FEASIBILITY OF MARINE CORPS PROVIDING REMEDIAL HIGH SCHOOL LEVEL EDUCATION FOR ENLISTEES

James Stuart Shillinglaw

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THESIS

FEASIBILITY OF MARINE CORPS PROVIDING
REMEDIAL HIGH SCHOOL LEVEL
EDUCATION FOR ENLISTEES

by

James Stuart Shillinglaw

June 1974

Thesis Advisor: R. E. Jamison

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Research in support of this study consisted of a review of applicable public laws and Marine Corps Orders. Personal interviews with administrators of PREP at three major military bases in California provided basic information and statistical data.

Feasibility of Marine Corps Providing Remedial High School Level Education for Enlistees

by

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requirements for the degree of

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ABSTRACT

This thesis examines the feasibility of several methods for providing remedial high school level education to Marine Corps enlisted personnel. It includes a review of recent Marine Corps enlistment experience and the serviceman's need for education. Also considered are the congressional and Marine Corps requirements for servicemen to possess a high school education and the present provisions which allow completion of secondary schooling, with emphasis on the Predischarge Education Program (PREP). This precedes an analysis of alternative methods for providing this education with a view toward expected costs and benefits.

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TABLE OF ABBREVIATIONS

A-A Test	Aptitude-Area Classification Test
AC/S	Assistant Chief of Staff
AFQT	Armed Forces Qualification Test
CY	Calendar Year
FMF	Fleet Marine Force
GCT	General Classification Test
GED	General Educational Development
GT/GCT	General Technology/General Classification Test
HQMC	Headquarters Marine Corps
HS	high school
HSG	high school graduate
ITS	Infantry Training School
MAW	Marine Aircraft Wing
MCAS	Marine Corps Air Station
MCAS(H)	Marine Corps Air Station (Helicopter)
MCRD	Marine Corps Recruit Depot
MG	mental group
MOS	military occupational specialty
NHSG	non-high school graduate
PREP	Predischarge Education Program
RT	Recruit Training
USAFI	United States Armed Forces Institute
USMC	United States Marine Corps
VA	Veterans' Administration

I. INTRODUCTION

Since the All-Volunteer Force became effective on 1 July 1973, the military services have experienced varying degrees of success in reaching their enlistment goals. At the same time there was noted some decrease in the percent of high school graduates (HSG) who were enlisting for the first time. The Marine Corps record during the period July 1973 through January 1974 reflected that 49% of the accessions did not possess a high school diploma [Ref. 1]. It is at this group of enlisted men who came into the Marine Corps with various levels of formal schooling behind them and who are interested in advancing their general level of education that this thesis effort is directed. No naive assumptions are made to the effect that a high school diploma or a General Educational Development (GED) Certificate is automatic proof positive of a particular level of intelligence, but it has been and still is being used as a prerequisite for many paths of advancement open to military personnel. For this reason alone it is to the benefit of all the Armed Forces to encourage their members who have less than a high school education to seek it. A number of ways exist which allow a serviceman to pursue such an endeavor; this thesis will examine those and several other alternative solutions for the purpose of determining their feasibility of improving the procedures whereby non-high school graduates (NHSG) may receive high

school level educational instruction leading to a diploma or a GED equivalency certificate while in the service. The general approach will commence with a description of the problem of deficient educational level among enlistees to include discussions of recent enlistment experience and the need for education of servicemen. This will be followed by an enumeration of the various requirements for a high school (HS) education and the provisions presently being made within the Marine Corps for such remedial instruction. Four alternative solutions will be presented with an analysis of their desirable and undesirable features, the major ones of which will be compared before the conclusion is reached.

While a HS diploma does not assure its holder of success in the many faceted world of opportunity ahead of him, it certainly must be agreed that it is a step in the right direction. With such a high percentage of Marine enlistees lacking this foundation in basic education, it becomes apparent that some action must be taken to equip them with the tools to better cope with military life, its competitive environment, and, later, with a civilian occupation after separation from the service. Those tools, it would appear, may in most cases be obtainable through formal education. The value of experience must not be overlooked as an important adjunct to classroom education, for it possesses its own peculiar brand of learning.

It should be apparent to the reader that a problem does exist in the educational level of enlistees in the Marine

Corps, and that problem in its many ramifications will be addressed in the following pages.

All references to GED tests refer to the high school level GED tests.

II. DESCRIPTION OF THE PROBLEM

At the inception of the All-Volunteer Force on 1 July 1973 authority to induct men for military service under the Selective Service Law expired. Even prior to this, however, inductions had terminated ahead of schedule in December 1972 [Ref. 2]. In effect then, all accessions into the Marine Corps commencing 1 January 1973 were voluntary. Some shortfall in enlistment quotas was experienced after this date, but of more importance for purposes of this study was another potential problem area which began to materialize - the percentage of HSG's enlisting began to fall, leveling off at 51% [Ref. 1]. Not only did this move actual performance further away from the Marine Corps goal of 65% HSG's among its enlistees, but it posed a serious problem in light of public law which sets a minimum percentage level of 55% HSG's required to be enlisted during Fiscal Year 1974 before appropriated funds could be expended to pay any FY74 enlistees [Ref. 3].

A. RECENT ENLISTMENTS

Figure 1 shows for FY73 and the first half of FY74 actual enlistment results fragmented into high school and non-high school graduates.[1] The last double vertical

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[1] Statistics for Figure 1 were obtained from a Point Paper prepared at Headquarters Marine Corps by the Manpower Planning, Programming and Budgeting Branch.

column to the right displays projected needs during the second half of FY74 to meet the recruiting requirement of 56010 non-prior service enlistees for the entire FY74 and at the same time satisfy the not less than 55% HSG requirement of Section 718 of Public Law 93-238. During the first half of FY74 HSG's comprised 50.5% of the accessions, leaving the second half of the fiscal year facing a goal of 58.3% HSG's. It is to be noted that the figures in Figure 1 include female enlistees, all of whom must hold a high school diploma for enlistment. Further, it is to be noted that persons having received a certificate of high school equivalency on the basis of successful completion of the GED tests from a state or the District of Columbia are considered high school graduates for the purposes of satisfying Section 718 of Public Law 93-238. Figure 1 does not include enlistees who possessed a GED certificate upon enlistment; when these figures are included, the projected number of HSG's needed to reach the FY74 goal is 17597, or 54.9% of all second half FY74 male enlistees.

As can be seen from Figure 1 a significant improvement in successful HSG recruiting is necessary to meet the goal of not less than 55% in FY74. In addition, Figure 1 shows the current educational level of Marine Corps male enlisted accessions and thereby establishes the magnitude of the problem herein discussed.

USMC Enlistment Statistics

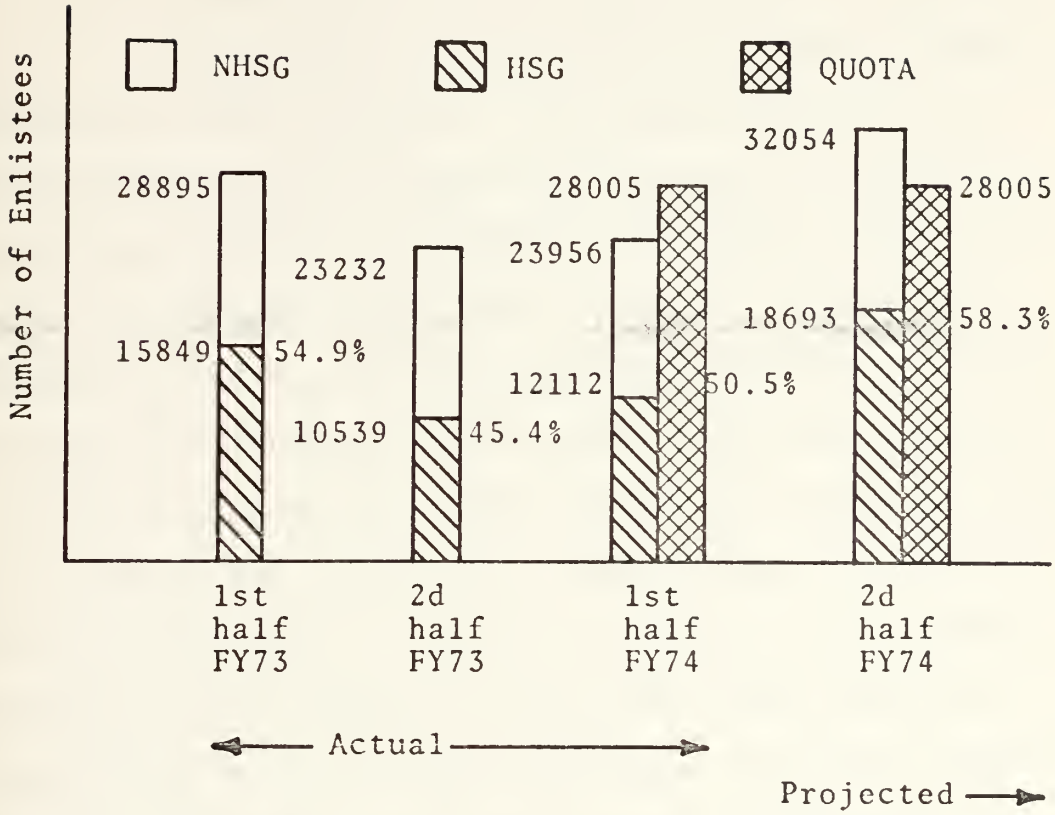

FIGURE 1

B. THE NEED FOR EDUCATION

Experience has demonstrated that for the most part lower educated individuals are ill equipped to successfully compete with those who have attained a higher level of formal schooling. So it is with servicemen who, for one reason or another, have not taken advantage of secondary schooling opportunities and found it difficult or almost impossible to compete on an equitable basis with others who have had the benefit of graduating from high school, at the minimum.

1. Competition

a. Advancement

Advancement in rank is quite often related to educational level attained. Servicemen who have high school diplomas can be expected to outperform those who do not, purely from the standpoint of having a more generally rounded education. Written tests, which often accompany other measures of knowledge attained in military subjects, are far easier for an individual who possesses a broader background or higher performance level in reading. It is obvious that persons who cannot read very well do poorly on such tests. The serviceman who leaves formal schooling at the eighth or ninth grade level finds his comprehension on such examinations can in no way compete with the HSG or GED certificate holder. Of course, there will always be exceptions to the above; some individuals will be able to learn through self-education without the benefit of a full high school exposure, but in general these will consist of a relatively small percentage of the population.

b. Reenlistment

In regards to education, reenlistment is a choice open only to those who (1) meet the civilian educational requirements established by the services or (2) satisfactorily complete the GED test battery at prescribed levels. In many cases reenlistment holds no appeal for the serviceman, but for those who are interested in

continuing beyond their initial enlistment, the educational requirements are very specific and can bar further service if not satisfied. In the event they are not satisfied, a waiver of this prerequisite must be granted to permit reenlistment [Ref. 4].

c. Assignment of Military Occupational Specialty

Assignment of initial military occupational specialty (MOS), which dictates the type of duty to be performed throughout a Marine's enlistment regardless of geographical assignment, is very definitely related to civilian educational attainment. Results of Aptitude-Area Classification Tests (A-A Test), which measure mental aptitude as a collection of abilities, "identify and measure those aptitudes which are significantly related to military jobs and thereby provide a profile of an enlisted Marine's strengths and weaknesses in terms of his assignment potential." [Ref. 5, p 5-6]. Based on the scores obtained in the eleven areas that may be tested, and application of those scores to simplified formulas prescribed in Ref. 5, the aptitude-area scores are obtained. The highest aptitude-area score, along with the results of other tests, will indicate the type of MOS assignment to be made.

For example, in the general field of Armament Repair (MOS 2100), to show aptitude as an Infantry Weapon Repairman (MOS 2111) a high score in aptitude-area GM (General Maintenance) must be obtained. Reference 5 contains a formula for the calculation of GM as follows:

$$GM = \frac{PA + 2SM}{3}$$

PA stands for Pattern Analysis and SM means Shop Mechanics. A high score in these two aptitude-areas would indicate an ability for high performance in that type of assignment, as well as a variety of other MOS's for which GM is the significant indicator of ability, such as Aviation Ordnance (MOS field 6500) or Air Delivery (MOS field 7100).

