armed Forces Women's Selection Test (AFWST)

1. Introduction

Just as the Enlistment Screening Test serves as a forerunner to the AFQT in the case of male enlistees, the WEST serves as an initial screening device on the local recruitment level for female enlistees. The WEST is a short form of the AFWST. It is twenty minutes in duration and forty-four questions in length (an exception being a thirty minute test for the Marine Corps). There are two subtests to the WEST: arithmetic and vocabulary.

All women seeking entry level position into the Women's Army Corps (WAC), Women Accepted for Voluntary Emergency Service (Navy WAVES), Women Marines (W.M.) and, Women's Air Force (WAF) must take the Women's Enlistment Screening Test at their local recruiting office. Results of this test are then used as an indicator of success or failure on the AFWST.

Each branch of the women's military requires a minimal passing score on the WEST in order to qualify the applicant for further testing. The Army requires eight correct answers out of forty-four questions on their WEST #3, and nine out of forty-four on their WEST #4. The Navy, Marine Corps and Air Force require fourteen correct answers out of forty-four questions on their WEST. Failure to achieve these scores will

not preclude the applicant from military service, but such failure will prevent the applicant from undergoing further testing until such time as probable successful performance is expected.

The AFWEST, being an extension of the WEST, also consists of a vocabulary and arithmetic subtest. The AFWST is seventy-five minutes long and one-hundred questions in length. It is administered at the Armed Forces Examining and Entrance Station. Successful performance on the AFWST is a prerequisite for all women seeking entry into the Armed Forces.

For entry into the WAC, the applicant must achieve a passing score of approximately 30% on the AFWST #5, or a passing score of thirty-four on the AFWST #6. For the Navy WAVES, the Women Marines, and the Women's Air Force, applicants must score approximately ten percentage points higher. The AFWST is scored on the same basis as the AFQT. (See p. 75, supra.) Generally, a twelfth grade aptitude and achievement level is required to score successfully on the AFWST.

Unlike its AFQT counterpart, the AFWST is divided into only two subtests: vocabulary and arithmetic. The vocabulary subtest is subdivided, however, into two categories: word recognition and word analogy. The word recognition category is comparable to the vocabulary subtest of the AFQT. The word analogy category is somewhat comparable to the patterns and figures subtest of the AFQT, in that it reveals reasoning

development. The arithmetic subtest of the AFWST is comparable to the arithmetic subtest of the AFQT.

## 2. Subtests

### VOCABULARY SUBTEST

The word recognition portion of the Vocabulary Subtest utilizes vocabulary words considered to be on or below the twelfth grade level. Here, the examinee is given a vocabulary word and asked to select one of four other words that has most nearly the same meaning. Referring to the standardized table explaining the various levels of GED, the examinee must perform on level 4.0 of the GED Language Development Scale.

The following are examples of the word recognition portion of the Vocabulary Subtest:

#### Example #1

FICTITIOUS (a) turbulent (b) anxious (c) assumed (d) scanty

#### Example #2

ARDENT (a) fervid (b) gay (c) savage (d) untamed

#### Example #3

BLATANT (a) insipid (b) open (c) closed (d) loud

#### Example #4

WILY (a) crooked (b) narrow (c) broken (d) cunning

#### Example #5

EXPEDITE (a) hinder (b) harm (c) send (d) hasten

#### Example #6

DILATORY (a) expanding (b) delaying (c) watery (d) pickling

Example #7

SANGUINE (a) baleful (b) thirsty (c) hopeful (d) delinquent

Example #8

PHLEGMATIC (a) sluggish (b) active (c) potent (d) secretive

Example #9

INGENUITY a term used in referring to: (a) fashion (b) a state  
(c) a medicine (d) the stage

Example #10

CORPOREAL (a) military (b) naval (c) bodily (d) legal

Example #11

MUNDANE (a) stupid (b) lady-like (c) worldly (d) weedy

Example #12

INTERVENE (a) induce (b) insert (c) interfere (d) solve

The word analogy portion of the Vocabulary Subtest also employs vocabulary words considered to be on or below the twelfth grade level. In this section, the first two words of each question are related to each other in some way. The examinee must determine this relationship, and then find a similar relationship between a third given word and four others. Such an exercise not only reveals vocabulary skills and knowledges, but general reasoning development as well. Referring to the standardized table explaining the various levels of GED, the examinee must perform on level 3.0 of the Reasoning Development Scale.

The following are examples of the word analogy portion of the vocabulary subtest:

Example #1

HAND is to GLOVE as HEAD is to (a) hat (b) warmth (c) earmuffs (d) hair

Example #2

BEHEAD is to GUILLOTINE as HANG is to (a) gallows (b) nail (c) murderer (d) picture

Example #3

THIMBLE is to FINGER as SOCK is to (a) band (b) felt (c) hat rack (d) foot

Example #4

ICE is to SKATE as WATER is to (a) swim (b) distill (c) rain (d) sport

Example #5

BED is to SLEEP as CHAIR is to (a) carry (b) sit (c) stare (d) awake

Example #6

PEASANT is to HUT as KING is to (a) queen (b) royalty (c) crown (d) palace

Example #7

2 is to 8 as  $\frac{1}{3}$  is to (a)  $\frac{2}{3}$  (b)  $\frac{4}{3}$  (c) 12 (d) 4

Example #8

DIESEL TRUCK is to OIL as PASSENGER CAR is to (a) gears (b) Chevrolet (c) gasoline (d) speed

Example #9

BOY is to TROUSERS as GIRL is to (a) overalls (b) suit (c) skirts (d) leather

Example #10

FLOWERS is to VASE as MILK is to (a) udder (b) pitcher (c) farm (d) tube

## ARITHMETIC SUBTEST

The Arithmetic Subtest of the AFWST is also more difficult in nature than the arithmetic section on the AFQT. It requires arithmetic skills and knowledges on or below the twelfth grade level. Problems involving a more sophisticated arithmetic ability, including calculations involving fractions, decimals, percentages and algebraic skills are present in this subtest. Referring to the standardized table explaining the various levels of GED, the examinee must perform on level 4.0 of the Mathematical Development Scale.

The following are examples of problems found on the Arithmetic Subtest:

### Example #1

Which fraction is closest in value to  $\frac{3}{7}$ ? (a)  $\frac{1}{2}$  (b)  $\frac{2}{3}$   
(c)  $\frac{41}{100}$  (d)  $\frac{42}{100}$

### Example #2

If a man invests \$1,000 at an annual rate of 5%, how much interest will the man have after one year? (a) \$20 (b) \$50  
(c) \$100 (d) \$120

### Example #3

If 3 apples cost 24¢, how many dozen apples can be bought for \$1.92? (a)  $1\frac{1}{2}$  (b) 1 (c) 2 (d)  $5\frac{1}{3}$

### Example #4

The volume of a cube whose side is 3 inches is (a) 9 cubic inches (b) 3 cubic inches (c)  $\frac{1}{64}$  cubic feet (d) 27 cubic feet (e) none of these

### Example #5

Mr. Arnold gets \$5 an hour for 8 hours and \$6 an hour overtime (after 8 hours per day). How much will he receive if he works for 12 hours straight? (a) \$60 (b) \$66 (c) \$84 (d) \$64



Example #6

25 is what percent of 5? (a) 5 (b) 50 (c) 500 (d) 20

3. Summary

The WEST serves as an initial screening device on the local recruitment level for female enlistees. It is a short form of the AFWST and is administered to all females at the Armed Forces Examining and Entrance Station.

The WEST is twenty minutes in duration and forty-four questions in length. There are two subtests for the WEST: arithmetic and vocabulary. Results of the WEST are used as an indicator of success or failure on the AFWST. The Army requires a passing score of eight correct answers out of forty-four questions to qualify the applicant for further testing. The Navy, Marine Corps and Air Force require fourteen out of forty-four.

The AFWST is seventy-five minutes in duration and one-hundred questions in length. Successful performance on the AFWST stands as a prerequisite for all women seeking entry into the Armed Forces.

The Army requires a passing score of approximately 30% on the AFWST. The other military branches require a score of approximately ten percentage points higher. The AFWST is scored on the same basis as the AFQT. Generally, a twelfth grade aptitude and achievement level is required to score successfully on the AFWST.

The Vocabulary Subtest of the AFWST is divided into two categories: word recognition and word analogy. The word recognition category utilizes vocabulary words on or below the twelfth grade level. The examinee is given a vocabulary word and asked to select one of four other words that has most nearly the same meaning. To be successful in this category, the examinee must perform on level 4.0 of the GED Language Development Scale.

The word analogy category also employs vocabulary words on the twelfth grade level and below. By finding the relationships between sets of words, the examinee is tested not only on vocabulary skills, but also on general reasoning development. The examinee must perform on level 3.0 of the GED Reasoning Development Scale to be successful in this category.

The Arithmetic Subtest involves arithmetic skills on or below the twelfth grade level. The examinee must solve problems involving fractions, decimals, percentages and algebraic skills. She must perform on level 4.0 of the GED Mathematical Development Scale.

#### D. Analysis of the Military Battery Placement Tests

##### 1. Introduction

The battery placement test is used by each branch of the military for the purpose of placing the new recruit in a job most fitted to his abilities. In some cases, the AQB is

administered in conjunction with the AFQT to determine basic eligibility into the Armed Forces. In other cases, successful performance on one of the battery placement tests is a prerequisite for entry into the military training school of the applicant's choice.\* Thus, consideration of the battery placement test is important to offer full coverage of the minimum skills and knowledges for "successful entry" into the military. The term "successful entry," refers to the ability of continuation education graduates to enlist or be inducted into the Armed Forces of the United States. Such a definition does not include the classification procedure except to the extent that screening and placement tests influence this procedure.

The basic functions of classification in recruit training are: to determine and record the aptitudes, skills and abilities which would indicate the type of duty for which each recruit is best fitted; to recommend each recruit for the type of training or duty for which he is best qualified; and, to assign each recruit to that type of training or duty for which he is best fitted, by matching his qualifications with the needs of the service. To a large degree, the battery placement test fulfills these initial functions.

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\*See p. 36, of the Military Questionnaires and Personal Interviews, supra. It is in this context that a discussion of the battery placement tests is included in these findings.

The AQB and MCBCTB are approximately two hours long, and have virtually the same ten subtests: verbal, arithmetic, shop mechanics, pattern analysis, clerical, automobile, mechanical, electronics, general-technical, and personality (infantry).

The Air Force placement battery (AQE), is approximately the same duration and covers the same aptitude areas. However, the Air Force arranges these into four aptitude "clusters": general, administrative, mechanical, and electronics.<sup>8</sup> The current AQE mechanical aptitude cluster has subtests covering mechanical principles, general mechanics, tool functions and pattern comprehension. The administrative cluster contains subtests concerning clerical matching, verbal analysis and hidden figures. The electronics cluster offers subtests in arithmetic reasoning, technical data interpretation, electrical information and pattern comprehension.

Briefly, the Arithmetic Reasoning Subtest of the AQE includes verbal arithmetic problems requiring the examinee to devise his own method of solution. The Verbal Subtest measures vocabulary level; the Mechanical Principles Subtest measures the examinee's understanding of simple physical principles and his comprehension of mechanical movements; the General Mechanics Subtest is a verbal measure of mechanical experience; the Tool Functions Subtest is a pictorial measure of mechanical experience; the Hidden Figures Subtest measures the examinee's

ability to judge spatial relationships by discovering a simple figure imbedded in a complex one; the Clerical Matching Subtest tests clerical speed and accuracy in the traditional form of matching pairs of symbols; the Technical Data Interpretation Subtest requires the extraction of data from charts and tables to use in the solution of simple problems; the Pattern Comprehension Subtest requires the identification of the parts of a solid figure as made from a folded two dimensional pattern; and, the Electrical Information Subtest offers elementary practical and academic problems on electricity.

The NBTB is very comparable to the AQB, the MCBCTB, and the AQE. As in the case of the Air Force, the Navy divides its battery into four aptitude clusters, which in turn are composed of one to four subtests each.

Although the Navy and Marine Corps have not supplied this Project with the "passing" scores desired for their basic test batteries, it is generally known that a high percentage, usually seventy-five and above, is desired for specialization relating to the category tested. In some cases, a score of ninety to one-hundred in an area of desired specialization is required in order for the new recruit to be schooled in this particular area. The Army, for instance, requires a ninety or better in two areas, and the examinee must score one-hundred in the area of desired specialization.

The Air Force considers a score of sixty on the electrical cluster, and one of forty on each of the three other



clusters as "passing." The following Air Force charts, courtesy of the Air Force Recruiting Office, offer an indication of what "passing" means in terms of job classification:

### Air Force Example

### Career Fields by Aptitude Area

Aptitude Area	Minimum Score of 80	Minimum Score of 70	Minimum Score of 60	Minimum Score of 50	Minimum Score of 40
MECHANICAL			*Munitions & Weapons Maint.	*Aircraft Egress Systems *Missile Maint. *Electrical Power Production *Cryogenic Fluid Production Ref & Air Cond. Liquid Fuel Sys. Maint. *Protective Coat Aircraft Load-master Air Freight	*Wire Maint *Office Machine Repair *Aircraft Propeller *Aircraft Pneudraulic *Aircraft Fuel Sys. *Mechanical Access & Equipment *Aircraft Maint. Motor Vehicle Maint. Metalworking Heating Sys. *Civil Eng. Structural Pavements Civil Eng. Sanitation *Fire Protection Fabric, Leather & Rubber *Marine *Motor Trans. *Railroad Equipment
ADMINISTRATIVE	<u>Cost &amp; Real Prop. Accounting &amp; Finance</u>	Supply Computer Systems Procurement	<u>Comm Center Ops Supply</u> **Chaplain Services Personnel #Comm Ops.	<u>Transportation</u>	<u>Traffic Management Supply Services Administrative Special Services</u>
GENERAL	*Intelligence *Weather *Elec Intercept Ops. Information (incl TV and Radio)	*Safety Site Development (Gen 65)	*Photomapping *Precision Photo Prot. Photo Instrumentation *Air Traffic Con Eng. Entomology Data Systems <u>Education &amp; Tng</u> Special Investigation Medical (*Vet) <u>Dental</u>		Photographic Maint. Scheduling Packaging <u>Food Services</u> *Fuel Services Materiel Facilities Printing Air Police Aircraft Protection
ELECTRONIC	*Comm Elec Sys. *Missile Elec Maint *Arm Sys Maint & Operator *Nuclear Weapons *Tng Devices		*Defensive FSC Oper. *Telephone Switching Equip *Comm & Relay Equip. *Intricate Equip Maint *Aerospace Photo Sys. *Precision Photo Rep. *Aircraft Access Maint. *Missile Electrical *Civil Eng. Mech/Elec		

\*Normal Color Vision Required. Note: Normal Color Vision Required for all Electronic and the 42 and 43 Career Fields.  
\*\*Ordained Ministers are not normally assigned to this field.  
#Must attain qualifying score on Radio Operator test at Lackland AFB.  
\$Ability to distinguish between vivid red and vivid green.  
Fields available to women are underlined.