It must be remembered, however, that the highest indicated aptitude-area is not the only criterion for MOS assignment, as the needs of the service must also be taken into account.[2]

The general educational level of a recruit will in this manner have a great deal of influence on his initial classification for job assignment.

It is possible for a Marine to change his MOS providing he meets the requirements set forth in Ref. 6, the Marine Corps Order pertaining to lateral movement. Lateral movement is defined as "Movement of qualified Marines either within or between occupational fields as a result of reclassification action". [Ref. 6, p 1]. Among the various requirements to qualify for a lateral move is the necessity

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[2] Marine Corps Order 1220.5B, Subject: Lateral Movement, states at p 2 "First term Marines are assigned an MOS within occupational fields according to their obligated service, test scores (Aptitude-Area, Electronics Technician Selection Test, Automated Data Processing Test, and Language Aptitude Test), and the needs of the service".

to meet the aptitude-area score levels prescribed for each MOS in Ref. 6. Retake of the A-A Test for such reclassification is permitted as stated in Ref. 5.

Grade and occupational field imbalances along with reenlistment results by occupational field are published quarterly by the Marine Corps in its 1220 series of bulletins. The information contained in those bulletins specifies particular MOS's that are deficient within the enlisted career force. Most of these deficient MOS's are technical in nature, and their general occupational field could be expected to benefit from an educational program which would qualify more Marines for assignment to them. With more qualified personnel from which to choose, the quality of these technical MOS's could be expected to rise.

It can be seen from the above that educational attainment, even after initial entry into the service, can have a definite effect upon job assignment, since lateral movement can allow an individual to enter a field which will be more in consonance with his inclinations. If the individual does not meet the prerequisite aptitude-area score required by the MOS he is seeking, one avenue open to him to improve his A-A Test scores is through education. The need for general education is again apparent.

2. Other Military Training

Once a Marine has completed recruit training, been classified and assigned to an organization for his first duty assignment, he then may be eligible for further training

at formal schools and courses presented by the Marine Corps, providing he meets the prerequisites for entry into the courses, spelled out in Ref. 7, the Marine Corps Formal Schools Catalog. Many of the courses offered for enlisted men require minimum level scores in particular aptitude-areas, the General Classification Test (GCT) and GED test scores in appropriately related fields to the course offered; in some cases, the applicant must possess a high school diploma. In some cases waivers can be granted for minor deficiencies in an individual's qualifications to meet prerequisites, but this is generally discouraged since satisfactory completion of the courses is dependent upon the student's possession of minimum requirements, the absence of which increase his chances of failure.

Again, it should be evident that the less educated Marine is not able to take advantage of further military training because of his low potential for success at formal military schools. But, even though an individual scores poorly on the many tests to which he is exposed before and during recruit training, there are avenues available for him to follow if he is interested in improving his educational background allowing him to qualify for further in-service training.

The raising of A-A test scores and GCT scores, as well as successful completion of the GED tests will allow a Marine to compete more equitably with his contemporaries

for schools, which constitutes one additional step toward his overall advancement while in the service.

3. Military Programs

Another positive reason for the need for education can be seen from the requirements necessary for admission to the several Marine Corps commissioning or higher education programs, some of which are shown in Figure 2. It must be kept in mind that while Figure 2 lists educational requirements and shows the ranks of those eligible to participate, there are many other prerequisites which must be met before an individual will be considered fully qualified to apply for the programs listed. It is interesting to note that all male enlisted ranks (subject to age limitations) are eligible to participate for the Naval Academy and Enlisted Commissioning Programs. Without sufficient formal schooling, most enlistees would find it difficult to satisfy the educational requirements shown; those who enter service without the benefit of that training are not able to equitably compete with their peers for such programs.

4. Society Considerations

Still other benefits accrue from education. These can be thought of as private benefits and public benefits.

a. Private Benefits

'Education traditionally has been thought of as a civilizing, acculturating process whose output is an improvement in the "quality of life".' [Ref. 8, p 288]. One of the major values of education is derived from a general ability

EDUCATIONAL REQUIREMENTS FOR USMC COMMISSIONING & HIGHER EDUCATION PROGRAMS[1]

Program	Educational Requirements	Open to	Ref.[7]
Enlisted Commissioning	GCT min. 120 or A-A Test score[2] of 120 HSG Completion of at least 1 yr. unduplicated college work[3] If do not possess baccalaureate degree must attain 25th percentile on each of the 5 tests of general examinations of CLEP[4].	Pvt and above with age restrictions	9
Limited Duty Officer	GCT min. 120 or A-A Test score[2] of 110.	Permanent male Warrant Officers & male SNCO's	10
Warrant Officer	GCT min. 120 or A-A Test score[2] of 110.	Sergeants & above	10
Enlisted Women Marine Commissioning	GCT min. 120 or A-A Test score[2] of 120. HSG Completion of at least 1 yr. unduplicated college work[3] Must attain 30th percentile of each of the 5 tests of general examinations of CLEP[4].	Pvt and above with age restrictions	11
Naval Academy (Active Duty Personnel)	GCT min. 120 or A-A Test score[2] of 120. 15 HS/College prep units[5].	Pvt and above with age restrictions	12
Navy Enlisted Scientific Education	Min. 3 yrs HS[6]. Pass GED(HS) with min. 90 percentile in each area.	L/Cpl and above with 1 yr. active duty after completion of recruit training	13

FIGURE 2

EDUCATIONAL REQUIREMENTS FOR USMC COMMISSIONING & HIGHER EDUCATION PROGRAMS[1] (cont'd)

Notes:

1. See appropriate Marine Corps Order for other prerequisites.
2. Determined by following formula: using A-A test scores: Verbal + Arithmetic Reasoning + Pattern Analysis ÷ 3.
3. 30 semester hours or 45 quarter hours.
4. College Level Examinations Program.
5. Unit is a year's work in HS with min. grade of C.
6. Only NHSG requirements shown.
7. See List of References.

FIGURE 2

to apply thoughtful processes with an inquisitive outlook to all situations. An individual gains a certain amount of usefulness from his capability to reason through to solution the problems with which he is faced. With greater education comes broadened knowledge which can be called upon during these periods of mental gymnastics. Such benefits can be useful to a Marine not only while he is on active duty, but as well after he has completed his service obligation and returned to the civilian scene.

b. Public Benefits

> "General education confers benefits on society at large in a variety of ways. It is generally accepted that minimal levels of education are necessary to permit the functioning of a developed economy and a democratic society. Literacy, familiarity with elementary mathematics, and an acquaintance with cultural and political institutions are essential for minimal participation in economic and political affairs." [Ref. 8, p 290].

The benefits that Singer speaks of are those that become evident through an individual's participation in the society around him. The actual value is difficult or impossible to measure, but it is most likely more valuable than the cost incurred to provide the education. To be able to function as a reasoning, reasonably thoughtful and knowledgeable person in society is a significant contribution to the public, made through the efforts of education.

The benefits of education, both public and private, will all point toward a more rounded citizen, better equipped to take the position of "contributing" rather than merely "following" in any society in which he exists, be it military or civilian.

5. The Military, Discipline and Education

The Marine Corps has established quality goals considering both skill requirements and amenability to discipline and good conduct. High school graduation and higher mental level are indicators of success and less involvement in disciplinary matters. Data which support the assertion that non-high school graduates and personnel in the lower mental groups contribute a disproportionate share to disciplinary problems and absenteeism are shown in Figures 3 through 7, following.

Figure 3 compares the deserter population of the Marine Corps with total Marine Corps population by educational level. It can be readily seen that the educational level of the deserter subpopulation was consistently lower than that of the Marine Corps population at large.[3]

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[3] Data obtained from a Talking Paper prepared by AO1C, HQMC of 10 May 1973.

FY 1972 DESERTER POPULATION BY EDUCATIONAL LEVEL

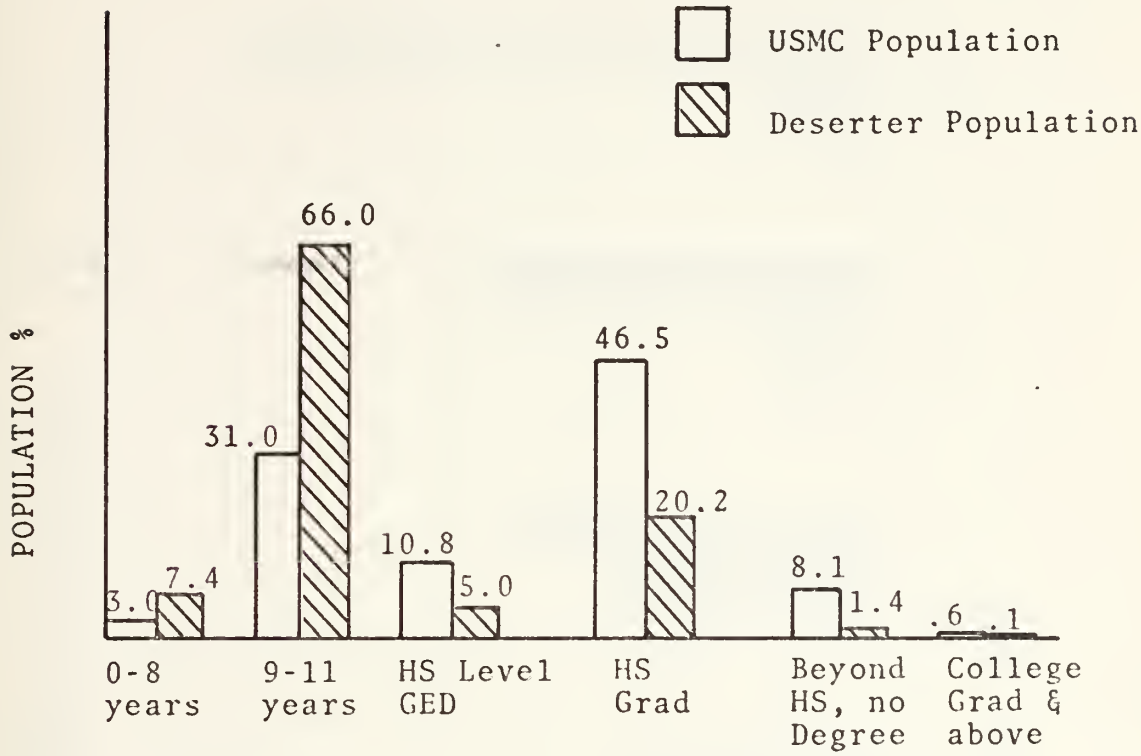

FIGURE 3

Figure 4 shows a comparison similar to that depicted in Figure 3, with two exceptions: (1) Marine Corps population is categorized by mental groups and (2) desertion rates are per 1000 onboard enlisted population (an annual average). It should be noted in reading Figure 4 that the vertical axis measures two quantities, desertion rate per 1000 population being identified by the single hatchered columns. Mental ability can be measured by the Armed Forces Qualification Test (AFQT) or a combination of General Technology (GT) and General Classification Test (GCT) scores. Using this

FY 1972 DESERTERS BY MENTAL GROUP

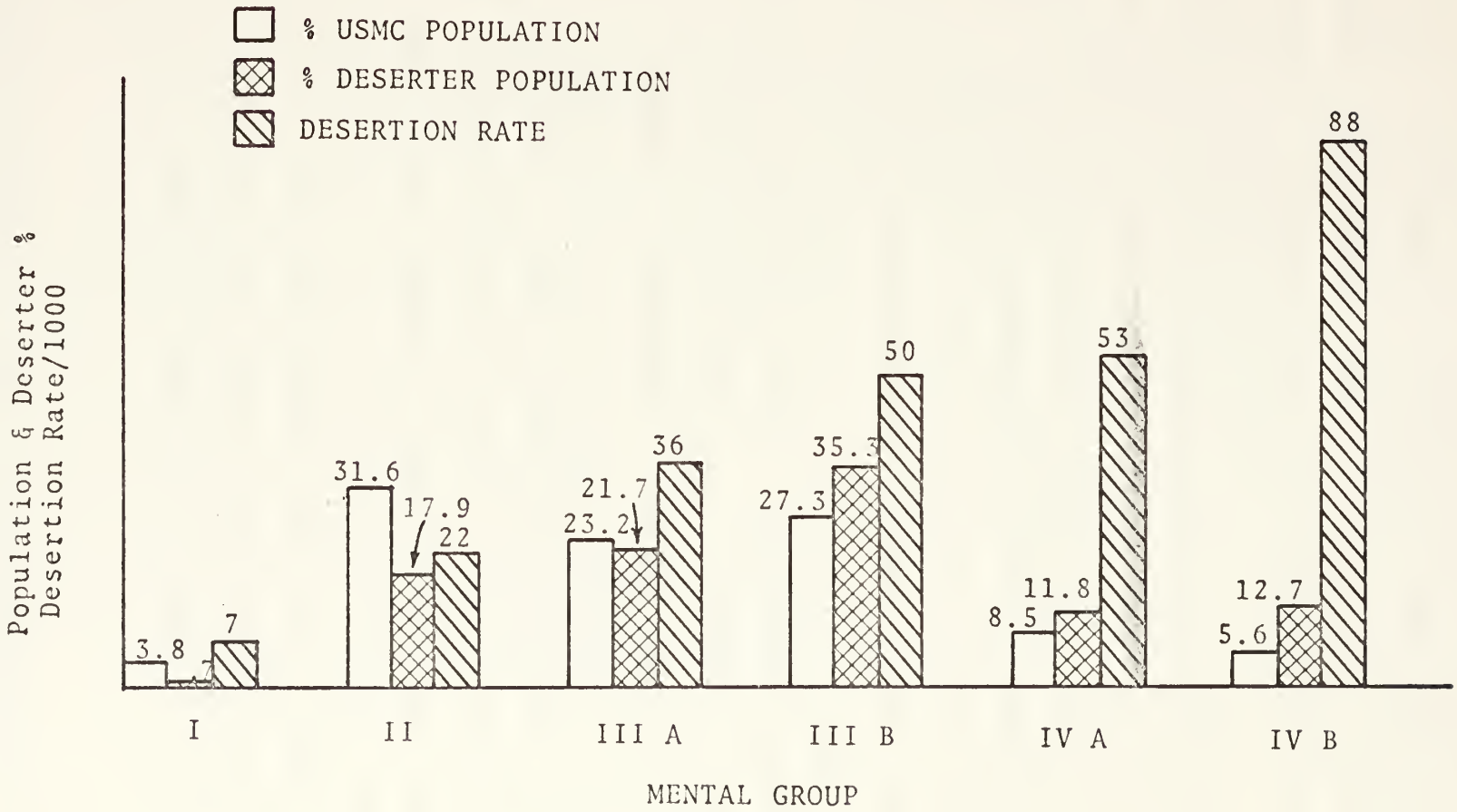

FIGURE 4

criterion, Marines in mental group IV B (AFQT 10-20 or the equivalent) show, by far, the highest desertion rate, 88 incidents per 1000 Marines. Thereafter, each higher mental group shows a successively lower desertion rate, with Marines in mental group I (AFQT 93-100 or the equivalent) boasting a rate of only 7 incidents per 1000.[4]

The statistics in Figures 3 and 4 are indicators of the relationship between mental ability, education and the disciplinary problem generated by desertions. Figure 3 shows that desertions occurred more frequently among grade school and high school dropouts (0-8 years and 9-11 years formal schooling) than among those who had, at the least, attained a GED certificate. The percentages in Figure 3 are not intended to establish a causal relationship between educational level and desertions. It is apparent, however, that the incidence of desertions is significantly less among the Marine population with the higher educational level.

Regardless of when the GED certificate was obtained, before or after entering the service, movement to this group clearly exemplifies a degree of improvement in one disciplinary problem area. This is not to say, however, that all such individuals who would achieve GED success, would automatically vanish from the ranks of desertion-prone Marines; still, it is an indication toward that trend. No such

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[4] Data obtained from AC/S, G-1, HQMC Memorandum AO1M-2-RPK-mmb of Oct 72, Subject: Marine Corps Deserters.

similar conclusions can be drawn from Figure 4 since movement to a higher mental group is rarely recorded.

A further breakdown of Marine Corps desertion experience during a 16 month period by mental group and educational level is set forth in Figure 5.[5] For example, 122 of every 1000 mental group IV NHSG's accessed deserted at least once, whereas only 40 of every 1000 mental group IV HSG's accessed did the same. The rates calculated in Figure 5 include some individuals who deserted more than once, but the repetition

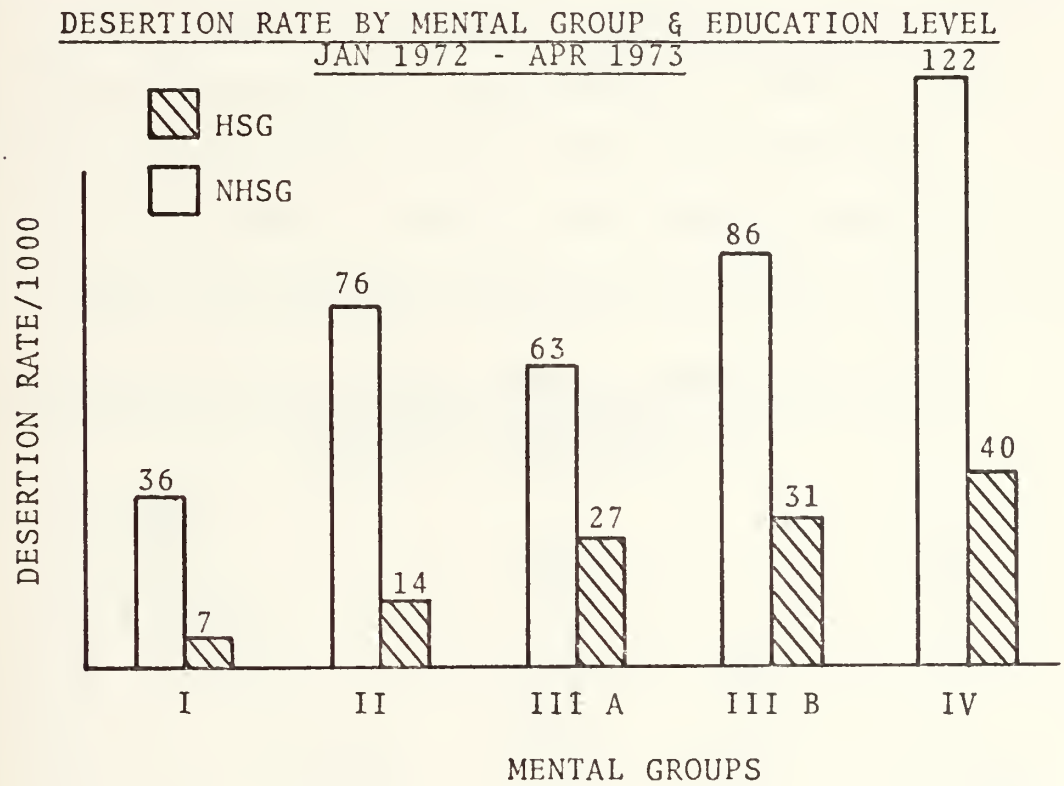

FIGURE 5

of their offense was not used to inflate the desertion rates shown. Again, these data show the establishment of a

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[5] Data obtained from working papers prepared at HQMC from official records.

relatively consistent trend - the lower the mental group (lowest being mental group IV) the greater the tendency to desert, regardless of whether the deserter holds a high school diploma or not. The point made here is that with higher accession of the lower mentality group personnel (MG IV), the more the desertion problem will be experienced.

Figure 6 is a portrayal of similar types of information except that it pertains to those Marines separated from the service for any number of derogatory reasons.[6] This Figure is read in the same manner as Figure 5, and generally supports the earlier trend established by desertion experience - that the lower mental groups contribute a higher percentage of offenders to overall good order

SEPARATION RATE BY MENTAL GROUP & EDUCATION LEVEL
JAN 1972 - APR 1973

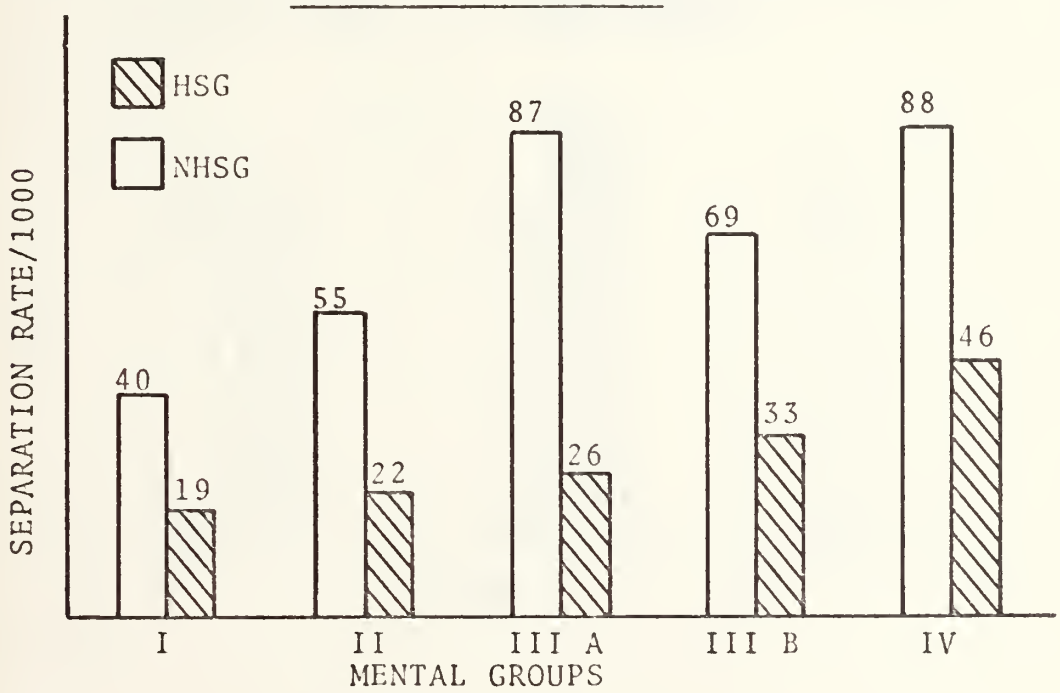

FIGURE 6

[6] Data obtained from Working Papers prepared at HQMC from Official Records.

and discipline. An obvious exception is reflected in the MG III A column, which lends strength to a charge of inconsistency in any conclusions regarding the constant relationship between MG's and disciplinary problems.

Figure 7 shows that the percentage of Marines confined in Naval correctional facilities and the Naval Disciplinary Command who have not graduated from HS is significantly higher than those confinees with at least 12 years of education.[7] These data verify earlier observations that less educated Marines commit more than their share of disciplinary infractions.

PRISONER EDUCATIONAL LEVEL AT NAVAL CORRECTIONAL FACILITIES & NAVAL DISCIPLINARY COMMAND

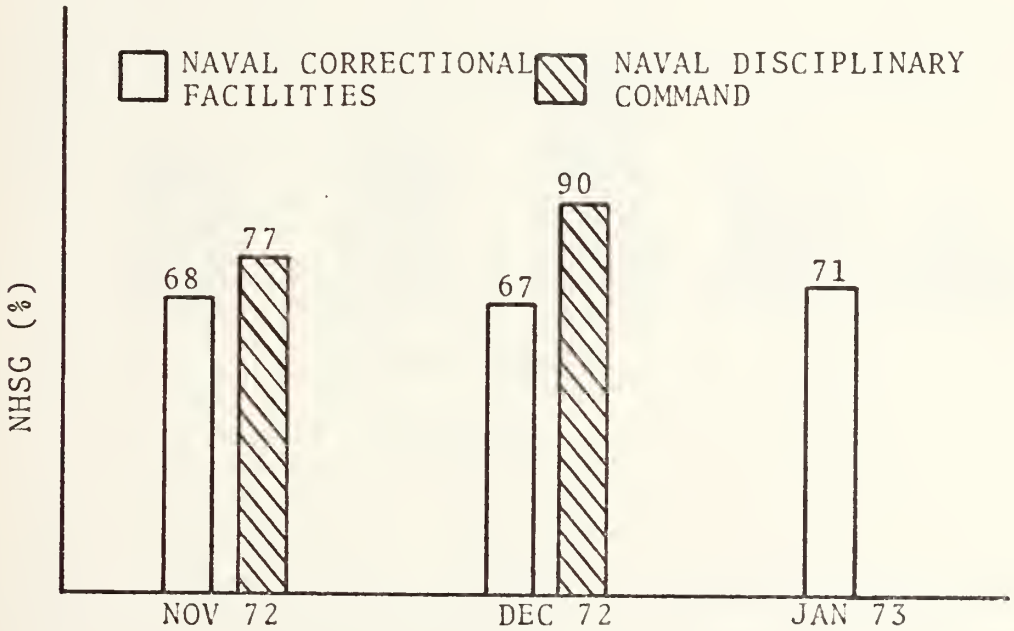

FIGURE 7

[7] Data obtained from Talking Paper prepared by AO1C Branch, HQMC, 10 May 1973.