(Air Force Example, continued)

CAREER FIELDS WITHIN MECHANICAL  
APTITUDE AREA

Aircrew Egress Systems Repair-  
man  
Munitions & Weapons Maintenance  
Missile Maintenance  
Utilities  
Liquid Fuel Systems Maintenance  
Specialist  
Fire Protection  
Wire Maintenance  
Office Machine Repairman  
Aircraft Maintenance  
Motor Vehicle Maintenance  
Machinist  
Marine  
Metals Processing Specialist  
Parachute Rigger  
Air Freight Specialist  
Motor Transportation  
Fuel Specialist  
Construction  
Refrigeration Specialist  
Plumbing Specialist

CAREER FIELDS WITHIN GENERAL  
APTITUDE AREA

Intelligence  
Weather  
Electronics Intercept OPS  
Specialist  
Air Traffic Control & Warning  
Education & Training  
Dental  
Medical  
Data Processing Machine  
Operator  
Programming Specialist  
Air Traffic Control Operator  
Food Service  
Printing  
Air Police  
Still Photographer  
Personal Equipment Specialist

CAREER FIELDS WITHIN ADMINISTRA-  
TIVE APTITUDE AREA

Finance  
Chaplain Services  
Personnel  
Radio Operator (Air & Ground)  
Non-Morse Operator  
Communications Operation  
Air Transportation  
Supply  
Administrative  
Special Services

CAREER FIELDS WITHIN ELECTRONIC  
APTITUDE AREA

Radio-Radar Systems  
Armament Systems Maintenance  
Atomic Weapons  
Training Devices  
Missile Electronic Maintenance  
Intricate Equipment Main-  
tenance  
Aircraft & Missile Electrical  
Repairman  
Instrument Repairman

Since the battery placement test in each of the four military branches is quite similar, and because the materials used for reference were very limited, the Project staff focused its analysis on the Navy's Basic Test Battery. Each of the other branches of the military places emphasis upon aptitude areas characteristic of that branch (such as electronics in the Air Force, and infantry in the Army and Marine Corps). Still, all of their battery placement tests are very similar to that of the Navy in terms of required skills and knowledges.

## 2. The Navy Basic Test Battery

The following description of the NBTB will indicate the basic skills and knowledges required to perform successfully on each equivalent battery in the Army, Marine Corps and Air Force. Although some of the subtests which compose the NBTB are broken down into two or more sections, total composite scores are obtained on each test for classification and assignment purposes. While the necessary scores for success in individual subtests have not been released to this Project by the Department of the Navy, the following description should aid the curriculum planner in designing a system which will allow for success on the battery placement tests.

The NBTB is divided into four test clusters; the general classification test, the arithmetic test, the mechanical test, and the clerical aptitude test. The following description of each cluster will compare the Navy clusters to the subtests

found on the Army, Marine Corps and Air Force batteries. Direct correlations are not possible as some of the subtests overlap considerably. A general similarity does, however, exist. GED ratings will also be offered whenever applicable to relate this part of the research to other sections.

a. The General Classification Test (GCT)

The General Classification Test is designed to measure verbal ability. It tests the comprehension of word meaning and verbal relationships. Although it is not entirely correct to regard this test as a measure of general intelligence it does correlate highly with most standard tests of intelligence. The GCT includes sentence completion, opposites, analogy and reading subtests. It requires thought and reflection rather than education, vocabulary or special information.<sup>9</sup>

The Sentence Completion, Opposites, Analogy and Reading Subtests of the GCT can be compared to other military battery subtests and clusters. The GCT subtests compare to the Army's AQB Vocabulary Subtest, Infantry Subtest, General-Technical Subtest and, partially, with the Electronics Subtest and other AQB subtests involving technical language development. The GCT subtests compare to the Marine Corps' BCTB Verbal Reasoning Subtest, General Information Subtest and other BCTB subtests involving technical language development. The GCT subtests compare to the Air Force AQE General Cluster involving the Word Knowledge Subtest and the background for Current Affairs Subtest. They also compare with the Air Force

AQE Electrical Cluster involving the Technical-Electrical Vocabulary Subtest partially with the interpretation of Data Subtest (Administrative Cluster); and, other subtests involving technical language development.

Referring to the Standardized Table explaining the various levels of GED, the examinee must perform on level 4.0 of the Language Development Scale and 3.0 of the Reasoning Development Scale for each of the following GCT subtests:

#### THE SENTENCE COMPLETION SUBTEST

The sentence completion portion of the GCT offers the applicant a series of short sentences, one word of which is left blank. The applicant must then choose from a series of five vocabulary words listed under the sentence to fill in the blank. The vocabulary skills and knowledges required for successful completion of this section are estimated to be on or below the twelfth grade level.

#### Example

A good sailer will \_\_\_\_\_ the orders of his superior officers. (1) see (2) fear (3) read (4) obey (5) like

#### THE OPPOSITES SUBTEST

The opposites portion of the GCT offers the applicant one vocabulary word under which are five other words, one of which is directly opposite in meaning to the first word listed. The applicant must then choose which of the five words is the antonym of the word listed.

Example

GRIEF (1) anger (2) poverty (3) joy (4) sorrow (5) pride

The vocabulary level suggested in order to successfully complete this portion of the GCT is estimated to be on the twelfth grade level and below.

THE ANALOGY SUBTEST

The Analogy Subtest of the GCT offers the applicant the same type of vocabulary/reasoning question that was described earlier under the corresponding subtest of the Armed Forces Women's Selection Test. (See p. 88, supra.)

THE READING SUBTEST

The Reading Subtest consists of paragraphs of increasing difficulty, each followed by several questions. The examinee must be able to retain the information read in the opening paragraph and then answer the question without referring back to the paragraph. The questions are designed to measure the ability to note details in the material read, to note inferences from it, and to follow directions. The paragraphs generally consist of material relating to military (Navy) life. Vocabulary on this subtest is estimated to be on or below the twelfth grade level and often contains highly technical terms related to mechanics and electronics.

Example

After a can of paint has been opened and the paint partly used, the can should be covered and kept as airtight as possible to prevent a paint scum from forming on the surface. If scum forms, the paint should be strained through a fine-mesh wire screen or cheesecloth. To prevent scum from forming in a partly used can of paint, one should:



- (a) keep the can free from dirt.
- (b) fill the can up with water.
- (c) stir the paint well before storing.
- (d) keep the can tightly covered.
- (e) make sure that the can is more than half full.

The method of removing scum from paint is

- (a) to stir the paint thoroughly.
- (b) to pour the scum off.
- (c) to strain the paint through a wire screen.
- (d) to skim the scum off with a putty knife.
- (e) not discussed in this paragraph.

The method of thinning paint is

- (a) to mix it with turpentine.
- (b) to mix it with linseed oil.
- (c) to mix it with white lead.
- (d) to mix it with water.
- (e) not discussed in this paragraph.

b. The Arithmetic Test (ARI)

The arithmetic test portion of the Basic Test Battery consists of verbally stated problems which require the ability to think with numbers. Generally, those basic arithmetic skills required for successful performance on the AFQT are sufficient for successful completion of the ARI portion of the Basic Test Battery. (See p. 62, supra.)

The Arithmetic Cluster can be compared to other battery subtests and clusters. The ARI compares to the Army's AQB Arithmetic Subtest; to the Marine Corps' BCTB Arithmetic Reasoning Subtest; and, to the Air Force AQE General Cluster involving the Arithmetic Reasoning Subtest, and the Airman Arithmetic Subtest. GED ratings are also comparative to AFQT findings.



c. The Mechanical Aptitude Test (MECH)

The Mechanical Aptitude Test consists of Mechanical Comprehension, Block Counting, Surface Development and Mechanical Knowledge Subtests. All of these require the examinee to grasp the mechanical details of a situation which are presented to him by means of an illustration, and to be able to follow directions and apply physical principles to the solution of problems.

The Mechanical Comprehension, Block Counting, Surface Development and Mechanical Knowledge Subtests of the MECH can be compared to other military battery subtests. The MECH subtests compare to the Army's AQB Precision Maintenance Subtest, Motor Maintenance Subtest, Shop Mechanics Subtest, Pattern Analysis Subtest, Electronics Subtest, and General-Technical Subtest.

The MECH subtests compare to the Marine Corps' BCTB Mechanical Aptitude Subtest, Pattern Analysis Subtest, Automobile Information Subtest, Shop Mechanics Subtest, and Electrical Information Subtest.

The MECH compares to the Air Force AQE Mechanical Principles Mechanical Movements, Pattern Comprehension, Hidden Figures, General Mechanics, Tool Functions and Electrical Information Subtests.

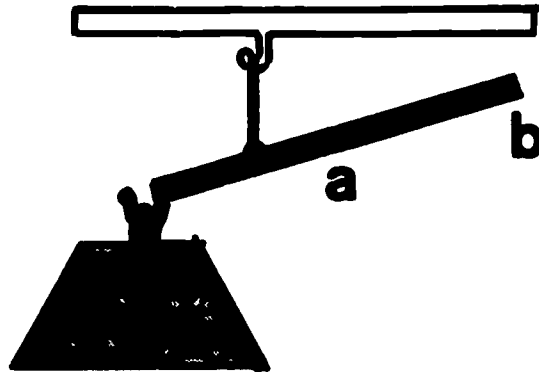
Referring to the Standardized Table explaining the various levels of GED, the examinee must perform on level 4.0 of the Reasoning Development Scale. He must also

display a reading achievement level of approximately the twelfth grade, and display a special aptitude for mechanics and electronics. Such aptitude could be acquired by two or more years of vocational training in shop classes and/or extensive exposure to mechanical/electrical work. This would apply to the following subtests:

#### THE MECHANICAL COMPREHENSION SUBTEST

In this subtest, each item consists of a picture which illustrates a mechanical situation about which a question is asked.

##### Example



At which point should one pull down to raise the weight more easily?

- (1) One should pull down at point A.
- (2) One should pull down at point B.
- (3) The weight may be raised just as easily from either point A or B.

#### THE BLOCK COUNTING SUBTEST

The Block Counting Subtest consists of two columns of blocks of the same size and shape shown in a diagram. Some of the blocks are lettered alphabetically. The task is to decide how many blocks touch each of the lettered blocks.

Generally, those skills and knowledges outlined under the AFQT block counting discussion (see p. 67, supra) are sufficient to allow successful completion of the block counting subtest of the MECH.

#### THE SURFACE DEVELOPMENT SUBTEST

The Surface Development Subtest contains questions which offer a drawing of a flat pattern which can be folded along indicated lines and of a prospective drawing of the solid object formed by folding the pattern as indicated. In the drawings of the pattern and of the object, one side is lettered. A number of lines in the pattern are numbered, while in the prospective drawing of the object, all of the edges and some of the sides are lettered. The task is to match the numbered lines of the pattern with the lettered lines of the picture. This task involves the ability to perceive the relationships present in transforming a two dimensional projection to three dimensions as shown in perspective.

Generally, those basic skills and knowledges outlined under the AFQT solid figure turning, view question, and spatial relationship subtests, previously discussed are sufficient to allow successful completion of the surface development subtest of the MECH. (See p. 68, supra.)

#### THE MECHANICAL KNOWLEDGE SUBTEST

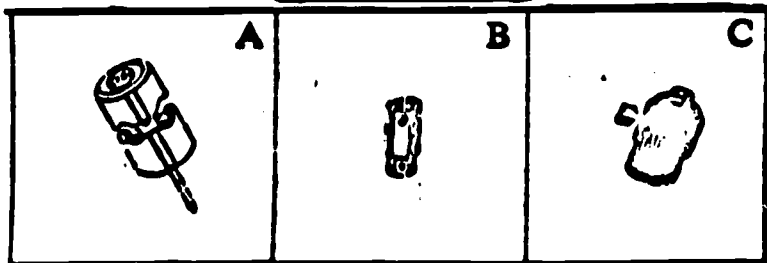
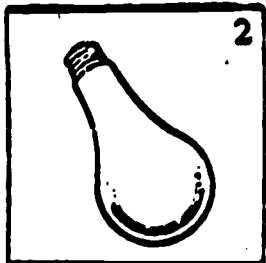
The Mechanical Knowledge Subtest includes questions covering both electrical and mechanical knowledge. Part 1,

called Tool Relationship, consists of pictorial questions; twenty-five of which are electrical and thirty-five are mechanical.

Examples

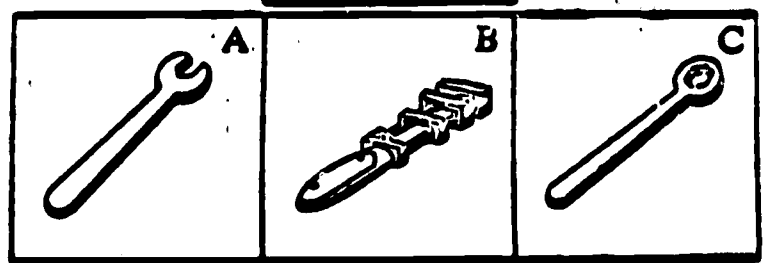
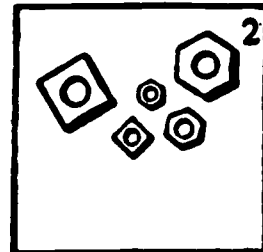
(Electrical)

Which item A, B, or C goes with the blub?



(Mechanical)

Which wrench would be used with all these nuts?



Part 2 of this subtest contains eighty information items, each stated in verbal form as a question, to which four alternative answers are given. The task is to indicate the correct answer.

Example

(Electrical)

In an a-c operated radio receiver direct current is needed for the (a) rectifiers (b) plate voltage (c) power pack (d) field coils

(Mechanical)

A rasp is a kind of (a) saw (b) wrench (c) file (d) hammer

THE CLERICAL APTITUDE TEST (CLER)

The final test cluster on the Basic Test Battery is

entitled the Clerical Aptitude Test. This test consists of alphabetizing, name checking and number checking subtests. The cluster measures the examinee's potential for clerically oriented tasks.

The subtests compare to the Army's AQB Clerical Ability Subtest; the Marine Corps' BCTB Clerical Speed Subtest; and, the Air Force AQE Interpretation of Data and Word Knowledge Subtests.

Referring to the Standardized Table explaining the various levels of GED, the examinee must perform on level 3.0 of the Language Development Scale to perform successfully on the following subtests:

#### THE ALPHABETIZING SUBTEST

This subtest measures the applicant's ability to arrange words in alphabetical order. Each item consists of five words, four of which are given in alphabetical order. The fifth, the key word, is to be inserted into the correct position so that all five will be in alphabetical order.