The overall distribution of HSG's and NHSG's in the Marine Corps enlisted population at the end of FY73 by mental group[8] is presented in Figure 8. Care must be exercised in reading the percentages shown, as the figures at the top of the columns report percentage of total USMC population by mental group, and the percentages directly above the hatchered areas reflect the percentage of NHSG's within the mental groupings.

EDUCATIONAL LEVEL OF USMC ENLISTED FORCE BY MENTAL GROUP, FY 1973

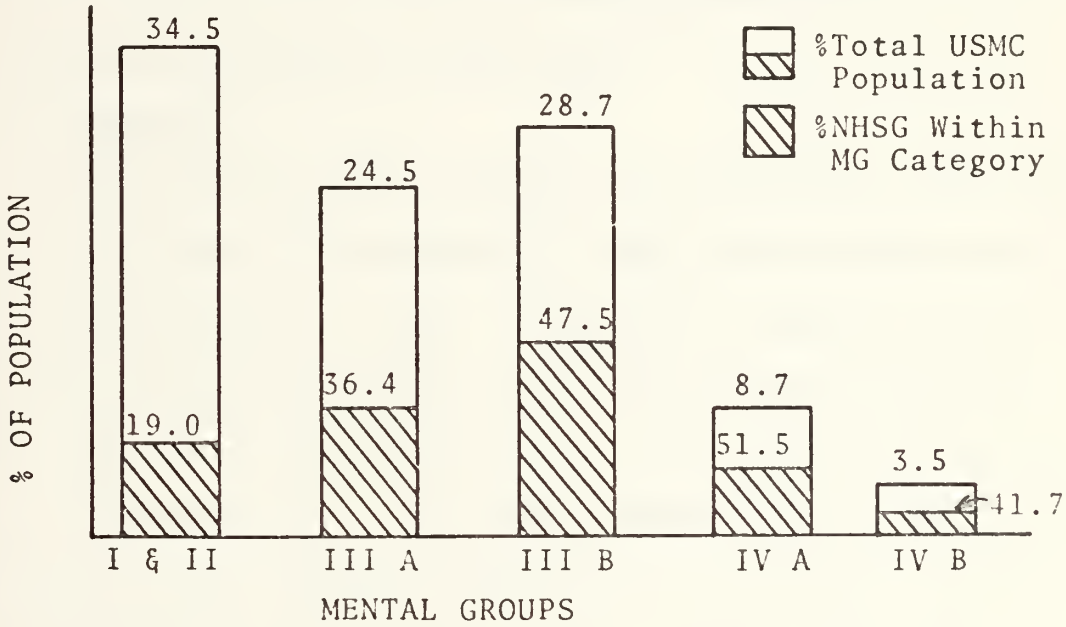

FIGURE 8

For example, Figure 8 shows that 8.7% of total USMC enlisted population was in mental group IV A and that 51.5% of the

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[8] Data obtained from Deputy Chief of Staff for Manpower, HQMC memorandum MPP-27-gmm of 13 Nov 1973.

personnel in mental group IV A were NHSG's. It is interesting to note that MG IV B was composed of only 41.7% NHSG's, while higher MG's (III B and IV A) had greater proportions of NHSG's. Since mental ability is generally a measure of capability to assimilate education, it does not follow that MG IV B personnel should have attained a greater percentage of HS diplomas than the two higher MG's. This phenomenon may be partially explained by the practice of awarding "social promotions" to some HS students, who attend classes regularly but do not perform at a sufficiently high level to earn the usual scholastic advancement.[9]

6. Summary

Figures 3 through 7 report MG, educational level and disciplinary problem relationships among enlisted Marines over various periods of time. It would be improper to conclude that low mental ability causes disciplinary problems or that lack of a HS diploma does the same. The statistics presented establish no such causal relationship, even though the data, at first glance, may seem to so indicate. The precise reasons for the relationships as they exist are unknown, but what is known is that better performance can be expected from more highly educated individuals. To increase a person's mental capacity to assimilate knowledge may not

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[9] Information concerning "social promotions" obtained through several interviews with education administrators during research incident to this thesis.

be possible, but to further educate those who have the ability and have lacked perseverance in the pursuit of education is very likely to be successful. The Marine Corps stands to benefit from programs which will cultivate this latter category of individual through remedial steps on an immediate and continuing basis.

The above Figures and considerations point out vividly the need for education, not only for the serviceman's benefit while he is serving his country but for society's utility when the serviceman returns to civilian life. The need for education exists. What is being done about satisfying that need?

III. PRESENT SITUATION

In order to get a firm grasp of the situation as it exists today, it will be useful to examine the current requirements and provisions for high school education within the Marine Corps.

A. REQUIREMENTS FOR A HIGH SCHOOL EDUCATION

While the possession of a high school diploma or its equivalent, a GED Certificate, is recognized as a necessity before commencing the quest for higher civilian education, it is also a prerequisite, to different degrees, for servicemen as they advance in their military service or careers. Below is a discussion of these requirements from three points of view.

1. Congress' Requirements

Congress, in passing the FY74 Department of Defense Appropriation Act included a stipulation limiting the use of funds authorized under that law in the event that the enlistment of non-prior service personnel during FY74 dropped below 55% high school graduates. This limitation applies to each service individually and includes both male and female personnel. As stated earlier, persons having received a GED Certificate are considered high school graduates for purposes of this limitation. Section 718 [Ref. 3] also places a limitation of 18% on the proportion of Mental Group IV personnel that may be enlisted.

The Marine Corps experienced some difficulty during the early months of FY74 in meeting its recruiting goals. Although this trend was being reversed early in the second half of that fiscal year, the congressional limitations imposed by Ref. 3 are sure to cause some shortfall in enlistment goals. General Cushman, Commandant of the Marine Corps, has stated that he expects "a total strength shortfall of approximately 12000 .... by the end of Fiscal Year 74". [Ref. 14]. This shortfall is partially a result of the Section 718 [Ref. 3] limitations. Figure 1 shows the higher percentage of HSG's which must be recruited during the second half of FY74 to meet the 55% limitation. Since HSG's generally become more readily available around the beginning of each fiscal year, the proportion of 58.3% of them to be included among all recruits during the second half of FY74 poses a problem of great magnitude.

Since April 1973 the Marine Corps has maintained its own limitation of 10% on the number of Mental Group IV personnel that it would accept for enlistment, and has had no difficulty in keeping within the 18% limitation prescribed by Ref. 3. General Cushman, in testimony before the Senate Committee on Armed Services, said in this regard,

> "Although I do not wish to underrate the attainment of a high school education, we believe that higher mental group achievement is as valid an indicator of potential performance as is the possession of a high school diploma. It is interesting to note that over 50 percent of the Mental Group IV enlistees we have recruited thus far in FY 1974 are high school graduates. As a result of the requirement to adhere to a 55 percent high school graduate limitation, we may be forced to rescind our 10 percent limitation and take an increased number of Mental Group IV individuals". [Ref. 14]

An increase in the number of MG IV personnel accepted for enlistment will cause a deterioration of the quality of non-prior service enlistees and will also tend to create more disciplinary problems, as identified in Figures 4 through 6.

Although relief from the requirements of Ref. 3 has been identified as necessary to maintain the operating strength of the Marine Corps, the limitations of Section 718 still stand. Congress has agreed with the necessity to up-grade the quality of the Armed Forces, but the All-Volunteer Force has made the attainment of that stated goal difficult.

2. U. S. Marine Corps Requirements

The Marine Corps has its own requirements, beyond enlistment, for personnel to obtain a high school diploma or its equivalent. Some of these have been previously discussed and will be only briefly mentioned below.

a. Reenlistment

Paragraph 5101, Career Planning and Development Guide, Volume 1 [Ref. 4] sets forth the prerequisites for a Marine's first reenlistment. In addition to other requirements, those that pertain to education are quoted as follows:

> "h. Must have successfully completed a minimum of 10 grades in an accredited civilian school or, must have completed the high school level General Educational Development test battery with a standard score of 35 on each part or an average of 45 on all five parts of the test battery.

"i. Must have a minimum of three aptitude area scores of 100 or above (male Marines only). Women Marines with general technical (GT) scores below 90 should be closely reviewed to ensure that adequate career potential is indicated." [Ref. 4, p 5-9].

Educational prerequisites for a second reenlistment are higher, as might be expected. Paragraph 5102 of Ref. 4 states that in such cases "Personnel . . . must have successfully completed a minimum of 12 grades in an accredited civilian school or must have successfully completed the high school level General Educational Development test battery."

The requirements for reenlistment reflect a demand for improvement in civilian education before further service will be permitted. The level of attainment is not considered to be difficult to reach, but it does require individual initiative of the Marine who never went far with his civilian education.

b. Military Schooling

Mentioned earlier in some detail were the educational and aptitude-area requirements necessary for Marines to qualify for assignment to the variety of military schools and courses related to each MOS [Ref. 7]. A change of MOS by enlisted personnel can be accomplished only after they have demonstrated the required abilities, in the form of A-A test scores, for the MOS sought [Ref. 6]. These levels of civilian education and/or aptitude-area scores are viewed as sound indicators of expected performance in such training and operating environments.

c. Advanced Civilian Schooling and Commissioning Programs

The Marine Corps requirements for a high school diploma, or its equivalent, to qualify an enlisted person to participate in advanced civilian schooling or its commissioning programs are set forth in detail in Figure 2, documented in Refs. 9 through 13.

3. General Requirements

There are several MOS fields wherein no particular civilian educational level or aptitude-area scores are required, but success and advancement in those specialties is nevertheless indirectly related to general educational level. The need to be able to read, interpret and perform basic arithmetic calculations, while not specified in so many words, is essential for the Marine who aspires to leadership. Everyday training and operations are becoming exceedingly more complex, and the individual who does not progress with the world around him will be left behind. Consequently, there is an implied requirement for educational development for those who anticipate personal advancement, regardless of the military specialty to which they are assigned.

As has been alluded to before in this paper, the GED equivalency certificate can, in many cases, substitute for the high school diploma, allowing those who terminated their civilian education while they were of usual high school age, an opportunity to complete their required secondary schooling before moving on to higher education or other programs.

B. PROVISIONS FOR A HIGH SCHOOL EDUCATION

Recognizing the various needs and requirements for furthering the education of its personnel, the Marine Corps established an off-duty education program [Ref. 15]. Its purpose is to "encourage and assist Marines to broaden their educational background, raise their educational level, and enhance their value to their country, the Marine Corps, and themselves". [Ref. 15, p 1-3]. In Ref. 15 the policy for educational attainment states, in part, that it is desirable that enlisted personnel obtain "at least a high school diploma or high school equivalency certificate". [Ref. 15, p 1-3]. In support of this policy the Marine Corps has structured its off-duty education program to include a tuition assistance phase, an instructor hire phase, and the GI Education Program (including the Pre-discharge Education Program (PREP)). Marines have also been encouraged to strive for the GED high school equivalency certificate when a high school diploma was not within reach due to the total number of Carnegie units needed. All of these programs and GED testing will be discussed below.

1. Tuition Assistance and Instructor Hire

Chapter 3 of Ref. 15 contains detailed information about the tuition assistance and instructor hire phases of the Marine Corps off-duty education program. The purpose of these two phases is "to encourage personnel to attend off-duty courses offered by accredited secondary schools and colleges." [Ref. 15, p 3-3]. Under these

phases the Marine Corps consents to pay part of the tuition costs or instructors' salaries, and the student pays the balance. Payment for correspondence courses is not authorized in these phases.

a. Tuition Assistance Phase

This phase permits active duty Marines and personnel of other military services attached to Marine Corps units to enroll in courses offered for academic credit by accredited civilian schools. These classes may be presented on the school campus, the military installation or at an extension center. Eligible personnel may enroll any time a course is to be presented; there are no time-in-service restrictions imposed. The Marine Corps will pay up to 75% of the tuition costs for these courses. However, funds are not authorized for high school courses except in cases where the Commandant of the Marine Corps grants specific approval. The tuition assistance phase is therefore, for the most part, limited to support of students who enroll in college level credit courses. For this reason, tuition assistance will be disposed of at this point since it provides such a minor portion of high school level education for Marines, as contemplated in this thesis.

b. Instructor Hire Phase

The instructor hire phase makes provisions for classes to be held on military installations located in "isolated areas" where no nearby educational institutions exist. All active duty Marines, regardless of time-in-service

accumulated, are eligible to participate in this phase. Other individuals such as dependents and civil service employees of the Marine Corps or Navy who are employed by the base or station, may enroll in the courses offered under this phase, provided ten eligible military personnel are also enrolled. The Marine Corps authorizes fund obligations for 75% of the remaining portion of the instructor's salary, after those enrolled personnel other than active duty Marines have paid the full amount of resident tuition charged students by the educational institution involved. Eligible military students pay the remaining costs in equal amounts [Ref. 15, p 3-5 and 3-6].

The instructor hire phase is authorized for use by students seeking the completion of their high school education. However, its provisions are not utilized to any great extent at present[10] and constitute a small portion of the active participation in off-duty education leading to a high school diploma.

2. GI Education Program

Public Law 91-219 authorized the Veterans' Administration (VA) to establish the GI Education Program to provide fund reimbursements to certain military personnel for educational courses pursued in approved schools. A

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[10] Interview with Colonel H. E. BENN, USMC, Head, Educational Services Branch, HQMC, 12 Apr 1974.

phase of the GI Education Program called Predischarge Education Program (PREP) is designed to assist servicemen who lack high school diplomas in obtaining them through successful completion of high school credit courses offered by accredited civilian schools. Vocational and college preparatory non-credit courses are also available through PREP and are designed to help the serviceman, who is already a HSG, overcome educational deficiencies to permit his entrance into trade schools or institutions of higher learning. PREP is the major high school education program used by Marines today. Chapter 6 of Ref. 15 contains specific details concerning PREP in the Marine Corps.

To be eligible to enroll in courses funded by the VA under PREP, a Marine must (1) be on active duty, (2) have served more than 180 consecutive days of active duty, and (3) lack a high school diploma or GED certificate or (4) require remedial, refresher or deficiency makeup or other courses to prepare for vocational, college, or other educational courses above the high school level [Ref. 15, p 6-3].

The funds for PREP courses are provided by the VA and are based on the VA's approval of course fees determined by the school the student attends. One of the most attractive features of PREP is that full course costs, including books and course related supplies are covered by the VA. Additionally, servicemen participating in PREP do not lose any basic educational GI Bill entitlement.

At some military installations, classes under PREP have been organized so that they are presented over the noon hour, which is usually one and a half hours in length. With an additional half hour of duty time authorized by the local commander, a full two hour session is possible, keeping time lost from military duties to a minimum. At other bases all classes are held in the evening after normal working hours.

It should be remembered that these off-duty education programs are strictly voluntary, and participation of military personnel in them must be consistent with the needs of the military service, which are determined by the local military commander concerned. For this reason, many Marines find it difficult to find the time to participate in PREP. Night exercises and jobs which require duties to be performed on an irregular time schedule constitute a significant hurdle to Marines who may be interested in taking advantage of PREP. A commander has the authority to excuse his Marines from military duties at his discretion, but this causes deficiencies in unit as well as individual training. This conflict of interest probably keeps many Marines from even attempting formal courses such as PREP, as will be shown in a later section by statistical data concerning PREP participation at some major Marine Corps bases.

3. GED Testing

GED testing is open to all civilian and military personnel. In the military the United States Armed Forces

Institute (USAFI) was[11] the agency which issued, controlled and graded GED tests. The results of these tests (five tests in all) were made available to the personnel tested for use in applying to their civilian high school or state department of education for a high school equivalency certificate. The policies governing the minimum test scores and other requirements necessary to obtain a GED equivalency certificate vary from state to state as set forth in the booklet "State Department of Education Policies", Bulletin #5, published by the American Council on Education [Ref. 16]. While the Marine Corps recognizes the satisfactory completion[12] of the GED tests as equivalent to a general high school education, it will not issue high school diplomas or equivalency certificates [Ref. 15, p 5-6]. That was a function of USAFI, which issued a GED test certificate to military personnel who passed the GED at the level prescribed in footnote 12, commonly referred to as the "military requirement". A distinction is made here between an "equivalency certificate" and a "test certificate". "The [high school equivalency] certificates issued by the departments of education [of the various states] are official

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[11] As of 31 May 1974 USAFI was disestablished. Responsibility for GED Testing and grading is expected to be assumed by a private contractor under an executive agency arrangement with the Department of the Navy.

[12] "Satisfactory completion" is defined as either a minimum standard score of 35 on each of the five parts or an average of 45 on all five parts of the test battery.

documents that are acceptable in the same manner as high school diplomas for meeting the requirement of high school graduation." [Ref. 16, p ii].[13] However, "The USAFI GED test certificate is not a substitute for either a high school diploma or an equivalency certificate from a high school or state department of education." [Ref. 15, p 5-6]. Armed with a "test certificate", a serviceman may apply to his home state department of education or to his former high school for issuance of a high school diploma or equivalency certificate, and based on that state's requirements, he may or may not be granted either. It becomes important, then, for the NHSG serviceman to ascertain his state's requirements and establish those as his goal since the "military requirement", while satisfying the required high school education for Marine Corps purposes, may not be sufficient to earn a diploma or equivalency certificate from his state. In obtaining only the "test certificate" the Marine falls short of going the full distance to a goal that will later be of much more value to him.

As noted in footnote 11, the Department of Defense is putting forth every effort to continue to offer USAFI's testing program through an alternate agency. At the time of this writing no firm announcement has been made regarding the plan for what government organization will fill the void

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[13] Words within brackets supplied by author for clarity.

left by the disestablishment of USAFI. It is expected, however, that GED testing still will be available through the Armed Forces, although issuance of the test certificate is questionable.

From the foregoing it can be seen that GED testing is a very important feature of the Marine Corps' educational program for its NHSG's. Not only does it contribute to the attainment of the desired level of education for all enlisted personnel as stated in current policy, but it also assists in meeting the 55% HSG limitation imposed by Congress [Ref. 3].

An interesting experiment was recently conducted at the Marine Corps Recruit Depot (MCRD) at San Diego, California. From the recruits then engaged in training, 69 NHSG's were arbitrarily selected and given the GED test without any preparatory instruction. The results were encouraging; 58% (40) of those tested passed sufficiently high to satisfy the military criterion, recognized as the equivalent to a general high school education. Out of that 40, 28 had scores which qualified them for award of a high school equivalency certificate from their home state. There existed a very close relationship between the recruit's GCT score and his performance on the GED test. Those who passed the GED test had a GCT score of 97 or higher, with

three exceptions; those who failed had GCT's below 97, again with three exceptions.[14]

Of course, this experiment is a relatively small sample upon which to base any general theory relating GCT and expected GED performance, but it may provide some insight into one method to ease the congressional constraint concerning HSG's (or their equivalent) and at the same time bring the Marine Corps' policy concerning educational level of enlisted men closer to attainment. Especially important to note is the fact that no preparatory educational instruction was given to the participants tested, indicating the possibility of a better than 50% chance of obtaining a GED high school equivalency certificate without attendance at organized, off-duty education classes such as are offered through PREP.

4. GCT Retesting

Although not a step toward providing a high school education for servicemen, the raising of a low GCT score can be beneficial in such areas as attaining eligiblity for formal military schooling, commissioning programs and special duty assignments. For that reason, mention is made here of the provisions available for re-evaluation of the GCT score. Reference 5 at paragraph 5006 prescribes those provisions and discusses procedures for retesting.

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[14] Information and test data obtained through interview with Major J. E. HARMS, USMC, Depot Education Officer, MCRD, San Diego, 17 Apr 1974.

A pilot program to raise the GCT level of Marines with low scores was conducted at Marine Air Base Squadron 13 located at Marine Corps Air Station, El Toro, California in 1973. The primary objective was to qualify more Marines for first term reenlistments without the need for waivers, which appeared to be necessary in an increased number of cases due to the raising of the minimum A-A Test score requirement in 1973 for reenlistment. Other objectives were to enable Marines to qualify for military schooling, lateral moves, choice duty station assignment, and commissioning and warrant officer programs. The syllabus was composed of studies in basic mathematics, vocabulary and reading, and study skills. The courses were presented for one and a half hours per day, five days a week for slightly longer than seven weeks. Upon completion of the course, students were retested with the A-A Test, and GCT's were computed based on the retest scores. With the exception of one student out of the 34 who completed the program, the experiment was an unqualified success. The average increase per Marine in GCT score was 13.1 points, with one Marine raising his score 45 points [Ref. 17].

This program pointed out that education courses aimed at the specific disciplines to be tested can be developed which are beneficial to the serviceman who has the perseverance to better his chances to get ahead.

5. PREP Statistics

Since research revealed that most high school level education activity in the Marine Corps was being provided via PREP, some statistics regarding participation and results were gathered for several major military installations. These included Marine Corps Base, Camp Pendleton and Marine Corps Air Station, El Toro, both located in California. Data for Marine Corps Base, Camp Lejeune, North Carolina were sought but found to be unavailable in composite form. In addition to Marine Corps statistics, information concerning PREP experience at the U. S. Army Training Center at Fort Ord, California was also obtained. Figures 9 through 11 portray the data gathered.

It was discovered that there was a wide disparity in records kept at the several military installations from which data concerning PREP participation were sought. For that reason, extreme care is recommended when reading and comparing the information contained in Figures 9 through 11. One area for caution pertains to the composition of the figures comprising the average daily number of NHSG's at all three installations cited. Included in them are an unknown number of personnel who were ineligible to participate in PREP due to their not having completed 180 days of active duty service. Since the participation factors developed are rough estimates, it was assumed that approximately equal numbers of such ineligibles were included in the figures of

each installation examined. Other specific areas where caution should be exercised will be discussed in the following subparagraphs.

a. Camp Pendleton Statistics

Figure 9 displays statistics of the participation of military personnel at Camp Pendleton in PREP during CY 1973. Members of the 3rd Marine Aircraft Wing (El Toro) stationed at Camp Pendleton were included in Camp Pendleton's count. The data concerning numbers of courses presented, students started, students completed and students attaining a HS diploma were obtained from records of the Army & Navy Academy, Carlsbad, California, the accredited local high school which provided the classes for Camp Pendleton's PREP. The approximate number of NHSG's stationed at the base on a given day during 1973 was calculated by averaging end of year 1972 and end of year 1973 official HQMC personnel report counts reflecting NHSG populations.

Only the aggregate number of HS diplomas awarded (193) during 1973 was readily available. This figure is not truly reflective of those who worked toward and obtained their HS diploma during this period, because within the 193 there are those Marines, or former Marines, who may have participated in courses offered by the Army & Navy Academy in previous years, completed the requirements for a diploma elsewhere, and finally been granted the diploma by the Academy. The 193 figure, however, is used

PREP Results at Camp Pendleton, California for CY 1973

Courses Finished in	No. of Courses	Students Started	Students Completed		Students Attained HS Diploma	
			No.	%	No.	%
Jan	3	73	43	59	Breakdown of these data not obtained	
Feb	3	170	121	71		
Mar	5	264	154	58		
Apr	3	109	56	51		
May	5	258	139	54		
Jun	4	227	135	59		
Jul	4	131	90	69		
Aug	4	321	219	68		
Sep	3	180	120	67		
Oct	4	311	193	62		
Nov	5	157	92	59		
Dec	4	263	181	69		
Totals	47	2464	1543	63	193	7.8
Participation Factor (%)[1]		28.4	17.8		2.2	

[1] Average daily number of NHSG's at Camp Pendleton during CY 1973 was 8670 (8627 at end of CY 1972 and 8712 at end of CY 1973). Participation factor shows % of NHSG's who enrolled in individual courses, not a complete HS program. In "Students Started" and "Students Completed" columns an individual could be counted several times during the year, once for each course in which he enrolled.