#### Example

CAT     APPLE     BARN     DOG     RAT  
    1            2            3            4            5

#### THE NAME CHECKING SUBTEST

This portion of the Clerical Aptitude Test is designed to measure an ability to sort and check words which are spelled nearly the same. The questions consist of two names which are

either identical or very similar. The task is to state whether the two names in each part are the same or different. Such differences between pairs of names might involve one letter of a name, a change in punctuation, or, perhaps, a more perceptible difference.

Example

1. J.H. Hornblow & Co. - J.H. Hornaday & Co.
2. American Outdoor Adv'g. - American Outdoor Adv'g
3. National life Ins. - National Life Ins
4. Colgates' Dental Cream - Colgates Dental Cream

THE NUMBER CHECKING SUBTEST

Each item in this subtest consists of two numbers of from five to eleven digits each. The task is to indicate whether the two numbers in each item are the same or different.

Example

1. 436815 - 435815
2. 9614328 - 9614328

3. Summary

The Navy Basic Test Battery is divided into four test clusters: the General Classification Test, the Arithmetic Test, the Mechanical Test, and the General Clerical Aptitude Test. These test clusters are very similar to the subtests of the Army, Marine Corps and Air Force examination batteries.

The General Classification Test (GCT) is designed to measure verbal ability. It tests the comprehension of word meaning and verbal relationships. The GCT includes in the reading sections; sentence completion, opposites, and analogies.



It requires thought and reflection rather than education, vocabulary or special information.

The sentence completion portion of the GCT offers the applicant a series of short sentences, one word of which is left blank. The applicant must fill in the blank with one of five vocabulary words listed under the sentence. The vocabulary skills and knowledges required for successful completion of this section are estimated to be on the twelfth grade level.

The opposites portion of the GCT offers the applicant one vocabulary word under which are five other words, one of which is directly opposite in meaning to the first word listed. The applicant must then select the word which is the most opposite of the word listed. The Analogy Subtest of GCT offers the applicant the same type of vocabulary reasoning question that was described earlier under the corresponding subtest of the Armed Forces Women's Selection Test. The Reading Subtest consists of paragraphs of increasing difficulty, each followed by several questions. The questions are designed to measure the ability to retain details in the material read, to note inferences from it, and to follow directions. The paragraphs generally consist of materials relating to military life. The examinee must be able to retain the information read in the opening paragraph and then answer questions on the material contained in that paragraph, without referring back to

it. Vocabulary on the subtest often contains technical terms relating to mechanics and electronics.

The Arithmetic Test portion of the test battery consists of verbally stated problems which require the ability to think with numbers. Generally, those basic arithmetic skills required for successful performance on the AFQT are sufficient for successful completion of this portion of the test battery.

The Mechanical Aptitude Test consists of Mechanical Comprehension, Block Counting, Surface Development and Mechanical Knowledge Subtests. All of these require the examinee to grasp the mechanical details of a situation which is presented to him by means of an illustration. They also require him to be able to follow directions and apply physical principles to the solution of problems. To perform successfully on the Mechanical Aptitude Test, the examinee must achieve a 4.0 on the Reasoning Development Scale of the GED. He must also display a reading achievement level on the twelfth grade, and a special aptitude for mechanics and electronics. Such aptitudes could be acquired by two or more years of vocational training and shop classes, and/or extensive exposure to mechanical-electrical work.

The final test cluster on the basic test battery is entitled the Clerical Aptitude Test. This test consists of alphabetizing, name checking, and number checking tests. The

cluster measures the examinee's ability in clerically oriented tasks. In order to perform successfully on this test the examinee must perform on level 3.0 of the Language Development Scale of the GED.

### III. SYSTEM GRADUATE FINDINGS

#### A. Questionnaire Data

Ten former students at Valley High Continuation School were contacted by letter and requested to fill out a questionnaire which was designed to solicit their views on the continuation school's role in developing essential skills and knowledges required in the military. These ten students are currently serving on active duty in the Army, Marine Corps, and Air Force. Of the ten students contacted, two replied; both of whom are on active duty in the Army. Eight of the ten system graduates are now serving in the Army.

The following presents the data received in these questionnaires:

#### RESULTS OF THE QUESTIONNAIRES FILLED OUT BY THE SYSTEM GRADUATES NOW IN THE MILITARY

##### Summary:

1) Branch of Service interviewed:

ARMY - 2 replies	MARINES - No reply
NAVY - Not served	AIR FORCE - No reply

2) Rank of interviewees:

ARMY - SP/4, E-4; Pfc, E-3

3) Average length of service:

ARMY - 10 months

- 4) Courses that have helped in military:
- Math
  - Reading
  - English
- 5) Courses that have not helped in the military:
- None
- 6) High School graduate?
- No
- 7) Effect of no diploma?
- No response
- 8) General impressions of in-service training:
- "I thought it was easy."
  - "It was not hard nor easy."
- 9) General impressions of pre-induction testing:
- "It was not real hard."
  - "It was hard and easy."
- 10) Reasons for enlisting in the military:
- "Because I wanted to get it over with."
  - "Because I thought it might help me."
- 11) Type of job and pay scale expected after military:
- Truck driver - \$3.65/hour
  - Construction - \$6.00/hour

12) General impressions of achievement while attending continuation school:

"Good."

13) Classes not offered at continuation school that would have helped in the military:

No response.

14) General impression of teaching at continuation school:

Favorable, due primarily to the fact that student was allowed to progress at his own speed.

15) Suggestions that would improve continuation school:

"Offer more vocational training, especially electronics."

"Be more strict with students."

16) What do continuation students need to learn to do before going into the military:

Self-discipline.

To take orders.

To be neat and clean in their work.

#### B. Analysis of Findings

Only two replies were received from the ten letters and questionnaires mailed to system graduates now serving in the military. Both of these replies were received from only one branch of the service, the Army. The attempt of this Project to receive information from system graduates in all military branches was, therefore, frustrated. The fact that each of these men had served a period of ten months in the military,



and that they had risen in rank from a Grade E-1 to a Grade E-3 and E-4 respectively, however, gives some weight to their particular responses.

It is noteworthy that basic courses in mathematics, reading and English taken by these men during their time at the continuation school were stressed in their response to the questionnaire as study areas which have been of particular help to them in the military. (The Armed Forces stress these particular subjects, as indicated by the weight given them in the AFQT.) In question 13, the respondents could recommend no other subject areas.

Neither of the respondents were regular high school graduates; yet, they indicated no adverse effect in their military experience caused by the absence of a diploma. Both men, in fact, have progressed satisfactorily during the ten months they have served. The emphasis by the military on the possession of a high school diploma before entry seems to be unsubstantiated by the actual performance of these former Valley High School students.

Each respondent reported a generally "good" impression of his achievement while at the continuation school, which suggests that some experience of academic success in continuation school might have more of an effect on subsequent pre-induction testing and in-service training in the military than merely the attainment of a diploma.

A significant finding is the favorable opinion of these ex-students to the continuation school teaching method which allows each student to progress at his own rate.

The final remarks by these former students - that the continuation school should be more strict, teach self-discipline, teach the student to take orders, and to be neat and clean in their work - suggest that these behaviors are not presently being conveyed by the continuation education program. The remarks also imply that these behaviors are necessary to a successful military experience.

#### IV. MILITARY TRAINING OFFICERS QUESTIONNAIRE

##### A. Review of Findings

The military training officers of the system graduates now in the military were contacted by letter and requested to fill out a questionnaire comparing the basic skills and knowledges the system graduates possess with those of non-system graduates at the same military level and station. Questionnaires were sent to training officers who are directly supervising system graduates now serving on active duty in the Army, Marine Corps, and Air Force. At present, there are no system graduates on active duty in the Navy. A response to these questionnaires was received from the training officers in the United States Army and Marine Corps. The following is a review of the findings produced by these questionnaires:

1) Branch of the Armed Forces replying to the questionnaire:

ARMY: Three replies (A, B, and C)

MARINE CORPS: One reply

2) Rank and status of the person completing the questionnaire:

ARMY: A) Second Lieutenant Active, U.S. Army Chemical Corps

B) Second Lieutenant, Armor, Commanding Officer

C) Counselor, Army Education Center

MARINE CORPS: Captain.

3) Rank and status of the system graduate now under supervision:

ARMY: A) E-2 Active

B) Pfc., Loader, Tank, M60

C) E-3 Active

MARINE CORPS: Private

4) Relationship to system graduate:

ARMY: A) Platoon Leader

B) Commanding Officer

C) Education Counselor

MARINE CORPS: Academic Section Head

5) Basic skills and knowledges required to perform successfully the duties required of the rank designated in question 3:

ARMY: A) "To aid an equipment operator who mixes and prepares all decontaminants, mixes, sprays in hot or soapy water. To act as 'goat handler,' M-1 water heater operator and driver of a 2-1/2 ton truck."

B) "Working knowledge of all the assigned weapons, their performance, necessary maintenance, and ammunition required for operation. Knowledge of good radio-telephone procedures and basic crew maintenance for the vehicle."

C) "High school diploma ... Eight week mechanics course."

MARINE CORPS: (Answer not applicable.)

5a) How does the system graduate being rated exhibit these skills?

ARMY: A) "Fairly well ... if he is supervised."

B) "Below average, he is a very slow learner and fails to grasp the most menial of assigned tasks."

C) "Very well."

MARINE CORPS: "He is maintaining an 80.8 average  
(2.6 points below the class average)."

5b) How does the system graduate displaying these skills compare with other men in his unit on the same level and rank?

ARMY: A) "On an equal level."

B) "Below average."

C) "Above average."

MARINE CORPS: "The class average is 83.4. Seventy is passing."

6) What are the basic social behaviors required to successfully perform the duties required of the rank designated in question three?

ARMY: A) "Respect for superiors ... self-discipline ... cooperation with fellow workers."

B) "Ability to react quickly to any given situation, aggressive performance of assigned duties, and constantly be able to perform as directed by his commander on a moments notice."

C) "Above average intelligence ... social acceptability."

MARINE CORPS: "Acceptable to fellow Marines, cleanliness, consideration, willing response to duties."

6a) How well does the system graduate exhibit these behaviors?

ARMY: A) "Good respect for superiors ... poor self-discipline ... lack of cooperation with fellow workers. I have been forced to discipline the young man on a number of occasions."

B) "Far below average."

C) "Excellently."

MARINE CORPS: "Average."

6b) How does the system graduate compare with other men in his unit with respect to these behaviors?

- ARMY: A) "Unfavorably."  
B) "Below average."  
C) "Acceptable."

MARINE CORPS: "Average."

7) Nature and results of aptitude or vocational testing system graduate has undergone while under this command?

- ARMY: A) None  
B) None  
C) Aptitude testing - 98%; successful completion of mechanic school.

MARINE CORPS: None

8) Nature and results of aptitude or vocational testing undergone prior to this command?

- ARMY: A) No record.  
B) "Above average on Army Battery Testing."  
C) Unknown.

MARINE CORPS: "The system graduate has taken the General Classification Test, given in recruit training in November, 1967. Results are as follows: Overall GCT-110, Electrical-Technical-43, Verbal Evaluation-106, Arithmetic Reasoning-120, Pattern Analysis-104, Comprehension-109, Mechanical Aptitude-101, Clerical Speed-104, Radio Code-58, General-107, Shop Mechanics-114, Automobile-109, Electrical Engineering-112, Infantry-113, Armor/Artillery/Engineering-108, Electrical General-108, General Maintenance-111, Motor Maintenance-112, Clerical-105, General Technical-113."



9) Will the system graduate undergo further testing after leaving this command?

- ARMY: A) "It is doubtful."  
B) "Unknown."  
C) "Has been advised to take college level tests while in Vietnam."

MARINE CORPS: "No."

10) Complete evaluation of system graduate:

- ARMY: A) "At first the young man appeared very slow to understand events going on around him, however, he gave me no special cause to be concerned. He performed his duties well. Later on, he disobeyed an order knowing full well what he was doing. I recommended an Article 15 which he received. After the Christmas Holidays he received thirty days leave. While on this leave the young man was arrested with the verdict still pending. He was returned to my unit approximately eighty days after leaving. The young man seems slower to comprehend than the average individual of his rank. However, he does perform his duties well, but like the average E-2 he needs constant supervision."
- B) "(He has) individual lack of initiative and drive that is common place among other personnel of equal rank and position. His interest is never keen and generally speaking goes about his daily routine with a lackadaisical attitude. As a result his job proficiency remains much lower than that of other persons of equal rank, position and time in the service."
- C) "(He) has good capabilities and with a little prodding could be a good college student and has the mechanical knowledge to do anything he desires. I think he has channeled himself to a mechanical trade rather than believing in himself as far as college goes."

MARINE CORPS: "Average."

- 11) Suggestions as to how we may improve our job of preparing our graduates with the basic skills and knowledges required for successful performance in the military:

- ARMY: A) "One area the average E-3 or E-2 in the military lacks is a greater sense of responsibility. The young man I am reporting on is typical of the privates in the military. They all require a great deal of supervision. If a sense of responsibility could be instilled in these young men, this time consuming task could be eliminated."
- B) "I have no working knowledge of your educational program, but taking for granted you devote the majority of your time to drop-outs or persons with similar background, I suggest you emphasize the treatment or correction of social deficiencies. This individual, for example, is proven to be above average in intelligence but continually below average in job performance. He also has very few friends and generally is a loner, indicating in the short run a problem or combination of problems originating long before now."
- C) "(He) left La Puente High School in the eleventh grade as a result of an argument with a teacher. He then went to Valley High to obtain the necessary credits to graduate but left to join the Army. He volunteered for the service but immediately went to an Education Center to find out what he needed to take (for) the GED (to) get his equivalency certificate. He has taken two tests and wants to take the other five. He is leaving today for Vietnam and plans to finish the tests there. I do not believe he should have been 'kicked out' due to an argument. According to the young man, he was an average student and NOT failing. The only recommendation I can make is that he be given counseling toward college by his state and the Army Education Centers wherever he is stationed to obtain his certificate. When asked about college he gave a very positive 'No!'. I feel his attitude toward SCHOOL is very poor and I have counseled him to continue in his education and to consider his future. These are the things that I feel he reflects in my sessions. He definitely has GREAT HOSTILITY toward the school and its discipline."

MARINE CORPS: No reply.

## B. Analysis of Findings

This Project was not able to survey each branch of the Military Armed Forces to discover the relative success of system graduates now serving in the military. No known system graduates are serving in the Navy, and no replies were received from the Air Force. The survey produced a somewhat representative sample of Army experience, however, and one Marine Corps reaction. Since the majority (eight out of ten) Valley High system graduates in the military are serving in the Army, the survey at least suggests some performance levels for system graduates now serving in that branch.