FIGURE 9

to demonstrate the small percentage of those participating who received a diploma and, therefore, is considered sufficiently accurate for this purpose.

Another feature to be identified in both Figures 9 and 10 concerns the numbers of "students started" and "students completed". As pointed out in the footnotes to these Figures, the numbers appearing in these two columns are to be interpreted with care. An individual may have required completion of several courses to accumulate the necessary credits to qualify for a diploma. In accomplishing this he may have taken several courses throughout the calendar year, and he would be counted as a "student started" and a "student completed" for each different course in which he enrolled, which could be as high as seven.[15] Because of this method of record keeping, it is difficult to compare the participation factors shown in Figures 9 and 10 with those in Figure 11. However, the statistics do present an indication of the participation in PREP, regardless of how well they compare, one to another.

b. El Toro Statistics

Figure 10 shows statistics for PREP participation by servicemen at MCAS, El Toro during CY 1973. Those 3rd Marine Aircraft Wing (El Toro) personnel stationed

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[15] Interview with Col. M. A. COOPER, USMC (Ret.), Associate Dean, Army & Navy Academy, Carlsbad, California, 10 Apr 1974.

PREP Results at MCAS, El Toro[1], California for CY 1973

Courses Finished in	No. of Courses	Students Started	Students Completed		Students Attained HS Diploma	
			No.	%	No.	%
Jan-Jun[2]		781	365	47	Breakdown of these data not obtained	
Jul	4	170	73	43		
Aug	4	122	82	67		
Sep	5	159	104	65		
Oct	4	81	38	47		
Nov	7	188	100	53		
Dec	5	161	79	49		
Totals		1662	841	51	151	9
Participation Factor (%)[3]		63.5	32.1		5.8	

1. Includes MCAS(H), Santa Ana, California.
2. Data available only in aggregate.
3. Average daily number of NHSG's at El Toro during CY 1973 was 2618 (2517 at end of CY 1972 and 2719 at end of CY 1973). Participation factor shows % of NHSG's who enrolled in individual courses, not a complete HS program. An individual could be counted several times during the year, once for each course in which he enrolled.

FIGURE 10

permanently at Camp Pendleton for duty are not included in El Toro's count; they appear in Camp Pendleton's statistics in Figure 9. All data shown were obtained from the Joint Education Center at MCAS, El Toro and verified through the Adult Division of the Army & Navy Academy at Carlsbad. The Army & Navy Academy, as at Camp Pendleton, provided the courses for El Toro servicemen striving for a high school diploma via PREP. Personnel at the nearby air station at Santa Ana who participated in PREP (high school) are included in the data contained in Figure 10. Headquarters Marine Corps, again, furnished the records for calculation of average number of NHSG's during 1973.

The same cautions made concerning Figure 9 data apply to Figure 10. Additionally, detailed information could not be gathered for the first six months of CY 1973 for El Toro, but the aggregate figures were available.

c. Fort Ord Statistics

Figure 11 portrays data for U. S. Army personnel at Fort Ord who participated in PREP during CY 1973. The data shown were obtained from the Army Education Center at Fort Ord. The information presented in the Figure differs markedly from that presented in Figures 9 and 10. Here, the term "course" refers to a 12 week, four hour per day, on-duty time instructional cycle[16] during which the students

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[16] Changed to an eight week course in 1974.

PREP Results at Fort Ord, California for CY 1973

Course Dates	No. Started	No. Completed		Attained GED Certificate		% Attained GED Score		Attained HS Diploma	
		No.	%	No.	%	45 Ave. or higher + 35 min. in each area	45 Ave. or higher or 35 min. in each area	No.	%
8 Jan - 30 Mar	25	17	68	14	56	20	66.1	3	12
20 Feb - 18 May	34	23	68	18	53	18.7	75	7	21
2 Apr - 29 Jun	27	22	81	20	74	59	95	7	26
21 May - 10 Aug	31	21	68	18	58	31.2	77.6	6	19
2 Jul - 21 Sep	29	18	62	18	62	27.7	72.4	7	24
13 Aug - 2 Nov	32	27	84	21	66	21.2	65.5	8	25
24 Sep - 14 Dec	28	19	68	16	57	Figures Not Available →			
Totals	206	147	71	125	61			38	18
Participation Factor (%)[1]	4.8		3.3		3.0				.89

1. Of 4250 Army enlisted personnel who were NHSG's this line shows percentages of (1) those who took advantage of the program, (2) those who completed, (3) those who attained a GED equivalency certificate, and (4)those who obtained a HS diploma from the Monterey, California Adult High School. 4250 obtained by averaging the numbers of Army NHSG's at Fort Ord at end of Dec 1972, and Jun and Dec 1973.

FIGURE 11

concentrate on the subjects needed for successful completion of their secondary schooling. Although much emphasis is placed on subjects applicable to the GED test battery, the attainment of a HS diploma is the primary objective of PREP instruction at Fort Ord. Before PREP, however, an eight week remedial reading course is offered for those who need its assistance. Credits gained through successful completion of the 12 week course are acceptable toward a HS diploma, awarded by the Monterey Peninsula Unified School District, providing sufficient Carnegie units are accumulated as required by the State of California.

As can be seen from Figure 11, Fort Ord's records were much more complete regarding each student's success, especially with the GED test battery, after completion of the courses under PREP. The records available from the Army & Navy Academy for students from Camp Pendleton and El Toro did not reflect GED completion history, as these data were recorded at the individual's unit. The GED test battery is important in all three commands' education program, but methods of record keeping varied widely.

The participation factor in Figure 11 is a reliable statistic as there were no duplications in the number of soldiers who started the seven courses listed.

d. Summary of Statistics

Demonstration of participation in the high school level courses presented in PREP is the purpose for including Figures 9 through 11 herein. A comparison of the

data from the three installations is at best difficult because of the inherent duplicative nature of the number of participants at the Marine Corps base and station. For ease of comparison the most important statistics from Figures 9 through 11 have been summarized in Figure 12. The

SUMMARY OF CY 1973 PREP PARTICIPATION

(1) Installation	(2) Started No.	(3) Completed No.	(4) Completed %	(5) Attained HS Diploma No.	(6) Attained HS Diploma %	(7) NHSG's (ave.) No.	(8) Participation factor (2 ÷ 7) %
Camp Pendleton	2464	1543	63	193	7.8	8670	28.4
El Toro	1662	841	51	151	9.0	2618	63.5
Fort Ord	206	140	68	38	18.0	4250	4.8

FIGURE 12

participation factors (column 8) for Camp Pendleton and El Toro when compared with those at Fort Ord are inflated to an unknown degree because of the duplicative nature of the data contained in columns (2) and (3), as discussed earlier. Therefore, for Camp Pendleton and El Toro the true participation factors, obtained by dividing the number of individuals in PREP by the average daily number of NHSG's at the installation, are not obtainable from the data as presently recorded. Assuming, then, that they are quite high, due to duplicate counting, it would be expected that they would be

significantly lowered if the true participants could be identified. The calculation of these more reliable factors would most certainly show a low participation in PREP compared to the numbers of servicemen lacking a HS diploma or GED certificate at all the installations. Actual computation of the true participation factors from the records of the Army & Navy Academy would be a monumental task, well outside the realm of feasibility of this study.

The above difficulties with recorded data notwithstanding, the figures shown in column (6) of those who were able to earn a HS diploma are probably a closer approximation to reality. Duplicate counting does not appear here; however, the figures cannot be relied upon to report with 100% accuracy the diplomas earned as a result of CY 1973 courses taken, as discussed above. Even though this is so, it is interesting to note that Fort Ord's HS diploma awards were much higher than Camp Pendleton's or El Toro's. This could be attributed to the differences between the Marine and Army methods of presenting the PREP instruction; a full on-duty time course permitting greater stability in class attendance would appear to yield better results than an extended, off-duty time program.

IV. ALTERNATE SOLUTIONS TO THE PROBLEM

With both a description of the problem and a discussion of the present situation in mind, an examination of alternative solutions to handling this problem of education for servicemen, specifically for Marines, will now be presented.

Two assumptions are made at the outset. The first is that any program, including each alternative outlined below, which will increase the educational level of the present NHSG population of the Marine Corps, will be beneficial to the individual and to the service from an expected performance viewpoint. This assumption is necessary as a foundation upon which to develop the alternatives that follow.

The second assumption is that PREP offers the most attractive method among those discussed herein for the majority of servicemen to obtain a high school education while in the military. This is based primarily on the fact that the VA pays for all costs to the students enrolled in PREP.

Before the alternatives are examined individually, a presentation of benefits and obstacles which affect them all equally should be made. The benefits have already been reviewed in Chapter II, where the need for education was discussed under a description of the problem. Greater equity in competition for advancement, reenlistment, assignment of an MOS along with qualification for formal military

schooling and commissioning and warrant officer programs are seen as benefits to educational programs, no matter what structure is selected for implementation. Additionally, there are the expected benefits of fewer disciplinary problems and later, after military service is completed, a citizen more able to assume a productive position in society.

An obstacle faced by all the programs is the uncertainty surrounding the assumption of GED testing for the military services. With the disestablishment of USAFI, a great gap has opened in the capability to measure HS educational attainment of servicemen. Procedures for closing this gap are being developed at this writing, and it is expected that a reasonable solution will be forthcoming in the near future. Without the services formerly provided by USAFI, servicemen will experience a slowdown and possibly a temporary stoppage of GED testing, so necessary under our present system for objective attainment. This prospect is viewed as an obstacle to each alternative solution presented.

A. ALTERNATIVE A - PREP FUNDED BY VA AFTER 180 DAYS

This alternative contemplates a continuation of the present method, i.e., the offering to servicemen, with more than 180 consecutive days of active duty, courses defined as:

> "a. Those offered for high school credit by a Veterans' Administration approved educational institution which are required for a high school diploma or equivalency certificate.

"b. Those noncredit courses offered as deficiency, remedial or refresher courses by a Veterans' Administration approved educational institution which are required for entrance to an institution of higher learning, or for a vocational training program and are designed to overcome educational deficiencies." [Ref. 15, p 6-3].

The VA assumes the full burden of course costs to the student in this alternative with no loss of GI Bill entitlements. Duty time which can be used for attending classes may be authorized by local commanders but will be consistent with the needs of the military service. Experience has shown that the majority of such classes at Marine Corps installations is held during off-duty time, such as over the noon hour or after regular working hours in the evening.

1. Desirable Features

As presently established within the Marine Corps a student seeking a HS diploma may proceed toward that goal at his own speed, allowing for periods of time when his unit's activities (operational and/or training) will not permit class attendance on the required regular basis. Students generally enroll in one course at a time, a process which ultimately results in the spreading of effort over several months, depending on the deficiencies of each student. This enrollment flexibility permits a choice of when to enroll in the various credit courses needed, thus providing a greater satisfaction of the student's, as well as the military's, needs.

Duty time used for class attendance can be held to a minimum with this method, resulting in minimal costs to

the Marine Corps with respect to lost time on the job. In cases where local commanders authorize duty time for PREP class attendance, there is a cost to the Marine Corps as a result of this policy. Productive performance of the student who is absent from his duties while at class is the cost envisioned and, more correctly, should be viewed as a value lost. To affix a dollar value to such a cost in general would be difficult, although it probably would be a function of the student's rank, his job and the proficiency of his normal job performance, the latter being the most elusive in attaching a monetary value. Therefore, the specific cost involved here will be assiduously avoided and suffice it to say that the cost would theoretically be a function of the factors just named. The cost question could be reduced to a more manageable, although admittedly less complete, form by considering only the student's pay as the value lost while at PREP training. This common denominator eliminates the inherent complexities involved in attempting to measure how well a particular Marine performs his job and allows a reasonable comparison of costs based on an expected average proficiency of all students.

2. Undesirable Features

The features of this method considered to be undesirable are in effect the opposite view of the two desirable features mentioned above. The prolonging of the student's efforts due to nonconsecutive course enrollment

can have very definite effects on individual initiative to follow a lengthy program through to completion. Flexibility in when to enroll may be a formidable enemy of initiative, especially when the objective is several, six week course sessions away. Whether this flexibility is a desirable or undesirable feature actually is dependent upon the perseverance of the Marine involved. Another factor that may cause a student's interest to wane would be the unforeseen interruption in the midst of a course, caused by operational contingencies or a change in training plans. This kind of a situation where the educational process is relegated to a catch-as-catch-can basis will take its toll among those enrolled, who have previously demonstrated their inability to "stick it out" while in civilian high school.

At commands where considerable duty time is authorized for use in attending PREP classes, the costs (value lost as discussed above) will be significantly greater. But it could be argued that this is not an undesirable feature at all, since from the standpoint of the local commander, the benefits expected to accrue from better education may more than offset the lost value at job performance caused by the student's class attendance. Would it be prudent for him to allow such use of duty time if he felt otherwise? The fact does remain, however, that when confining our examination of costs to the immediate future as opposed to the long range "big picture", costs attributed to increased use of duty time for civilian education are not insignificant

from the pure dollars and training proficiency viewpoints. Duty time spent away from regularly assigned training has a definite adverse effect where teamwork requires the coordination of all members of the group to ensure smooth and efficient performance in combat. This disadvantage is seen as the main undesirable characteristic of using large portions of duty time for PREP instruction.

A comparison of the total numbers of servicemen who started PREP classes with those who completed them at Camp Pendleton and El Toro reveals a completion factor around 58%.[17] There are many reasons for this low percentage of completions; among them are transfers, maneuvers or unit field problems, assignment to guard or mess duty, emergency leave or chance for annual leave, punitive or administrative discharge, disenchantment with the course, poor classroom facilities, and pressure from the student's non-commissioned officers concerning time off (when not granted to other unit members) from regular duties.[18] Some of these reasons could be cured by a system which exercises more control over the students and coordinates their available time more efficiently. (Additional comments regarding this idea will be

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[17] From Figure 12, total completed (2384) divided by total started (4126).

[18] Interview with Col. M. A. COOPER, USMC(Ret), Associate Dean, Adult Division, Army & Navy Academy, Carlsbad, California, 10 Apr 1974.

presented below). This high percentage of non-completions (42%) is seen as a serious, undesirable characteristic which could be alleviated using other methods.

B. ALTERNATIVE B - PREP FUNDED BY VA AFTER RECRUIT TRAINING AND INFANTRY TRAINING SCHOOL

Recruit training (RT) and Infantry Training School (ITS) for Marines on the west coast are combined into a three phase, eleven week training program presented at MCRD, San Diego, and Camp Pendleton, California. Following graduation therefrom and after a ten day leave period, the graduates report to their first duty assignments. This alternative, as well as the two following, envisions an interruption of this flow with the insertion of a remedial high school level education program for NHSG's between the leave period and the Marine's first duty assignment. Herein the adult divisions of the local civilian high schools or other VA approved educational institutions would provide the credit and noncredit courses as is presently being done (discussed in par. A above). The VA provides the funding as in Alternative A; the eligibility requirements are changed to permit servicemen with less than 180 consecutive days of active duty to participate. The students are billeted at military installations which can provide existing living and classroom facilities and which are located in proximity to the schools presenting the courses. A modest-sized unit, subordinate to an existing organization, is established for the purpose of providing administrative support for and control

of the students. Housekeeping and guard duties are assumed by the students with a minimum of supervision by a small number of permanently assigned personnel. The length of the course would vary depending upon the high school level credits each Marine had earned earlier; this information is obtained from home town high schools during the RT/ITS cycle. The program established under this alternative would initially be voluntary. At such time when the number of volunteers begin to dwindle, assignments to the program could be directed, but this could have an adverse effect on the performance level of the students.

A change in the method of initial assignment of a basic MOS is also contemplated by this alternative. Students enrolled in the program would be given an opportunity in the latter stage of instruction to retake the A-A Test battery for the purpose of demonstrating newly acquired knowledge and skill to be evaluated in HQMC's determination of a recommended MOS [Ref. 5, p 3-3].

Alternative B comprises a substantial departure in several respects from the presently employed procedures for Marines to complete their high school education while in the military. The NHSG Marine enrolled in the program would become a full time student of high school level subjects interspersed with the Marine Corps' physical fitness program and selected military subjects. Changes in the present HS adult class scheduling would be necessary with some increase

in teachers to be expected. Military impacts of such a scheme are outlined below.

1. Desirable Features

Compressing the educational requirements into a shorter period would allow students to complete their remedial schooling much more rapidly than is presently possible, allowing full attention to be paid to military duties assigned at the first duty station where duty or off-duty time would not need to be sacrificed for education class attendance. The Marine would be ready to go to work unencumbered by an outside education requirement competing for his time.

Through the knowledge and skill attained while attending classes, it could be expected that the student's A-A Test scores would show an improvement upon retesting. These expected higher scores could be helpful in obtaining the initial MOS assignment more in keeping with the student's personal preferences, although no guarantees could be predicted or given.

Voluntary enrollment in the program would tend to ensure a student body with a high interest in education. (If assignment had to be resorted to, a drop of this interest level should be anticipated). Classes composed of volunteers would be more likely to be conscientious than a group which included personnel directed to attend, and, which, as a result, would be more disruptive to the program.

2. Undesirable Features

The most undesirable feature of this alternative concerns the present authority granted to the VA by law [Ref. 18], which in effect states that active duty members of the Armed Forces are not permitted to partake of PREP benefits until they have served more than 180 consecutive days on active duty. Alternative B schedules the newly graduated recruit to start PREP instruction at a time when he has had approximately 90-95 days on active duty. Congressional action, involving the passage of a public law, would be necessary to lower the 180 day prerequisite to a level allowing VA funding. Changing a public law is not a frivolous venture and must be embarked upon with fairly significant benefits to be gained from such an alteration. While such a task might seem formidable, it is not hopeless. This situation and required corrective action are included as undesirable features for two reasons: (1) current law restricts implementation of this alternative and (2) considerable high level effort is required to have title 38, United States Code [Ref. 18] changed.

Another implication of this alternative with undesirable characteristics involves the costs which would be experienced by the Marine Corps. The present method of employing PREP involves no cost to the military services, except where local commanders authorize duty time for class attendance (discussed earlier herein). Alternative B incorporates several costs, some small, others large. These

include, but are not necessarily limited to, costs of (1) staffing of the small unit for control of the students, (2) use of classroom and billeting facilities, (3) increased administrative processes, (4) value lost due to the shortened productive period the Marine will spend at his duty assignment before his enlistment expires, and (5) the foregone value of reduced readiness caused by delayed reporting to first duty assignment. Appendix A discusses these cost factors in more detail.

Increased costs in these times of constrained expenditures require even greater off-setting benefits before the programs they relate to can be expected to be approved.

C. ALTERNATIVE C - FUNDED BY USMC AFTER RECRUIT TRAINING AND INFANTRY TRAINING SCHOOL

Most of the features of this alternative are identical to those describing Alternative B, with the major exception of the funding aspects for the education program. Herein it is assumed that current eligibility requirements for PREP could not be changed, and funding by that means is not available, causing a reliance on a sponsor other than the VA. The same educational institutions would provide the necessary classes, but the Marine Corps would budget and pay for the cost of the schooling.

1. Desirable Features

The desirable characteristics of this alternative are the same as for Alternative B. No new desirable features

are seen as being generated by Marine Corps funding of a remedial HS level education program, but some additional comments are in order concerning the earlier attainment of the same counter-balancing benefits discussed in paragraph D, Appendix A. Somehow a determination must be made of the value of the trade-off between additional cost for education and military performance. The point at which one more dollar spent on education produces no better performance is the theoretical optimum cost/benefit trade-off point needed for efficient application of educational funds. But this point, as can be imagined, eludes simple calculation. Subjective judgment, then, must be substituted for this inability to compute the theoretical trade-off point, caused by the absence of objective cost-performance data. Subjective judgment can be influenced by results of experiments which attempt to measure performance changes resulting from application of funds earlier in the initial enlistment for remedial education in the military services. These experiments, however, would require a relatively long period to conduct.

2. Undesirable Features

Here, also, the same undesirable features apply as in Alternative B, except that an additional burden is present. To Appendix A must be added the cost factors of funding the student's HS education, which include costs of tuition, books and course related supplies. At present the fee charged by the Army & Navy Academy which provides PREP

courses for Marines stationed at Camp Pendleton and El Toro is $1.59 per contract hour, or $100 for each high school course.[19] This amount would closely approximate the cost to the Marine Corps for each Marine's schooling under this alternative, and, of course, the aggregate cost over any given period would be a function of the number of students enrolled. Adding these schooling costs to those already outlined in Appendix A would significantly increase the cost of providing the opportunity for Marines to obtain a HS diploma earlier in their enlistment than is presently done.

The proposal to assign the funding to the Marine Corps for remedial HS education of its NHSG's would involve significant changes to plans, programs and budgets prepared at HQMC. But going beyond this consideration, such action should reduce the same activity, especially the budgeting of funds, within the VA. It appears that this alternative merely is a transfer of funding responsibility from the VA to the Marine Corps, and involves no change in amount, but rather a change in time of application of those funds. This argument is limited to the tuition costs borne by the VA at present, since additional costs discussed in Appendix A would still require Marine Corps funding.

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[19] Information Brochure, Army & Navy Academy, Adult High School Division, Carlsbad, California.

D. ALTERNATIVE D - FUNDED AND OPERATED BY USMC AFTER RECRUIT TRAINING AND INFANTRY TRAINING SCHOOL

This alternative envisions total funding for and operation of a remedial HS level education program for NHSG's by the Marine Corps. Differences from previous alternatives can be addressed basically as the establishment and operation of an accredited high school by the Marine Corps and the necessary funding to support such a program. These military high schools would be located at the MCRD, San Diego and at Camp Lejeune, North Carolina,[20] and would offer courses consistent with the individual Marine's needs to satisfy local or home state requirements for the award of a HS diploma. Enrollment would be voluntary initially, with the option of being changed if participation lags. Teachers and school administrators would be hired, and a school curriculum would be developed and put into effect. The school would be operated and controlled completely by the Marine Corps. Funding for teachers, administrative overhead, facilities, text books, course related supplies, a military staff for control of the students (as proposed in paragraph A, Appendix A) and for the school's board of directors, and supporting school activities, such as a library, all would be budgeted for by the Marine Corps. Assignment to the school would be

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[20] ITS on the east coast of the U. S. is located at Camp Lejeune, N. C. and follows completion of Recruit Training at Parris Island, S. C.

effective immediately following completion of ITS and a ten day leave period; course length would, again, depend on the Marines' needs. Retesting of the A-A Test battery would also be a feature of this alternative to permit better assignment of MOS's by HQMC.

1. Desirable Features

The desirable features of this alternative include all the benefits derived from an earlier achievement of high school level education mentioned in Alternative B. The feature which is the most significant is the expected increase in individual performance on any job, stemming from the benefits accrued from the education received, which creates a more equitable competition base among the Marine's contemporaries.

2. Undesirable Features

Along with the desirable characteristics of this proposal must be weighed those which are not so desirable. Cost, of course, is the most glaring drawback to this plan and would well exceed that of any of the other alternatives presented. Veterans' Administration funding support would not be available due to the 180 day eligibility restriction. All the costs of Alternative C would be encountered plus the added costs of establishing the school and its program under the auspices of the Marine Corps. The planning alone for such a venture would amount to a sizeable task. The incremental costs over those experienced in Alternative C would consist of the establishment and annual operation of

the school. Costs associated with delays of the Marine reporting to his first duty station and reduced readiness, mentioned earlier, apply equally here.

Contained in the processes necessary to establish the school would be the satisfaction of requirements for state accreditation. The Education Code of California, for example, contains specific requirements which must be met concerning teachers' and administrators' credentials, adequacy of physical plants, and curriculum content, to mention a few, if accreditation is to be granted. An accreditation team representing the Western Association of Secondary Schools and Colleges would be required to closely examine the organization and program of the school before accreditation could be allowed. This lengthy process identifies the magnitude of the accreditation effort that would be inherent in the establishment of a high school operated by the Marine Corps.