The responses to question 5 of the survey indicated that the military respondents were primarily concerned with skills and knowledges of a military task nature. The respondents focused upon such things as weaponry maintenance and truck driving. Prerequisite skills and knowledges such as reading and writing were never mentioned. It may be concluded that military skills and knowledges are primarily task oriented, at least from the standpoint of training officers.

One respondent indicated that a high school diploma was a basic prerequisite for performing successfully in the military. This is in keeping with the response offered by the military recruiting personnel, all of whom stressed the value of having a high school diploma prior to entry into the military.

The training officers' descriptions of the system graduates now serving in the Armed Forces were most revealing. Generally, two of the four system graduates were below average in social behavior. One of the system graduates was average; the other excelled. If this sampling is at all indicative of the performance of other system graduates serving in the military, it would seem that continuation school is experiencing limited success in adequately preparing students for eventual military service, at least with regard to social behavior.

While there was a general unwillingness on the part of the military respondents to criticize the intelligence of the system graduates under their command, there was a definite criticism of social behavior. This is shown in the response to question 6, where a major concern was expressed over the system graduate's ability to exert self-discipline, cooperate with fellow workers, and perform as directed. Where questions 7 and 8 indicated average and above average aptitudes on the part of the system graduates, question 10 indicated very poor attitudes by these students. Behaviors such as insubordination, a criminal activity while on leave, lack of initiative and drive, and lack of interest by system graduates produced criticism from military training officers.

The final question to this survey was most revealing. The military respondents emphasized the role of continuation school in developing a greater "sense of

responsibility" in its graduates. And again, social deficiencies rather than intellectual deficiencies were stressed. Of special significance was the third Army example (C). This system graduate was described favorable throughout the survey. He was rated high in the skills and knowledges category and in the social category. However, he indicated a "very poor" attitude toward school. Although he has college potential, he "definitely (has) great hostility toward the school and its discipline." This finding indicated to the military respondent a shortcoming of the continuation school in developing attitudes which have a direct effect on social behavior.

The correlation between the training officer survey and the questionnaire completed by the system graduates suggests a need for developing greater self-discipline and responsibility among students at continuation school. Both the system graduates and their military commanders underlined a deficiency in this area.

In summary, this aspect of the research suggests that the continuation school is performing adequately in preparing system graduates with an average scholastic capability required for successful performance in the military. There is an indication, however, that the continuation high school is not presently preparing the student with the basic social skills and knowledges for successful performance in the military.



V. SELECTIVE SERVICE SYSTEM DATA

A. Excerpts from Correspondence

Correspondence from the Selective Service System at all levels was of little value in assessing minimal skills and knowledges required of the system graduate to be eligible for induction into the military. Many of these skills and knowledges, however, were defined in the analysis of the Armed Forces Qualifying Test earlier in this report.

The most substantial findings from the Selective Service System came in the form of a communication from the office of the Assistant Secretary of Defense. This communication outlined the moral standards for induction and enlistment. The following are excerpts from this communication:

"Moral standards, which concern the acceptability for military service of men with police records, were given thorough study during the summer of 1966 by a Department of Defense study group. The findings and recommendations of the study group were accepted by the Secretary of Defense and, in late 1966, he directed the Military Departments to make appropriate changes in their regulations. These changes were generally affective in all services early in 1967.

"As it stands now, conviction of an offense by a civil court including conviction of a felony offense or an adverse



adjudication for such an offense as a juvenile does not automatically bar an individual from induction or enlistment. Each such case is considered on its merits, and the determination is made in terms of the nature of the offense or offenses, age when committed, punishment actually imposed and degree of rehabilitation as reported by probation officers. Among other changes, the revised policies provide that: conviction of a single minor offense (disorderly conduct, drunkenness, vandalism, etc.) does not require a waiver; minor traffic violations do not require a waiver for induction and they require a waiver for enlistment only if they exceed five convictions within a period of one year; and conviction of a felony offense does not automatically bar an individual from consideration for induction or enlistment.

"The handling of cases of men under civil restraint - in confinement, parole, probation or suspended sentence - is another important area in which policies have been changed. Prior to the policy changes, men under civil restraint, without exception, could not be considered for induction or enlistment while they were in that status. The Study Group found that while this policy continues to have general merit, it had arbitrary and undesirable effects in many cases. Under current policies, induction or enlistment is no longer prohibited if the only civil restraint consists either of unconditional suspended sentence or unsupervised unconditional probation. By these terms we generally mean suspended sentences

or probationary status imposed by a court that places no conditions upon the individual: 1) regarding his freedom of movement; 2) requiring the payment of damages; 3) requiring periodic reporting by him to an officer of the court, or 4) involving supervision by an officer of the court.

"On the other hand, under current policies, persons under active forms of civil restraint, including confinement and supervised probation, continue to be barred from consideration for induction or enlistment until their terms of restraint are completed. In such cases, it is considered that the civil restraint is imposed primarily for the purpose of rehabilitation and that this is best effected by civil rather than military authorities.

"Consistent with the foregoing, the Military Services do not accept an individual released from criminal charges, confinement, probation or other civil restraints conditional on his entry into military service. There are many reasons for this policy. Basically, they do not wish to encourage judicial authorities to transfer civil responsibilities for rehabilitation of offenders to the Armed Forces. The assumption of such specialized responsibilities by the Armed Forces would entail a diversion of scarce resources from essential military missions. Additionally, they are of the firm conviction that the Armed Forces should not be used as a penal or correctional institution, as this would be damaging to the prestige and morale of service men who assume their

obligations willingly and adversely affect voluntary recruitment and retention of high quality personnel."

#### B. Analysis of Findings

Correspondence with the Selective Service System was largely unresponsive. The Project's communication to the local draft board received no reply. The letter sent to the District Headquarters was forwarded to the Los Angeles Armed Forces Examining and Entrance Station. No reply was received from this station. The reply from the California Headquarters directed the Project to communicate separately with each branch of the Armed Forces. Project communication directed to the National Headquarters was forwarded to the Department of Defense. The Department replied with the above mentioned material concerning moral requirements for entry into the military.

The Selective Service System is not involved with determining minimal skills and knowledges required for entry into the military. Such an area is not within Selective Service System jurisdiction. Generally, these skills and knowledges are determined by each branch of the Armed Forces, and the Selective Service System acts as an administrative body which classifies young men who are potentially eligible for military service.

Moral requirements for enlistment vary among the military services but are generally within the standards as set down in Army Regulation 601-270. A Department of Defense

publication summarizes moral standards for induction and enlistment. This summary confirms information received from the recruiters. Conviction of a felony will not automatically bar an individual from induction or enlistment. Each case is considered on its merits, employing the procedure of submitting an evaluation waiver to the branch of the service concerned. Conviction of a minor offense (misdemeanor) does not require a waiver, and minor traffic violations do not require a waiver for induction, unless they exceed five convictions within a period of one year.

Under current policies, induction or enlistment is no longer prohibited if the current civil restraint (arrest) of the applicant consists either of unconditional suspended sentence or unsupervised unconditional probation. However, persons under active forms of civil restraint, including confinement and supervised probation, continue to be barred from consideration for induction or enlistment until their terms of restraint are completed. The military services do not accept an individual released from criminal charges, confinement, probation or other civil restraints conditional on his entry into military service.

# **SUMMARY OF FINDINGS**

There are many prerequisites to "successful entry into the military." These are dependent upon the branch of the military where entrance is sought, and the status of the entrant as enlistee or inductee, and as high school graduate or non-graduate.

Generally, a high school diploma is prerequisite for entry into the Navy and Air Force, and is recommended for successful entry into the Army and Marine Corps. In the case of male enlistees, successful performance on the screening tests and the Armed Forces Qualifying Test (AFQT) is required. Inductees need only to perform successfully on the AFQT. All potential recruits must be of "good moral character."

The enlistment screening tests are practice examinations administered on the local recruitment level. These examinations are administered only to prospective enlistees. They are a short form of the AFQT. The same subject categories are tested, i.e., arithmetic, vocabulary, patterns and figures, and tool recognition. They range from thirty minutes to an hour in duration, and from forty-eight to eighty-eight questions in length. Passing scores range from ten out of forty-eight in the Air Force, and twenty out of eighty-eight in the Marine Corps, to nineteen out of



forty-eight in the Army. Failure to achieve these minimal scores will not preclude the applicant from gaining entry into the military; but, it is a strong indication of probable failure on the AFQT. Prerequisite skills and knowledges needed to score successfully on the screening tests include, in the words of the military, "a ninth grade aptitude, intelligence and achievement level in the English language." In the case of females, this would be a twelfth grade aptitude, intelligence and achievement level.

The Armed Forces Qualifying Test, an extension of the Enlistment Screening Test, is the single most important mental examination bearing upon entry into the military. It is administered to every male seeking entry into each military branch. The AFQT is divided into four subtests. There are twenty-five questions in each of the following subtests: arithmetic, vocabulary, patterns and figures, and tool recognition.

To succeed on the arithmetic subtest, the examinee must display skills in addition, subtraction, multiplication, and division of whole numbers. He must be able to identify the processes necessary to solve arithmetic problems. A reading and arithmetic aptitude of sixth grade, and the ability to perform on level 2.0 of the General Educational Development Test mathematical development scale are prerequisite to successful performance on this subtest. To succeed

on the vocabulary subtest, the examinee must display skills in finding synonyms for certain English words considered to be on approximately the sixth grade vocabulary level. The examinee must be able to perform on level 1.5 of the GED language development scale. Success on the patterns and figures subtest require skills in depth perception, mechanical aptitude and general reasoning development on approximately the ninth grade level. The examinee must perform on level 3.0 of the GED reasoning development scale in exercises involving cube counting, solid figure turning, view questions, and spatial relationships. The tool recognition subtest involves tool matching, tool description, and tool usage. Success on this subtest is largely dependent upon the examinee's prior exposure to the use of hard tools in various mechanical and electrical operations, and the degree of mechanical aptitude which would normally develop after two or more years of shop classes. Approximately a ninth grade mechanical vocabulary is required.

The Armed Forces Women's Selection Test is seventy-five minutes in duration and one-hundred questions in length. This test is different from its counterpart AFQT in that it has only two subtests, vocabulary and arithmetic. The vocabulary subtest of the AFWST is divided into two categories: word recognition and word

analogy. The word recognition category utilizes vocabulary words at about the twelfth grade level. Here the examinee must perform on level 4.0 of the GED language development scale. The word analogy category also employs vocabulary words on the twelfth grade level. The examinee is tested not only on vocabulary skills, but also on general reasoning development. The examinee must perform on level 3.0 of the GED reasoning development scale to be successful in this category. The arithmetic subtest involves arithmetic skills on the twelfth grade level; level 4.0 of the GED mathematical development scale. The examinee must solve problems involving fractions, decimals, percentages and algebraic skills.

Other prerequisites required of both men and women for successful entry into the military include: good physical health; ability to receive training and instruction (trainability-aptitude to learn); ability to accept authority, live with others, reason, and be motivated; and, a "good moral character" as evidenced by being honest and trustworthy.

## NOTES

<sup>1</sup> DeNeufville, Richard D., and Conner, Caryl, How Good Are Our Schools? Armed Forces Qualification Test Provides a Clue, (U.S. Printing Office: Department of Health, Education and Welfare, October, 1966).

<sup>2</sup> Turner, David R., Practice for the Armed Forces Tests, (Arco Publishing, 1965), pages 38 - 39. Test examples throughout "Findings" are taken from this text, unless otherwise noted.

<sup>3</sup> Dictionary of Occupational Titles, Volume II, (3rd edition, Manpower Administration, U.S. Department of Labor, 1965), page 652. In addition to the Mathematical Development Scale, the Reasoning Development Scale and the Language Development Scale are also to be found in this same location.

<sup>4</sup> DeNeufville and Conner, page 9.

<sup>5</sup> Ibid., page 5.

<sup>6</sup> Dictionary of Occupational Titles, Volume II, page 653.

<sup>7</sup> Ibid., page 652.

<sup>8</sup> Air Force Testing Program, page 9.

<sup>9</sup> Turner, page 5.

<sup>10</sup> Moral Standards for Induction and Enlistment, (Office of the Associated Secretary of Defense, Manpower and Reserve Affairs, March 21, 1966).

# **TABLES**

TABLE I  
BIBLIOGRAPHY



TABLE I

BIBLIOGRAPHY

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TABLE II

MILITARY SERVICE: LETTERS AND QUESTIONNAIRES

1. Letter to Parents
2. Letter to Ex-student
3. Ex-student Questionnaire
4. Letter to Training Officer
5. Training Officer Questionnaire
6. Letter to Military Administration
7. Military Administration Questionnaire
8. Letter to Selective Service System

**CONTINUATION EDUCATION  
SYSTEM DEVELOPMENT PROJECT**

- LA PUENTE UNION HIGH SCHOOL DISTRICT
- 455 N. Glendora Avenue
- La Puente, California 91744
- (213) 968-2114 or 336-6405

**LEON EAST**  
Project Director

TABLE II, 1  
LETTER TO PARENT

March 13, 1968

Mr. and Mrs. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

RE: (Your Son)

Dear Mr. and Mrs. \_\_\_\_\_:

We are trying to locate your son's address in the military so that we can ask his help in finding ways to improve Valley High. We want to do this so that future students of Valley High will have the greatest chance for advancement should they go into the military.

As a former student at Valley High, your son knows our school best. He knows what works and what doesn't. He can help us to make more realistic changes and find out what we must do to make the school better for other students who may some day go into the military.

What we would like you to do is fill out the enclosed, self-addressed post card. This will give us the address of your son in the military. Then we can write him and ask for his help. I want to thank you for your time in helping us.

Sincerely,

Steven C. Burtnett  
Research Associate

SCB/js

**CONTINUATION EDUCATION  
SYSTEM DEVELOPMENT PROJECT**

- LA PUENTE UNION HIGH SCHOOL DISTRICT
- 455 N. Glendora Avenue
- La Puente, California 91744
- (213) 968-2114 or 336-6405

**LEON EAST**  
Project Director

TABLE II, 2

LETTER TO EX-STUDENT

Date

Student Military Address

Dear \_\_\_\_\_:

I need your help. As a former student at Valley High School, you can help me answer a few questions about the school that will make it a better place for those now in attendance. I am working on a Project that wants to improve Valley High School in every way possible. The name of our Project is Continuation Education System Development Project. We hope to expand your school to its best potential.

That is why I'm asking for your help. As a former student at Valley High School, you are in the best possible position to tell us what works and what doesn't.

I have enclosed a questionnaire for you to fill out and return in the enclosed, self-addressed envelope. You don't have to answer all the questions, and you don't have to sign your name. But if you will, we would really like you to tell us what you think about the school and how it can be changed for the better. And if there is anything about the school you don't like, say so!

Remember, your honest feelings are the most important thing there is for us now. Your answers are the mirror we will look at to see what we can do to make the school the best in the state. We really hope you will help us.

Sincerely,

LEON EAST  
Project Director

by Steven C. Burtnett  
Research Associate

/lm

P.S. Please return this questionnaire within ten days. Thank you.

Encl.

## TABLE II, 3

### EX-STUDENT QUESTIONNAIRE

#### Purpose

The purpose of this questionnaire is to let you help us find out how we can improve Valley High School. Because you are in the military, you can help us find out what we must do to make the school better for other students who may someday go into the military.

#### Instructions

Take your time in answering. This is not a test. The answers to all questions will be kept private. You do not have to give your name, but it would help if you would tell us your rank and the branch of the military in which you are serving. If you do not have room to answer in the space given, use the back of the page. When you finish, put this form in the enclosed envelope and mail it to us. We would like to have it returned within ten days. Thank you for helping us.

1. What branch of the military are you in? \_\_\_\_\_
2. What is your rank? \_\_\_\_\_
3. What was your rank when you started? \_\_\_\_\_
4. How long have you been in the military? \_\_\_\_\_
5. How long did you go to Valley High? \_\_\_\_\_
6. Do you remember some of the courses you took at Valley High that have helped you in the military? \_\_\_\_\_
7. What are they? \_\_\_\_\_
8. Do you remember some of the courses that you took at Valley High that have not helped you in the military? \_\_\_\_\_
9. What are they? \_\_\_\_\_
10. Did they help you in any other way? \_\_\_\_\_
11. How? \_\_\_\_\_
12. Do you have a high school diploma? \_\_\_\_\_  
Has this helped you? If so, how? \_\_\_\_\_  
\_\_\_\_\_
13. What is your job in the service? (You don't have to give away any military secrets; just tell us generally what you do. For example, "mechanic", "typist", etc.) \_\_\_\_\_
14. Did you have to take any special training for this job? \_\_\_\_\_  
If so, what kind? \_\_\_\_\_
15. Was this training hard or easy (describe in your own words)? \_\_\_\_\_  
\_\_\_\_\_
16. Did you take a test to get into the military? \_\_\_\_\_  
If you remember the name of this test, what was it? \_\_\_\_\_  
\_\_\_\_\_  
Was it hard or easy (describe in your own words)? \_\_\_\_\_  
\_\_\_\_\_



17. Why did you go into the military (answer in your own words)? \_\_\_\_\_

\_\_\_\_\_

18. After you get out of the military, what kind of work do you want to do? \_\_\_\_\_

How much do you want to get paid for this? \_\_\_\_\_ per hour

19. How well did you do on school work at Valley High? \_\_\_\_\_

20. What classes were not offered at Valley High that you wish you could have taken? \_\_\_\_\_

\_\_\_\_\_

Would these classes have helped you in the military? \_\_\_\_\_

21. Did you like the teaching at Valley High? \_\_\_\_\_

Why (use your own words)? \_\_\_\_\_

\_\_\_\_\_

22. State briefly what you would do to make Valley High better so that future students who go into the military will be successful.

\_\_\_\_\_

\_\_\_\_\_

23. What do Valley High students need to learn to do before going into the military? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Thank you for your help!  
Please return this form  
When you are finished.

**CONTINUATION EDUCATION  
SYSTEM DEVELOPMENT PROJECT**

- LA PUENTE UNION HIGH SCHOOL DISTRICT
- 455 N. Glendora Avenue
- La Puente, California 91744
- (213) 968-2114 or 336-6405

TABLE II, 4

**LEON EAST**  
Project Director

LETTER TO TRAINING OFFICER

Date

Military Survey Training Officer

Dear Sir:

We would like to call upon a moment of your time for some help. The purpose of this letter is to gather some vital information that has a direct bearing upon the provision of manpower for the (branch of service).

We are conducting research for Continuation Education System Development Project which is funded under Title III of the Elementary and Secondary Education Act of 1965. Our particular Project aims at improving the instructional program for the continuation education student utilizing the system analysis approach.

You have such a student stationed at your base. His name is (name, rank and serial number). What we desire is information from your staff concerning how well this individual has been prepared for entry and successful performance in the (branch of service).

This information is important to us for a number of reasons. It will help us to determine the basic skills, knowledges and behaviors required for satisfactory entry and performance in the (branch of service). It will aid us in determining whether or not our current program is doing its job to try to develop these skills, knowledges and behaviors in our students, the majority of whom go into the military shortly after leaving us. Finally, it is our hope that the information you can provide us with will aid us in our attempt to prepare a curriculum that will better prepare students for their role in the service of their country.

In order to facilitate the gathering of this data, we are enclosing a questionnaire. It would be helpful if this could be filled out by the officer or member of your staff directly in charge of training (name and rank).

We want to offer our initial gratitude to you for taking the time to aid us in this goal, and we are hopeful that cooperation in this matter will allow us to produce more efficient manpower for the (branch of service).

Sincerely,

LEON EAST  
PROJECT DIRECTOR

by Steven C. Burtnett  
Research Associate

SCB/h1  
Encl.

TABLE II, 5

TRAINING OFFICER QUESTIONNAIRE

Purpose

The purpose of this questionnaire is to gain information as to how we can improve basic continuation education programs for young men about to enter the (branch). Continuation school plays a unique role in the community, and is of special significance to the military. As an attempt to solve a pressing problem in California - the problem of the school dropout or "push-out" - the California State Legislature mandated a program designated as the continuation high school. We are attempting to design an instructional program for the continuation student that will insure successful entry and performance in the military.

This is why your cooperation and aid is important at this time. We need your help in the identification of those basic skills, knowledges and behaviors needed for satisfactory entry and performance in the (branch). By completing this form, you can help us to evaluate how well we are doing our job, and what we can do to improve our curriculum to better prepare students for their role in the military service of their country.

### Instructions

This form should be completed by the military training officer directly in charge of training who is now serving on active duty with the As we are not concerned with the name of the former student you are rating as much as we are with the job he is doing, you should remove this cover page before returning this form.

The answers you give are for research only. The names and positions of those responding will not be disclosed. Remember, answers pertain only to academic and social behaviors required on the part of the student to enter and succeed in the primary military rank of your branch of the service.

You need not give your name, but it would help if you would tell us what branch of the military you are in, and your rank. When you finish, put this form in the enclosed envelope and mail it to us. We would like to have it as soon as you finish. Thank you for helping us.

1. To which branch of the Armed Forces of the United States is this questionnaire addressed? \_\_\_\_\_

2. What is the rank and status of the person completing this form?  
(Name not required) \_\_\_\_\_  
\_\_\_\_\_

3. What is the rank and status of our graduate now under your supervision? (Name not required) \_\_\_\_\_  
\_\_\_\_\_

4. What is your relation to this person? (Please explain in detail)  
\_\_\_\_\_  
\_\_\_\_\_

5. In your opinion, what are the basic skills and knowledges required to perform successfully the duties required of the rank designated in question #3? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

A. How well does the system graduate you are rating exhibit these skills? \_\_\_\_\_  
\_\_\_\_\_

B. How does the system graduate displaying these skills compare with other men in his unit on the same level in rank?  
\_\_\_\_\_  
\_\_\_\_\_



6. In your opinion, what are the basic social behaviors required to successfully perform the duties required of the rank designated in question #3? \_\_\_\_\_

A. How well does our graduate exhibit these behaviors? \_\_\_\_\_

B. How does our graduate compare with other men in his unit with respect to these behaviors? \_\_\_\_\_

7. While under your training, has our graduate undergone any aptitude or vocational testing? \_\_\_\_\_

If so, could you state the nature of this testing, and describe his results on a comparative basis? (Please be as specific as possible) \_\_\_\_\_

8. Before he came to you, did our graduate undergo any aptitude or vocational testing? \_\_\_\_\_

If so, could you state the nature of this testing, and describe his results on a comparative basis? \_\_\_\_\_







**CONTINUATION EDUCATION  
SYSTEM DEVELOPMENT PROJECT**

- LA PUENTE UNION HIGH SCHOOL DISTRICT
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- La Puente, California 91744
- (213) 968-2114 or 336-6405

**LEON EAST**  
Project Director

TABLE II, 6

LETTER TO MILITARY ADMINISTRATION

Date

Military Survey Administration

Dear Sir:

We would like to call upon a moment of your time for some help. The purpose of this letter is to gather some vital information that has a direct bearing upon the provision of manpower for the (branch of service).

We are conducting research for Continuation Education System Development Project. Our particular Project, which is funded under Title III of the Elementary and Secondary Education Act of 1965, aims at improving the instructional program for the continuation education student, utilizing the system analysis approach.

Continuation schools play a unique role in the community and are of special significance to the military. As an attempt to solve a pressing problem in California - the problem of the school dropout, or "pushout" - attendance in the continuation school was provided for by the California State Legislature.

The continuation school, therefore, assumes a vital responsibility in the overall curriculum. The state has delegated the responsibility of providing this type of education to the local school districts, who must determine their own direction in meeting the needs of the greater population of continuation students. Hopefully, our school district, by conducting original research in this area, will provide answers and suggestions which will serve as a model to the state and to the nation.

In order to facilitate the gathering of these data, we are enclosing a questionnaire for your completion. The purpose of this questionnaire is to discover the essential basic skills and knowledges required for entrance into the (branch of service). The questionnaire is designed in an "open-ended" style to allow you to respond according to your unique requirements and expectations.

Sincerely,

LEON EAST  
PROJECT DIRECTOR

by Steven C. Burtnett  
Research Associate

SCB/bls  
Encl.

## TABLE II, 7

### MILITARY ADMINISTRATION QUESTIONNAIRE

#### Purpose

The purpose of this questionnaire is to identify the skills and knowledges needed by the continuation education student graduate\* for entry into military service. This information will influence or constrain the design of the proposed instructional program for the continuation education student.

#### Instructions

The answers that you give are for research only and the names or positions of those responding will not be disclosed. Remember, answers pertain only to skills, knowledges and behaviors required on the part of the continuation student to enter the primary military rank of your branch of the service (e.g., Army, private; Navy, seaman apprentice, etc.).

\*NOTE - The term "graduate" does not imply that he has a high school diploma. The only legal requirement that must be fulfilled on the part of the continuation student to comply with the term "graduate" is the attainment of 18 years of age. A minimal percentage of continuation school graduates leave with the equivalent of a high school diploma.

1. To which branch of the Armed Forces of the United States is this questionnaire addressed? \_\_\_\_\_
2. What is the rate/rank and status of the person completing this form? (Name not required.) \_\_\_\_\_  
\_\_\_\_\_
3. What is the basic military rate/rank to which an enlistee in your branch of the service would qualify? \_\_\_\_\_  
(The answer to this question will serve as a frame of reference for subsequent questions.)
4. Does your branch of the service acquire manpower through the draft (Selective Service System)? \_\_\_\_\_
  - A. If so, what percentage? \_\_\_\_\_
  - B. How do the basic skills, knowledges and behaviors required for a draftee differ from those required for a volunteer enlistee? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. Do you require the prospective enlistee to possess a high school diploma prior to entry into your branch of the military service? \_\_\_\_\_



6. Do you require the prospective enlistee to successfully complete a scholastic aptitude test prior to entry into your branch of the military service? \_\_\_\_\_

A. Identify test. \_\_\_\_\_

B. If so, can you enclose a copy of this examination for our inspection? \_\_\_\_\_ If not, why? \_\_\_\_\_

7. Whether or not the prospective enlistee must successfully complete a scholastic aptitude test prior to entry into your branch of the service, please list any additional skills, knowledges and behaviors which a student should be able to demonstrate in order to perform successfully in your branch of the service. List them by number in order of importance. As far as possible, indicate how well the behavior must be performed and under what conditions. \_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_





8. Does your branch of the service refuse entry to persons with prior arrests and/or convictions? \_\_\_\_\_

A. If so, could you list for us the minimal exclusionary regulations concerning an enlistee's record regarding arrest and/or conviction of misdemeanors, felonies, juvenile offenses and probation? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

B. Are exceptions ever made to these exclusionary regulations? \_\_\_\_\_

C. If so, for what reason and how? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. Does your branch of the service enlist females? \_\_\_\_\_

A. If so, what is the name and basic rank of this branch? \_\_\_\_\_

\_\_\_\_\_

B. If so, what are the requirements a student must meet in order to enter and perform successfully in this program? (Refer to questions 5, 6, 7. Please be specific.) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. Upon enlistment in your branch of the service, and after arrival at a training base, is the new enlistee given further testing?

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If so, what is the nature of this testing, and what minimal skills, knowledges and behaviors must the new enlistee demonstrate in order to achieve a successful position? (Please be as specific as possible regarding minimal academic and vocational skills, as well as attitudinal factors.)

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**CONTINUATION EDUCATION  
SYSTEM DEVELOPMENT PROJECT**

- LA PUENTE UNION HIGH SCHOOL DISTRICT
- 455 N. Glendora Avenue
- La Puente, California 91744
- (213) 968-2114 or 336-6405

TABLE II, 8

LETTER TO SELECTIVE SERVICE SYSTEM

Military Survey-Selective Service System

Dear Sir:

We would like to call upon a moment of your time for some help. The purpose of this letter is to gather some vital information that has a direct bearing upon the provision of manpower for the Armed Forces of the United States.

We are conducting research for Continuation Education System Development Project which is funded under Title III of the Elementary and Secondary Education Act of 1965. Our particular Project aims at improving the instructional program for the continuation education student utilizing the system analysis approach.

Continuation school plays a unique role in the community and is of special significance to the military. As an attempt to solve a pressing problem in California - the problem of the school dropout, or "pushout" - attendance in the continuation school was provided for by the California State Legislature. Continuation school, therefore, assumes a vital responsibility of providing this type of education to the local school districts, who must determine their own direction in meeting the needs of the greater population of continuation students. Hopefully, our school district, by conducting original research in this area will provide answers and suggestions which will serve as a model to the state and to the nation.

This is why your cooperation and aid is important at this time. In order to best prepare the continuation student for service in the Armed Forces, we need to know the minimal skills, knowledges and behaviors that are essential prerequisites for entrance and satisfactory performance in the military.

We would appreciate receiving, at the earliest possible date, a complete description of those essential, prerequisite skills, knowledges and behaviors required for entrance into the Armed Forces. We would also appreciate knowing of any and all exclusionary factors which prevent induction into the military, such as prior criminal convictions, etc.

We want to offer our initial gratitude to you for taking time to aid us in this goal. It is our sincere hope that the information you provide us with will aid us in our attempt to better prepare students for their role in the military service of their country.

Sincerely,

Leon East  
Project Director

LE/bls

**TABLE III**

**RECRUITING OFFICES: LETTERS AND QUESTIONNAIRES**

1. Recruitment Offices Mailing List
2. Letter to National Headquarters, Recruiting Service
3. U. S. Army (National Level) Questionnaire Response
4. U. S. Army (District Level) Questionnaire Response
5. U. S. Navy (District Level) Questionnaire Response
6. U. S. Marine Corps (National Level) Questionnaire Response
7. U. S. Air Force (National Level) Questionnaire Response
8. U. S. Air Force (District Level) Questionnaire Response

TABLE III, 1

RECRUITMENT OFFICES MAILING LIST

**AIR FORCE**

**Local:** Tech. Sergeant, Grade E-6  
U.S. Air Force Recruiting Office  
3608 Monterey  
El Monte, California

**District:** Commanding Officer  
District Headquarters  
U.S. Air Force Recruiting Detachment #609  
1031 South Broadway  
Los Angeles, California

**National:** Commanding Officer  
Headquarters  
U.S. Air Force Recruiting Service  
Randolph Air Force Base  
Texas, 78148

**ARMY**

**Local:** Staff Sergeant, Grade E-6  
U.S. Army Recruiting Office  
3608 Monterey  
El Monte, California

**District:** Commanding Officer  
District Headquarters  
U.S. Army Recruiting Service  
1031 South Broadway  
Los Angeles, California

**National:** Commanding Officer  
Headquarters  
U.S. Army Recruiting Service  
Hampton, Virginia

## MAILING LIST

### MARINE CORPS

**Local:** Gy. Sergeant, Grade E-7  
U.S. Marine Corps Recruiting Office  
207 North First Street  
La Puente, California

**District:** Commanding Officer  
District Headquarters  
U.S. Marine Corps Recruiting Service  
1031 South Broadway  
Los Angeles, California

**National:** Commanding Officer  
Headquarters  
U.S. Marine Corps Recruiting Service  
Washington, D.C.

### NAVY

**Local:** 1st Class Petty Officer, Grade E-6  
U.S. Navy Recruiting Office  
207 North First Street  
La Puente, California

**District:** Commanding Officer  
District Headquarters  
U.S. Navy Recruiting Service  
1041 South Broadway  
Los Angeles, California

**National:** Commanding Officer  
National Headquarters  
U.S. Navy Recruiting Service  
Department of the Navy  
Bureau of Naval Recruitment  
Washington, D.C. 20370



**CONTINUATION EDUCATION  
SYSTEM DEVELOPMENT PROJECT**

TABLE III, 2

- LA PUENTE UNION HIGH SCHOOL DISTRICT
- 455 N. Glendora Avenue
- La Puente, California 91744
- (213) 968-2114 or 336-6405

ION EAST  
Project Director

LETTER TO NATIONAL HEADQUARTERS, RECRUITING SERVICE

March 6, 1968

Commanding Officer, National Headquarters  
(Branch) Recruiting Service  
(Branch)  
Bureau of \_\_\_\_\_ Recruitment  
Washington, D.C.

Dear (Sir):

We would like to call upon a moment of your time for some help. The purpose of this letter is to gather some vital information that has a direct bearing upon the provision of manpower for the \_\_\_\_\_.

We are conducting research for PACE (Project to Advance Creativity in Education). This Project is funded under Title III of the Elementary and Secondary Education Act of 1965, and aims at improving the instructional program for the continuation education student.

Continuation schools play a unique role in the community and are of special significance to the military. As an attempt to solve a pressing problem in California - the problem of the school dropout, or "pushout" - attendance in the continuation school was provided for by the California State Legislature.

The continuation school, therefore, assumes a vital responsibility in the overall curriculum. The state has delegated the responsibility of providing this type of education to the local school districts, who must determine their own direction in meeting the needs of the greater population of continuation students. Hopefully, our school district, by conducting original research in this area, will provide answers and suggestions which will serve as a model to the state and to the nation.

This is why your cooperation and aid is important at this time. In order to best prepare the continuation student for the basic skills and knowledges required for satisfactory entry and performance in the \_\_\_\_\_, we need to know the academic and social behavior that is an essential prerequisite for entrance into the military.

Commanding Officer - Page 2 - March 6, 1968

In order to facilitate the gathering of this data, we are enclosing a questionnaire for your completion. The purpose of this questionnaire is to discover the essential basic skills and knowledges required for entrance into the \_\_\_\_\_.

The questionnaire is designed in an "open-ended" style to allow you to respond according to your unique requirements and expectations. Your implementation in this regard is essential.

We want to offer our initial gratitude to you for taking the time to aid us in this goal. It is our sincere wish that the information you can provide us with will aid us in our attempt to better prepare students for their role in the military service of their country.

Sincerely,

Steven C. Burtnett  
Research Associate

SCB/lb

Encl.

TABLE III, 3

U.S. ARMY - (NATIONAL LEVEL)

QUESTIONNAIRE RESPONSE

QUESTIONNAIRE

Purpose

The purpose of this questionnaire is to identify the skills and knowledges needed by the continuation education student graduate\* for entry into military service. This information will influence or constrain the design of the proposed instructional program for the continuation education student.

Instructions

The answers that you give are for research only and the names or positions of those responding will not be disclosed. Remember, answers pertain only to skills, knowledges and behaviors required on the part of the continuation student to enter the primary military rank of your branch of the service (e.g., Army, private; Navy, seaman apprentice, etc.).

\*NOTE - The term "graduate" does not imply that he has a high school diploma. The only legal requirement that must be fulfilled on the part of the continuation student to comply with the term "graduate" is the attainment of 18 years of age. A minimal percentage of continuation school graduates leave with the equivalent of a high school diploma.

1. To which branch of the Armed Forces of the United States is this questionnaire addressed? US Army
2. What is the rate/rank and status of the person completing this form? (Name not required.) Sergeant Major
3. What is the basic military rate/rank to which an enlistee in your branch of the service would qualify? Private  
(The answer to this question will serve as a frame of reference for subsequent questions.)
4. Does your branch of the service acquire manpower through the draft (Selective Service System)? Yes
- A. If so, what percentage? 60%
- B. How do the basic skills, knowledges and behaviors required for a draftee differ from those required for a volunteer enlistee? There are no differences in basic skills, knowledges or behaviors required for new recruits whether they are drafted or they enlist.
5. Do you require the prospective enlistee to possess a high school diploma prior to entry into your branch of the military service?  
No

6. Do you require the prospective enlistee to successfully complete a scholastic aptitude test prior to entry into your branch of the military service? Yes

A. Identify test. (1) Armed Forces Qualification Test  
(2) Army Qualification Battery

B. If so, can you enclose a copy of this examination for our inspection? No If not, why? These tests are for official use and may be shown only on a need to know basis.

7. Whether or not the prospective enlistee must successfully complete a scholastic aptitude test prior to entry into your branch of the service; please list any additional skills, knowledges and behaviors which a student should be able to demonstrate in order to perform successfully in your branch of the service. List them by number in order of importance. As far as possible, indicate how well the behavior must be performed and under what conditions. Students must be of good physical health, pass the necessary tests and must be of good moral character to be eligible to enter the US Army. These qualifications are equally important. Students who possess these qualifications should be able to perform successfully as a member of the US Army.

8. Does your branch of the service refuse entry to persons with prior arrests and/or convictions? Yes

A. If so, could you list for us the minimal exclusionary regulations concerning an enlistee's record regarding arrest and/or conviction of misdemeanors, felonies, juvenile offenses and probation? Waivers are considered for all students providing their conduct subsequent to record of arrest or court conviction reflect that the student has been rehabilitated.

B. Are exceptions ever made to these exclusionary regulations?

C. If so, for what reason and how?

9. Does your branch of the service enlist females? Yes

A. If so, what is the name and basic rank of this branch? \_\_\_\_\_

Private, Women's Army Corps

B. If so, what are the requirements a student must meet in order to enter and perform successfully in this program? (Refer to questions 5, 6, 7. Please be specific.) High School Diploma, must pass Armed Forces Women Selection Test and the Women's Army Classification Battery. Women students must also be of good physical health, pass mental examinations and be of good moral character. Waivers are rarely considered for females.



10. Upon enlistment in your branch of the service, and after arrival at a training base, is the new enlistee given further testing?

Yes

If so, what is the nature of this testing, and what minimal skills, knowledges and behaviors must the new enlistee demonstrate in order to achieve a successful position? (Please be as specific as possible regarding minimal academic and vocational skills, as well as attitudinal factors.) These tests are designed to measure specific aptitude areas, such as Army language aptitude test, drivers test.

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TABLE III, 4

U. S. ARMY (DISTRICT LEVEL) QUESTIONNAIRE RESPONSE

QUESTIONNAIRE

Purpose

The purpose of this questionnaire is to identify the skills and knowledges needed by the continuation education student graduate\* for entry into military service. This information will influence or constrain the design of the proposed instructional program for the continuation education student.

Instructions

The answers that you give are for research only and the names or positions of those responding will not be disclosed. Remember, answers pertain only to skills, knowledges and behaviors required on the part of the continuation student to enter the primary military rank of your branch of the service (e.g., Army, private; Navy, seaman apprentice, etc.).

\*NOTE - The term "graduate" does not imply that he has a high school diploma. The only legal requirement that must be fulfilled on the part of the continuation student to comply with the term "graduate" is the attainment of 18 years of age. A minimal percentage of continuation school graduates leave with the equivalent of a high school diploma.

1. To which branch of the Armed Forces of the United States is this questionnaire addressed? U.S. ARMY

2. What is the rate/rank and status of the person completing this form? (Name not required.) CAPTAIN, OPERATIONS  
OFFICER

3. What is the basic military rate/rank to which an enlistee in your branch of the service would qualify? PO1 (E-1)  
(The answer to this question will serve as a frame of reference for subsequent questions.)

4. Does your branch of the service acquire manpower through the draft (Selective Service System)? YES

A. If so, what percentage? Approximately 70%

B. How do the basic skills, knowledges and behaviors required for a draftee differ from those required for a volunteer enlistee? No difference in behavior or skills. Enlistees must score higher on aptitude tests than draftees.

5. Do you require the prospective enlistee to possess a high school diploma prior to entry into your branch of the military service? No

6. Do you require the prospective enlistee to successfully complete a scholastic aptitude test prior to entry into your branch of the military service? YES,

A. Identify test. Armed Forces Qualification Test

B. If so, can you enclose a copy of this examination for our inspection? No. If not, why? The test is a

controlled item and can not be disclosed without the possibility of losing its effectiveness.

7. Whether or not the prospective enlistee must successfully complete a scholastic aptitude test prior to entry into your branch of the service, please list any additional skills, knowledges and behaviors which a student should be able to demonstrate in order to perform successfully in your branch of the service. List them by number in order of importance. As far as possible, indicate how well the behavior must be performed and under what conditions. Enlistees must be capable of

receiving training. Primarily they must be able to receive instruction without rebelling against authority and be able to adjust to a group living environment. Performance is quite exacting and is done in some cases under actual combat conditions.

8. Does your branch of the service refuse entry to persons with prior arrests and/or convictions? No

A. If so, could you list for us the minimal exclusionary regulations concerning an enlistee's record regarding arrest and/or conviction of misdemeanors, felonies, juvenile offenses and probation? Two misdemeanors or

one felony requires that a waiver be granted. Juveniles are handled in the same manner as adults.

B. Are exceptions ever made to these exclusionary regulations?

Yes.

C. If so, for what reason and how? The applicant must

be able to prove his rehabilitation. Letters of reference from school officials, probation officers, employers, etc.

9. Does your branch of the service enlist females? Yes

A. If so, what is the name and basic rank of this branch? \_\_\_\_\_

Private (E-1)

B. If so, what are the requirements a student must meet in order to enter and perform successfully in this program? (Refer to questions 5, 6, 7. Please be specific.) same as for men except:

1) must have parents' consent if under 21 years of age, 2) must obtain character references to include employers, school officials & reputable individuals within the community, 3) cannot have had any contact with police other than <sup>minor</sup> for traffic violations, 4) must be personally interviewed and accepted by the WAC Selection Officer.

10. Upon enlistment in your branch of the service, and after arrival at a training base, is the new enlistee given further testing?

Yes.  
If so, what is the nature of this testing, and what minimal skills, knowledges and behaviors must the new enlistee demonstrate in order to achieve a successful position? (Please be as specific as possible regarding minimal academic and vocational skills, as well as attitudinal factors.) Army

Classification Battery is administered to give a more detailed picture of applicant aptitudes and qualify for special program such as officer candidate. No special skills are required just an aptitude.



TABLE III, 5  
U.S. NAVY (DISTRICT LEVEL) - QUESTIONNAIRE

U. S. NAVY RECRUITING STATION  
HEADQUARTERS, LOS ANGELES RECRUITING DISTRICT  
1041 SOUTH BROADWAY  
LOS ANGELES, CALIFORNIA 90015

IN REPLY REFER TO:

NL(LOSA)/GB/ds

1130

Ser

197

Mr. Steven C. Burtnett  
Research Assistant  
Continuation Education  
System Development Project  
La Puente Union High School District  
455 N. Glendora Avenue  
La Puente, California 91744

Dear Mr. Burtnett:

This is in response to your letter of March 22, 1968, requesting assistance by furnishing information needed in your Continuation Education System Development Project.

Enclosed herewith is the completed questionnaire as requested. I sincerely hope that the questionnaire will assist the research undertaken by the La Puente Union High School District.

Sincerely,



GEO. BATES

Commander, U. S. Navy  
Commanding Officer

## QUESTIONNAIRE

### Purpose

The purpose of this questionnaire is to identify the skills and knowledges needed by the continuation education student graduate\* for entry into military service. This information will influence or constrain the design of the proposed instructional program for the continuation education student.

### Instructions

The answers that you give are for research only and the names or positions of those responding will not be disclosed. Remember, answers pertain only to skills, knowledges and behaviors required on the part of the continuation student to enter the primary military rank of your branch of the service (e.g., Army, private; Navy, seaman apprentice, etc.).

\*NOTE - The term "graduate" does not imply that he has a high school diploma. The only legal requirement that must be fulfilled on the part of the continuation student to comply with the term "graduate" is the attainment of 18 years of age. A minimal percentage of continuation school graduates leave with the equivalent of a high school diploma.

1. To which branch of the Armed Forces of the United States is this questionnaire addressed? U. S. Navy
2. What is the rate/rank and status of the person completing this form? (Name not required.) Commander
3. What is the basic military rate/rank to which an enlistee in your branch of the service would qualify? Seaman Recruit (E-1)  
(The answer to this question will serve as a frame of reference for subsequent questions.)
4. Does your branch of the service acquire manpower through the draft (Selective Service System)? No. Not at this time
  - A. If so, what percentage? N/A
  - B. How do the basic skills, knowledges and behaviors required for a draftee differ from those required for a volunteer enlistee? N/A
5. Do you require the prospective enlistee to possess a high school diploma prior to entry into your branch of the military service? Yes, or a high school equivalent (G. E. D.) (in most categories). A small percentage is enlisted without a diploma. They are low mental groups that the Navy is directed to enlist.



8. Does your branch of the service refuse entry to persons with prior arrests and/or convictions? Yes. However, some waivers are considered & granted.

A. If so, could you list for us the minimal exclusionary regulations concerning an enlistee's record regarding arrest and/or conviction of misdemeanors, felonies, juvenile offenses and probation? The following categories are not authorized to enlist: (1) Draft classifications 1-Y, 1-F, 1-AO, 2O, 1-W.

(2) Applicants awaiting trial, sentence or supervised probation as a result of violations of the law.

(3) Applicants placed on probation or given a deferred or suspended sentence contingent on enlistment. (4) Applicants released from probation,

B. Are exceptions ever made to these exclusionary regulations? Yes. (see below)

C. If so, for what reason and how? Applicants with felony or misdemeanor violations cannot be enlisted without approval from higher authority. This includes excessive traffic violations, serious moving violations etc.

It should be noted that at the present time, with recruiting climate being so favorable, moral waivers are not readily given.

9. Does your branch of the service enlist females? Yes.

A. If so, what is the name and basic rank of this branch? Waves, Seaman Recruit (E-1)

B. If so, what are the requirements a student must meet in order to enter and perform successfully in this program? (Refer to questions 5, 6, 7. Please be specific.) Waves must be high school graduates.

They are required to score favorably on the Women's Enlisted Selection Test.

No other skills etc. are required. Advanced Education enhances character

advancement. From a moral standpoint, wave applicant standards are more

strict than those outlined for males. A woman cannot be enlisted if she is

married, pregnant, or the mother of a child under 18.

-3-

\*enlisting shall be rejected.

10. Upon enlistment in your branch of the service, and after arrival at a training base, is the new enlistee given further testing?

Yes

If so, what is the nature of this testing, and what minimal skills, knowledges and behaviors must the new enlistee demonstrate in order to achieve a successful position? (Please be as specific as possible regarding minimal academic and vocational skills, as well as attitudinal factors.) Basic Battery Tests composed of the following sections: General Intelligence, Mechanical, Arithmetic and clerical. Generally an applicant cannot prepare for the general or the Clerical parts of the test, as to Mechanical and Arithmetic, generally high school math and physics courses are sufficient. It should be noted that this Basic Battery determines eligibility for further Navy Schooling.



TABLE III, 6  
U.S. MARINE CORPS (NATIONAL LEVEL)-QUESTIONNAIRE RESPONSE



DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
WASHINGTON, D. C. 20380

IN REPLY REFER TO  
AO1B-2/JRB/hjg

Mr. Leon East  
Project Director  
40 La Puente Union High  
School District  
455 N. Glendora Avenue  
La Puente, California 91744

Dear Sir:

Enclosed is the Marine Corps questionnaire response to your letter of March 22, 1968 concerning your Continuation Education System Development Project.

We hope that our submission will assist you in your efforts to identify skills and knowledges required of student personnel who may be motivated or required to enter military service at a future date.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "A. W. Snell".

A. W. SNELL  
Colonel, U.S. Marine Corps

## QUESTIONNAIRE

### Purpose

The purpose of this questionnaire is to identify the skills and knowledges needed by the continuation education student graduate\* for entry into military service. This information will influence or constrain the design of the proposed instructional program for the continuation education student.

### Instructions

The answers that you give are for research only and the names or positions of those responding will not be disclosed. Remember, answers pertain only to skills, knowledges and behaviors required on the part of the continuation student to enter the primary military rank of your branch of the service (e.g., Army, private; Navy, seaman apprentice, etc.).

\*NOTE - The term "graduate" does not imply that he has a high school diploma. The only legal requirement that must be fulfilled on the part of the continuation student to comply with the term "graduate" is the attainment of 18 years of age. A minimal percentage of continuation school graduates leave with the equivalent of a high school diploma.

1. To which branch of the Armed Forces of the United States is this questionnaire addressed? Marine Corps
2. What is the rate/rank and status of the person completing this form? (Name not required.) Project Officer, Office of Deputy Manpower Coordinator for Research & Information Sys., G-1 Division, Headquarters Marine Corps
3. What is the basic military rate/rank to which an enlistee in your branch of the service would qualify? Private  
(The answer to this question will serve as a frame of reference for subsequent questions.)
4. Does your branch of the service acquire manpower through the draft (Selective Service System)? Yes, but only during periods of rapid build-up  
A. If so, what percentage? Currently, inductees comprise less than 5% of the accessions for the fiscal year.  
B. How do the basic skills, knowledges and behaviors required for a draftee differ from those required for a volunteer enlistee? Basically, there are no differences in the requirements set for the enlistee and draftee.
5. Do you require the prospective enlistee to possess a high school diploma prior to entry into your branch of the military service?  
No.



1. The main selection test used by the Armed Forces is not a scholastic aptitude test per se. The Armed Forces Qualification Test (AFQT), which is employed, measures the ability to learn; it is a measure of military trainability. If the applicant scores within the 10-30 percentile range on the AFQT he is given a differential aptitude test (Army Qualification Battery (AQB)). This test is used as a device in conjunction with the AFQT. Both of these tests are given at the Armed Forces Entrance and Examining Stations (AFEES).

a. The Armed Forces Qualification Test and the Army Qualification Battery.

b. No. The AFQT is available only for use at the AFEES. Information regarding its further availability must be obtained from the Army who has been designated as the executive agent for the distribution and control of the test. This also applies to the AQB.

8. Does your branch of the service refuse entry to persons with prior arrests and/or convictions? Yes

A. If so, could you list for us the minimal exclusionary regulations concerning an enlistee's record regarding arrest and/or conviction of misdemeanors, felonies, juvenile offenses and probation? There is no minimal exclusionary list as such.

B. Are exceptions ever made to these exclusionary regulations?  
Yes

C. If so, for what reason and how? Each case is considered on its merits, and a determination is made in terms of the nature of the offense, age when committed, punishment imposed, and the degree of rehabilitation as reported by the probation officer. In each case the whole man concept is applied, that is, the individual's mental score, physical rating, education and employment record are considered along with his offense record. Request for waivers have to be sent to a higher authority.

9. Does your branch of the service enlist females? Yes

A. If so, what is the name and basic rank of this branch? \_\_\_\_\_

Woman Marines - Private

B. If so, what are the requirements a student must meet in order to enter and perform successfully in this program? (Refer to

questions 5, 6, 7. Please be specific.) The applicant must have a high school diploma or have passed a GED. A minimum score at about the 60th percentile is required on the Armed Forces Woman's Selection Test for entry into the Marine Corps.



10. Upon enlistment in your branch of the service, and after arrival at a training base, is the new enlistee given further testing?

Yes

If so, what is the nature of this testing, and what minimal skills, knowledges and behaviors must the new enlistee demonstrate in order to achieve a successful position? (Please be as specific as possible regarding minimal academic and vocational skills, as well as attitudinal factors.) The tests used are in large part the same tests used by the Army (Army Classification Battery), augmented by the Navy's Electronic Technician Selection Test. The system operates as described in TAB (A).

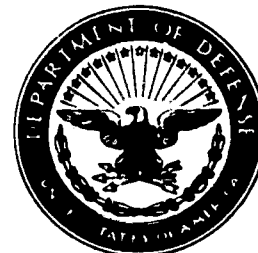
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TABLE III, 7  
U.S. AIR FORCE (NATIONAL LEVEL)-QUESTIONNAIRE RESPONSE

DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE  
WASHINGTON, D.C.



9 APR 1968

REPLY TO  
ATTN OF:

USAFMPC (AFPMRFE)  
RANDOLPH AFB TEXAS 78148

Mr. Leon East, Project Director  
La Puente Union High School District  
455 N. Glendora Avenue  
La Puente, California 91744

Dear Mr. East:

Your letter of March 28, 1968 to the Commanding Officer,  
Headquarters, U.S. Air Force Recruiting Service, has been  
referred to this office for reply.

Attached is completed questionnaire as requested. If we  
can assist you further do not hesitate to write.

Sincerely,

  
CURTIS R. ERSPAMER, Lt Col, USAF  
Enlistment Branch  
Directorate of Personnel Resources and Distribution

1 Atch  
Questionnaire

1. To which branch of the Armed Forces of the United States is this questionnaire addressed? U.S. Air Force
2. What is the rate/rank and status of the person completing this form? (Name not required.) Lt Colonel, Chief, Programs and Directives Section, Headquarters U.S. Air Force
3. What is the basic military rate/rank to which an enlistee in your branch of the service would qualify? Airman Basic  
(The answer to this question will serve as a frame of reference for subsequent questions.)
4. Does your branch of the service acquire manpower through the draft (Selective Service System)? No
- A. If so, what percentage? -
- B. How do the basic skills, knowledges and behaviors required for a draftee differ from those required for a volunteer enlistee? Enlistees for U.S. Air Force must achieve minimum scores on the Airman Qualifying Examination; a draftee does not take this test. The normally accepted minimum score on the Armed Forces Qualification Test for enlistment in the Air Force is 21 for high school graduates and 31 for non-high school graduates; the minimum for draftees is 10 for high school graduates with an additional requirement of two Army Qualifying Battery scores of 90 for the non-high school graduate.
5. Do you require the prospective enlistee to possess a high school diploma prior to entry into your branch of the military service? No, but priority of enlistment is given to the applicant having a high school diploma.

6. Do you require the prospective enlistee to successfully complete a scholastic aptitude test prior to entry into your branch of the military service? Yes

A. Identify test. Airman Qualifying Examination

B. If so, can you enclose a copy of this examination for our inspection? No If not, why? Air Force policy prohibits release of controlled tests to non-Air Force activities.

7. Whether or not the prospective enlistee must successfully complete a scholastic aptitude test prior to entry into your branch of the service, please list any additional skills, knowledges and behaviors which a student should be able to demonstrate in order to perform successfully in your branch of the service. List them by number in order of importance. As far as possible, indicate how well the behavior must be performed and under what conditions. Requirements for enlistment in the U.S. Air Force are contained in Part 888, Chapter VII, Title 32 - National Defense in the Federal Register. This is available through the U.S. Government Printing Office, Washington DC, 20402.

8. Does your branch of the service refuse entry to persons with prior arrests and/or convictions? Yes

A. If so, could you list for us the minimal exclusionary regulations concerning an enlistee's record regarding arrest and/or conviction of misdemeanors, felonies, juvenile offenses and probation? Exclusions based upon study of each individual case. Each applicant is given a police record check to assist in determination of moral character.

B. Are exceptions ever made to these exclusionary regulations? Yes

C. If so, for what reason and how? Based upon a complete review of the applicant's case, waivers of moral disqualifications are made by USAF Recruiting Service.

9. Does your branch of the service enlist females? Yes

A. If so, what is the name and basic rank of this branch? Women in the Air Force (WAF) - Airman<sup>o</sup> Basic

B. If so, what are the requirements a student must meet in order to enter and perform successfully in this program? (Refer to questions 5, 6, 7. Please be specific.) All WAF enlistees must be high school graduates. The applicant must achieve the minimum required scores on both the Airman Qualifying Examination and the Armed Forces Women's Selection Test.

10. Upon enlistment in your branch of the service, and after arrival at a training base, is the new enlistee given further testing?

**Yes**

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If so, what is the nature of this testing, and what minimal skills, knowledges and behaviors must the new enlistee demonstrate in order to achieve a successful position? (Please be as specific as possible regarding minimal academic and vocational skills, as well as attitudinal factors.) \_\_\_\_\_

**Language tests are administered on a selective basis. Other tests are used to determine progress in training and formal schools.**

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8

TABLE III, 8

U.S. AIR FORCE - (DISTRICT LEVEL)

QUESTIONNAIRE RESPONSE

QUESTIONNAIRE

Purpose

The purpose of this questionnaire is to identify the skills and knowledges needed by the continuation education student graduate\* for entry into military service. This information will influence or constrain the design of the proposed instructional program for the continuation education student.

Instructions

The answers that you give are for research only and the names or positions of those responding will not be disclosed. Remember, answers pertain only to skills, knowledges and behaviors required on the part of the continuation student to enter the primary military rank of your branch of the service (e.g., Army, private; Navy, seaman apprentice, etc.).

\*NOTE - The term "graduate" does not imply that he has a high school diploma. The only legal requirement that must be fulfilled on the part of the continuation student to comply with the term "graduate" is the attainment of 18 years of age. A minimal percentage of continuation school graduates leave with the equivalent of a high school diploma.

1. To which branch of the Armed Forces of the United States is this questionnaire addressed? U.S. Air Force

2. What is the rate/rank and status of the person completing this form? (Name not required.) Captain

3. What is the basic military rate/rank to which an enlistee in your branch of the service would qualify? Airman Basic  
(The answer to this question will serve as a frame of reference for subsequent questions.)

4. Does your branch of the service acquire manpower through the draft (Selective Service System)? No

A. If so, what percentage? 0%

B. How do the basic skills, knowledges and behaviors required for a draftee differ from those required for a volunteer enlistee? Each applicant must pass two exams beyond those for draftees. There are five basic mental aptitudes and thirteen speed-outs within the four. We took a small % of lower aptitude inlier people

5. Do you require the prospective enlistee to possess a high school diploma prior to entry into your branch of the military service? 95% must have H.S. diploma

6. Do you require the prospective enlistee to successfully complete a scholastic aptitude test prior to entry into your branch of the military service? Yes

A. Identify test. Airman Qualifying Exam (AQE)

B. If so, can you enclose a copy of this examination for our inspection? No If not, why? They are

controlled items issued by higher headquarters

7. Whether or not the prospective enlistee must successfully complete a scholastic aptitude test prior to entry into your branch of the service, please list any additional skills, knowledges and behaviors which a student should be able to demonstrate in order to perform successfully in your branch of the service. List them by number in order of importance. As far as possible, indicate how well the behavior must be performed and under what conditions.

See attached info sheet.

8. Does your branch of the service refuse entry to persons with prior arrests and/or convictions? Yes

A. If so, could you list for us the minimal exclusionary regulations concerning an enlistee's record regarding arrest and/or conviction of misdemeanors, felonies, juvenile offenses and probation?

1) Six or more minor traffic offenses in last year. 2) Two or more minor non-traffic offenses 3) one or more misdemeanors, 4) one or more felonies 5) must be off probation

B. Are exceptions ever made to these exclusionary regulations?

Yes

C. If so, for what reason and how?

Individual cases by command based on employer, professional, clergy recommendation, police report, recruit's report up to unit command.

9. Does your branch of the service enlist females? Yes

A. If so, what is the name and basic rank of this branch? \_\_\_\_\_

Arman Baric

B. If so, what are the requirements a student must meet in order to enter and perform successfully in this program? (Refer to questions 5, 6, 7. Please be specific.) \_\_\_\_\_

See att #1

10. Upon enlistment in your branch of the service, and after arrival at a training base, is the new enlistee given further testing?

*Sometimes*

If so, what is the nature of this testing, and what minimal skills, knowledges and behaviors must the new enlistee demonstrate in order to achieve a successful position? (Please be as specific as possible regarding minimal academic and vocational skills, as well as attitudinal factors.)

*High aptitude applicants are given language aptitude exam, Electronic Data Processing skill exam, and others*

TABLE IV

LOCAL RECRUITING OFFICES



TABLE IV

LOCAL RECRUITING OFFICES: SUMMARY OF PERSONAL INTERVIEWS

Question	Army			Navy			Marine Corps			Air Force		
	Staff Sergeant Grade E-6	Private Grade E-1	Yes, over 1/2, depending on need	1st Class Petty Officer, Grade E-6	Seaman Recruit Grade E-1	Yes, minimal 1966-less than 2,000 1967-none	Gy. Sergeant Grade E-7	Private Grade E-1	Yes, minimal 1966-less than 1% 1967-0%	Tech. Sergeant Grade E-6	Airman Basic Grade E-1	Yes, minimal less than 1%
1. Rank of person interviewed?												
2. Basic Enlistee Rank?												
3. Draftees?												
4. Do basic skills and knowledges required for an enlistee and a draftee differ?	No-only difference lies in wider field of specialization open to enlistees. A draftee has no guarantee of type of training where qualified enlistees have first choice of schooling.			No			No			No		
5. Diploma required?	No-but prefer high school graduates			Yes-with exception of minimal number of recruits-less than 5%			No-but prefer high school graduates			Yes-with exception of minimal number of recruits-less than 5%		
6. Can the system graduate earn a high school diploma while in your branch?	Yes*			Yes*			Yes*			Yes*		

\*By satisfactorily passing the General Educational Development Exam. (California will not accept G.E.D. exam as basis for granting diplomas unless the student has completed required course work as outlined by State Code.)

Question	Army	Navy	Marine Corps	Air Force
7. Do you require satisfactory completion of a general aptitude test on the local screening level?	Yes-Army Enlistment Screening Test (E.S.T.)	Yes-Navy Enlistment Screening Test (Applicants Qualifying Test)	Yes-Marine Corps Enlistment Screening Test (Applicants Qualification Test)	Yes-Air Force Enlistment Screening Test (Air Force Aptitude Test)
8. Nature of this test?	48 questions-30 minutes: questions on vocabulary, arithmetic, patterns and figures, tool recognition. Ninth grade aptitude.	88 questions-60 minutes: questions on vocabulary, arithmetic, patterns and figures, tool recognition. Ninth grade aptitude.	Same as Navy	Same as Army
9. Passing Score (approximate)	19	Not given	EST #4 - 20 EST #5 - 21	10
10. Second test at Armed Forces Examination Station?	Yes-A.F.Q.T. an extended version of E.S.T.	Same as Army	Same as Army	Same as Army
11. Passing Score (approximate)	Draftees - 10 Enlistees: High School Graduate - 16 Non-Grad. - 31; or 16 and two 90's on A.Q.B.*	10-30 - must retest 30 - pass	Same as Navy	High School Graduate - 21; Non-Grad. - 31
12. General skills, knowledges and behaviors desired?	Ninth grade aptitude with an "ability to learn." Basic reading, math and writing ability. Must read, write and speak English. Good moral character (trustworthy). Stress "motivational" factor. Stress "reasoning ability" and "trainability."	Same as Army	Same as Army	Same as Army

\* Non-High School graduate must score two 90's on A.Q.B. and 100% in field requested in order to be trained in that field.

Question	Army	Navy	Marine Corps	Air Force
13. Refuse entry due to prior arrests and/or convictions?	Yes-if minimum of six moving traffic violations in past year, or conviction of a felony or misdemeanor involving moral turpitude	Same as Army	Same as Army	Same as Army

TABLE V

CORRESPONDENCE RELATING TO TEXT,  
PRACTICE FOR THE ARMED FORCES TESTS

**CONTINUATION EDUCATION  
SYSTEM DEVELOPMENT PROJECT**

- LA PUENTE UNION HIGH SCHOOL DISTRICT
- 455 N. Glendora Avenue
- La Puente, California 91744
- (213) 968-2114 or 336-6405

**LEON EAST**  
Project Director

TABLE V

CORRESPONDENCE RELATING TO TEXT,  
PRACTICE FOR THE ARMED FORCES TESTS

March 28, 1968

Mr. David R. Turner, M.S.  
Arco Publishing Company, Inc.  
219 Park Avenue South  
New York, New York 10003

Dear Mr. Turner:

We are conducting research for Continuation Education System Development Project. Our particular Project, which is funded under Title III of the Elementary and Secondary Education Act of 1965, aims at improving the instructional program for the continuation education student, utilizing the system analysis approach.

In conjunction with our Needs Assessment Survey, we are attempting to determine the minimal skills, knowledges and behaviors a young man or woman must have in order to gain successful entry into the military. This information will help us to pattern the ideal continuation school curriculum, which will serve as a model to the nation.

To aid us in this particular task, we have made reference to your book entitled, Practice for the Armed Forces Tests. We would like to know if our copy of the sixth edition is your most recent work? If not, or if you are now working on a revised edition, would you please inform us of updated materials?

We would also appreciate the opportunity to contact you directly, should we have further inquiries in this regard. If you would please inform us of your address and phone number, it would enable us to make personal and effective use of the brief time remaining to gather our research data.

With many warm thanks for your cooperation, I remain ...

Sincerely,

LEON EAST  
PROJECT DIRECTOR

by Steven C. Burtnett  
Research Associate

SCB/bls

**P**RODUCTION  
COMPANY



writing, editing and producing educational books  
p. o. box 256 scarborough, n. y. 10510  
tel. 914-762-1706

April 8, 1968

TABLE V

My dear Mr. Burtnett,

The sixth edition of PRACTICE FOR THE ARMED  
FORCES TESTS is up-to-date.

We are working on a new edition, but the changes  
are minimal...and you really don't have to be concerned with  
them.

Sincerely yours,

A handwritten signature in cursive script that reads "David Turner".

DAVID TURNER



**TABLE VI**

**CORRESPONDENCE FROM SELECTIVE SERVICE SYSTEM**

1. Correspondence from Selective Service System (Local)
2. Correspondence from Selective Service System (State)
3. Correspondence from Selective Service System (National)
4. Correspondence from Office of the Assistant Secretary of Defense

20 March 1968

TABLE VI, 1

Lt. Col. Gene A. Roberts  
Commander  
Los Angeles Armed Forces Examining and Entrance Station  
1031 S. Broadway  
Los Angeles, CA 90015

Subject: Request for Information

Dear Sir:

We forward for your action request for information received  
from La Puente Union High School District.

Very truly yours,

TDP/j  
Attachment

T.D. Proffitt, Captain, USAF (Ret.)  
Coordinator

cc:  
La Puente Union High School District  
455 N. Glendora Avenue  
La Puente, Calif. 91744



CALIFORNIA HEADQUARTERS  
**SELECTIVE SERVICE SYSTEM**

FEDERAL BUILDING  
805 I STREET  
SACRAMENTO, CALIFORNIA 95814

MAR 25 REC'D

IN REPLYING ADDRESS  
THE STATE DIRECTOR AND REFER TO  
SUBJECT BELOW

March 22, 1968

1-10

TABLE VI, 2

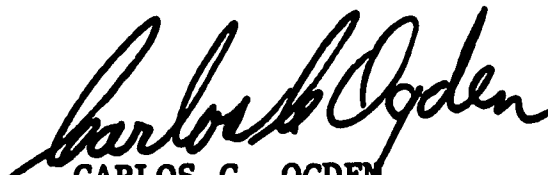
Mr. Leon East, Project Director  
La Puente Union High School District  
455 N. Glendora Avenue  
La Puente, California 91744

Dear Mr. East:

Thank you for your interest in qualifying the young students of your school to enter the Armed Forces of the United States. As you may know, we receive considerable correspondence from other than dedicated citizens who request information on how to avoid meeting the qualifications of service.

For your information, the Selective Service System does not set the physical standards nor the minimal skills that are essential for entrance into the military service. However, if you will correspond with each branch of the armed forces, they undoubtedly will supply you with the necessary requirements.

Very truly yours,

  
CARLOS C. OGDEN  
State Director



OFFICE OF THE DIRECTOR

**NATIONAL HEADQUARTERS  
SELECTIVE SERVICE SYSTEM**

1724 F STREET NW.  
WASHINGTON, D.C. 20435

ADDRESS REPLY TO  
THE DIRECTOR OF SELECTIVE SERVICE

22 March 1968

TABLE VI, 3

Mr. Leon East, Project Director  
La Puente Union High School District  
455 N. Glendora Avenue  
La Puente, California 91744

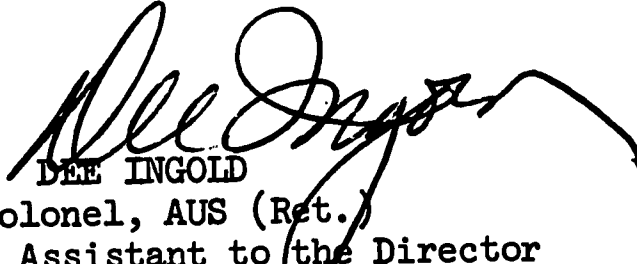
Dear Mr. East:

The information you requested in your March 13, 1968 letter concerns subjects which are not within Selective Service System jurisdiction.

The Selective Service System is confined by law to determinations of availability. Determinations of acceptability, assignment, and use of skills are all within the jurisdiction of the Department of Defense and the Armed Services.

Your letter is, therefore, being referred to the Office of the Secretary of Defense for further response.

For the Director,

  
DEE INGOLD  
Colonel, AUS (Ret.)  
Special Assistant to the Director

MAR 25 RECD

INSURE FREEDOM'S FUTURE—AND YOUR OWN—BUY UNITED STATES SAVINGS BONDS



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
WASHINGTON, D. C. 20301

15 APR 1968

MANPOWER  
and  
Reserve Affairs

TABLE VI, 4

Mr. Leon East  
La Puente Union High School District  
455 North Glendora Avenue  
La Puente, California 91744

Dear Mr. East:

Your letter to the Director of Selective Service has been referred to this office for reply.

Physical standards for acceptance are published in Chapter 2, Army Regulation 40-501. If you consider that the detailed regulations are necessary for your purposes, you may wish to direct a request to the Adjutant General, Department of the Army.

Mental qualifications for the Armed Forces are determined mainly by means of the Armed Forces Qualification Test. It is given to every registrant and applicant for military service. The test contains 100 questions equally distributed among the following content areas: vocabulary -- ability to handle words and understand verbal concepts; arithmetic -- ability to reason with numbers and solve simple mathematical problems; spatial relations -- ability to distinguish forms and patterns; and mechanical ability -- ability to interrelate tools and equipment.

Mental standards were revised in 1966 as part of Project One Hundred Thousand to enable the acceptance into the military service of men who previously had been rejected for inability to meet the mental standards. By law, the military services are permitted to exclude the lowest ten per cent and standards in force are now close to that level.

Project One Hundred Thousand servicemen have an average reading ability equivalent to students who have completed five years of school.

2.

While standards for enlistment vary among the military services, high school graduation is not necessary; for those who are not high school graduates, somewhat higher scores on the mental tests may be substituted.

Procedures covering moral standards, including court convictions, are set forth in Paragraphs 23-25, Army Regulation 601-270. In addition, the enclosed fact sheet sets forth current policies.

Your interest in the manpower programs of the Armed Forces is appreciated.

Sincerely,



Albert Kay

Associate Director for Procurement  
Policy and General Research



TABLE VII

"MORAL STANDARDS FOR INDUCTION AND ENLISTMENT"

TABLE VII

"MORAL STANDARDS FOR INDUCTION AND ENLISTMENT,"

OASD (M&RA) PP & GR, 21 March, 1968  
Reprint from Department of Defense

Moral standards, which concern the acceptability for military service of men with police records, were given thorough study during the summer of 1966 by a Department of Defense Study Group. The findings and recommendations of the Study Group were accepted by the Secretary of Defense and in late 1966 he directed the Military Departments to make appropriate changes in their regulations. These changes were generally effective in all Services early in 1967.

As it stands now, conviction of an offense by a civil court - including conviction of a felony offense - or an adverse adjudication for such an offense as a juvenile does not automatically bar an individual from induction or enlistment. Each such case is considered on its merits, and a determination is made in terms of the nature of the offense or offenses, age when committed, punishment actually imposed and degree of rehabilitation as reported by probation officers. Among other changes, the revised policies provide that: conviction of a single minor offense (disorderly conduct, drunkenness, vandalism, etc.) does not require a waiver; minor traffic violations do not require a waiver for induction and they require a waiver for enlistment only if they exceed five convictions within a period of one year; and conviction of a felony offense does not automatically bar an individual from consideration for induction or enlistment.

The handling of cases of men under civil restraint - in confinement, on parole, probation or suspended sentence - is another important area in which policies have been changed. Prior to the policy changes, men under civil restraint, without exception, could not be considered for induction or enlistment while they were in that status. The Study Group found that while this policy continues to have general merit, it had arbitrary and undesirable effects in many cases. Under current policies, induction or enlistment is no longer prohibited if the only civil restraint consists either of unconditional suspended sentence or unsupervised unconditional probation. By these terms we generally mean suspended sentences or probationary status imposed by a court that place no conditions upon the individual: (1) regarding his freedom of movement; (2) requiring the payment of damages; (3) requiring periodic reporting by him to an officer of the court; or (4) involving supervision by an officer of the court.

On the other hand, under current policies, persons under active forms of civil restraint, including confinement and supervised probation, continue to be barred from consideration for induction or enlistment until their terms of restraint are completed. In such cases, it is considered that the civil restraint is imposed primarily for the purpose of rehabilitation and that this is best effected by civil rather than military authorities.

Consistent with foregoing, the Military Services do not accept an individual released from criminal charges, confinement, probation or other civil restraints conditional on his entry into military service. There are many reasons for this policy. Basically, they do not wish to encourage judicial authorities to transfer civil responsibilities for rehabilitation of offenders to the Armed Forces. The assumption of such specialized responsibilities by the Armed Forces would entail a diversion of scarce resources from essential military missions. Additionally, they are of the firm conviction that the Armed Forces should not be used as a penal or correctional institution, as this would be damaging to the prestige and morale of servicemen who assume their obligations willingly and adversely affect voluntary recruitment and retention of high quality personnel.

ERIC Clearinghouse

APR 15 1969

on Adult Education