Then there is the question, "Should the Marine Corps be involved in the educational system to this depth"? The mission of the Armed Forces is not to educate NHSG's so that they may earn a HS diploma, but at the same time, the military services are interested, to the point of action, to ensure that their members are as well qualified as possible. To do this, training and educational programs are necessary. Congress agreed by passing certain public laws providing for in-service educational opportunities as set forth in title 38, United States Code [Ref. 18]. The states of

the Union have assumed the responsibility for providing secondary level education, and for the military services to become involved in such processes seems very clearly to be in conflict with their stated missions and those of the various states.

V. COMPARISON OF MAJOR FEATURES

With the desirable and undesirable characteristics of the four alternatives behind, it is now possible to compare them for the purpose of determining their feasibility of use. Feasible is defined by Webster[21] as "capable of being done or carried out; practicable; possible" and "capable of being used successfully". It is this connotation of practicality and capability of successful use upon which the following discussion will be focused.

A. READINESS VS. PERFORMANCE

Alternative A (PREP funded by VA after 180 days) permits a greater amount of freedom in selection of the time when the NHSG will take the necessary courses for HS diploma attainment. The other alternatives compress this voluntary schooling into a shorter time period, forcing more concentrated effort but yielding the objective more rapidly. Further, Alternatives B, C and D, while requiring a block of several weeks for the schooling, eliminate the need for use of duty time for the same type of schooling on a sporadic basis, once the Marine reaches his first duty station. There are benefits to both methods. In the former, the

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[21] Webster's New World Dictionary of the American Language, College edition, 1966.

Marine is made available to his unit earlier and can thereby contribute positively to that unit's readiness, although duty time authorized for schooling may have an effect on team training. In most cases, however, it is felt that the commander would not excuse the student from duty time unless the effects on unit readiness would be minimal. The latter method as proposed by Alternatives B, C and D, postpones the Marine's arrival at his first assignment and negatively affects his prospective unit's readiness. But, when the Marine arrives, he is ready for full duty with no civilian type schooling to be concerned with and has increased his ability for performance on the job through his newly attained education. No guarantees can be made regarding his general performance; past experience as shown by statistics must be relied upon in the prediction of more acceptable overall conduct.

A feature used in the military services as a means for off-setting some of the costs resulting from value lost due to the shortened period of productivity caused by school attendance is the enlistment extension. Servicemen who volunteer to participate in a program as contemplated by Alternatives B, C and D would be required to extend their enlistment by a factor of the number of days spent in the HS program. This, in effect, would add the productive time lost back on to the end of his enlistment, where the Marine Corps could expect to benefit from the services of a Marine who had been educated with government funds.

It is evident that a trade-off between availability on the job and an expected increase in performance on the job must be made in order to arrive at the desired alternative. The Marine Corps is expected to maintain as high a readiness level as is possible, and individual Marines in appropriate numbers must be available in order to accomplish this. Keeping Marines in the "pipeline" longer, before they are able to contribute to a unit's effectiveness, seriously affects unit readiness by their absence. Their later arrival, however, is accompanied by an expected performance increase. Permitting Marines to participate in PREP as is currently done and is proposed for continuation under Alternative A, while detracting from readiness to only a mild degree, provides a less educated and an expected lower performer to his unit.

Do the benefits expected to accrue from Alternatives B, C and D outweigh the costs in terms of readiness and individual performance? Such a determination would be based on incomplete information without the results of actual experiments embracing the methods proposed by Alternatives B, C and D. In their absence a subjective assessment is required.

B. DOLLAR COSTS

As far as dollar costs are concerned, Alternative A costs the Marine Corps nothing, while Alternatives B, C and D progressively raise the price tag of remedial HS level

education in the Marine Corps. One of the major differences among the alternatives centers around the individual flexibility permitted in when the necessary courses under Alternative A are taken, and the organized, more controlled group educational plan outlined in the other alternatives. The cost of each of the Alternatives B, C and D includes fund expenditures for the staffing of a unit to supervise the students, for billeting and classroom facilities and for administrative processing. Alternative C (Funded by USMC after RT and ITS) calls for the added costs of tuition in payment for the courses offered by local adult HS education departments. A further increase in cost is seen in Alternative D (Funded and operated by USMC after RT and ITS) where the costs of establishing and operating a separate high school would be experienced.

The questions to be answered here are (1)"How much benefit would there be in return for the additional funds spent?" and (2)"Are such expenditures worth it?" The benefits of more equality in competition for advancement, reenlistment and assignment of initial MOS; qualification for military schools and programs; better expected performance; and a more stable citizen after completion of military service have been listed and discussed in detail above. In addition to these is the beneficial impact upon prospective enlistees that such a program will produce. It will say to him in no uncertain terms that the Marine Corps is not only interested in each Marine attaining a HS diploma, but that

it is willing to provide funds and time to assist him in this effort. This benefit must not be overlooked, especially in light of the current shortfalls and difficulties in obtaining enlistments. Further, it could be expected that a higher percentage of students would complete the courses and receive their diplomas than has been the experience in the past.

Since the programs discussed herein are all voluntary, it seems logical to consider that expenditures will be made eventually anyway for Marines who are or become interested in seeking a HS diploma. Under the present system available, they enroll in PREP courses after eligibility is earned by serving more than 180 days on active duty. Alternatives B, C and D are characterized by the earlier availability of the same instruction and at the same cost. It is true than an individual's interests change over the years, and there is the possibility that one who earlier had wanted to finish his secondary education, later might abandon that goal in favor of no further education at all. It is suggested, however, that this circumstance is less likely to occur than the direct opposite, where the individual becomes more and more aware of the value of education as he interacts with his peers and the realities of the world. This, if the assumption is valid, will develop incentive to strive for this education. Whether the serviceman attempts it at the beginning of or sometime later during his enlistment, the costs to the government for that

education will be the same. There are, of course, additional costs of administration associated with the provision of the program at the front end of the enlistment, but the benefits to be derived from the skills acquired earlier are expected to compensate for the increased expenditures.

It appears that the results of a program where more is done for the NHSG to help him obtain a HS diploma earlier in his enlistment are indeed useful, desirable and of definite value. However, calculating the worth or value of these benefits in the final analysis is reduced to a subjective judgment. If there could be some guarantee that the benefits discussed above would come to fruition, the task of assigning value to the alternatives would be made much easier. This is not possible, of course, without some experience using these methods, and, therefore, an assessment must be based upon what is expected to result.

C. PREP EARLIER

Congress' purpose for establishing the Predischarge Education Program was

> "to encourage and assist veterans in preparing for their future education, training, or vocation by providing them with an opportunity to enroll in and pursue a program of education or training prior to their discharge or release from active duty with the Armed Forces." [Ref. 18, p 9153].

While the intent of the Congress appears to be focused on equipping veterans with the educational background they will need as civilians after their terms of active duty have been completed, the method of PREP implementation, i. e., granting

PREP eligibility after 180 days of active duty, implies a consent for military personnel to benefit from the program well before the end of their enlistment. Although not a stated purpose of PREP, the benefits of this education are being enjoyed by the services as early as seven to eight months after enlistment, in the case of those Marines who are able to enroll soon after arrival at their first duty station. Since the VA-administered PREP yields such advantages to personnel with a major part of their enlistment ahead of them, it should be possible to convince Congress of the added benefits expected from (1) the application of PREP earlier in an enlistment and in a controlled environment, and (2) the continued administration of PREP by the VA even though the advantages of the earlier presented program will be accrued by the services for a longer period of time, thereby nominally moving the implementation of PREP further away from the originally intended time during the serviceman's enlistment. Precedent demonstrates that this latter consideration has not been a limitation in the use of PREP up to this time.

D. SUMMARY OF COMPARISONS

Taken in sum, the overall benefits are considered to outweigh the costs. Better performance should be worth waiting for and worth the additional expenditures and administrative effort necessary to achieve it. Any action that will increase the capability of the Marine Corps, or

any service for that matter, to gain and retain better educated and qualified personnel can be expected with reasonable certainty to enhance its effectiveness in the long run.

VI. CONCLUSION

When examined from the viewpoint of "capable of being done or carried out", each one of the suggested alternatives is feasible. But when practicality and successful use are also considered, the effects of dollar costs weigh heavily against the feasibility of Alternative D (Funded and operated by USMC after RT and ITS) and promise to render Alternative C (Funded by USMC after RT and ITS) unwieldy. Authorization of additional funds in the amount necessary to implement these two alternatives would encounter severe resistance in times of constrained government spending.

Alternative B (PREP funded by USMC after RT and ITS) is selected as the most feasible solution to the problem of NHSG education in the Marine Corps. It offers the most benefits for the smallest cost and promises to be practical and successful in its execution. Of course, there are hurdles to be negotiated before its implementation can be realized. First, the Congress must be convinced of the gains achievable in the employment of such a program. Those benefits are outlined in this thesis and should serve as a basis for initiating action to change title 38, United States Code [Ref. 18] entitled Veterans' Benefits.

Second, the Marine Corps must be willing to accept the extended time in training and education its NHSG enlistees will spend while on active duty before arrival at their

first duty assignment. This hurdle is seen as probably the highest since its implications affect readiness to such a great extent. With performance and the resulting elevated level of readiness identified as goals the Marine Corps is in fact striving for, quality should be worth the several costs herein discussed.

Alternative C (Funded by USMC after RT and ITS) may offer distinct possibilities for use if (1) Congress refuses to alter the present laws concerning veterans' benefits, and (2) in the event of (1), the Marine Corps were successful in having educational funds reallocated from the VA to its own use.

Since implementation of Alternative B is not feasible immediately, it is recommended that planning be commenced directly for the development of a pilot program, established along the general lines of Alternative B, for the purpose of measuring the costs and benefits generated from it. Funds should be requested for this experiment, with the results used in future years as justification for full implementation should the program prove successful and cost effective.

A scenario of the characteristics of Alternative B is presented in Appendix B for ease of reference.

It is further recommended that present PREP instruction (Alternative A) be continued to allow those Marines who are not desirous of participating in the Alternative B program an opportunity to complete their HS education on an off-duty basis.

APPENDIX A

Examination of Costs Attendant to Alternative B

The below listed items constitute factors to be considered in analyzing the costs associated with this alternative. No attempt has been made to affix a dollar value to them, principally due to the difficulty of measurement and secondarily because of the large number of variables involved, such as size, frequency and length of classes and availability of facilities. These factors are not presented as an exclusive examination of cost considerations, but rather as some major points to be included in cost analysis.

A. Staffing Costs

Staffing of a small unit to control students would consist of a minimum number of supervisory personnel as follows:

Billet	No.	Rank
CO	1	Capt/1st Lt.
1st Sergeant	1	1st Sgt/Gy Sgt
Troop Handlers	1*	SSgt/Sgt
Administrative Personnel	2	Cpl/L/Cpl

* 1 per 50 students estimated

Costs associated with troop handlers would be direct but variable, depending upon the size and frequency of classes in the program.

B. Facilities

Existing facilities not currently being used would provide the most desirable classroom and billeting spaces, if available. Costs would be composed of the usual utilities and some funds for preventive maintenance. In the event no facilities were in existence, the costs of new construction would be difficult to justify in light of the current high cost of such undertakings. This alternative rests on the assumption that existing facilities could be made available with only normal operating costs, as mentioned above, being required.

C. Administrative Processing

Additional administrative personnel to service the students while in the program have already been included in the staffing costs shown above. However, other processing would be necessary, for example, the correspondence to home town high schools to obtain HS transcripts of prospective students, additional processing at HQMC for computation of A-A Test scores and GCT levels due to retesting, the added burden of transfer order writing generated by an intermediate command inserted between recruit training and the Marine's first duty station, and the increase in service support required of the PREP unit's parent. All of these types of costs are extremely difficult to measure and, therefore, are equally as hard to estimate.

D. Value Lost

This cost is generated by the loss of productive time the Marine will be able to contribute at his duty assignment, when he finally arrives after his PREP course. The time remaining before the expiration of his enlistment will have been shortened by the length of time spent in PREP. Based on an earlier assumption made in this paper, this loss could be reduced to dollars and cents if it is agreed that a Marine's pay alone is a reasonable measurement tool. The length of the course affects this cost, and the aggregate cost to the Marine Corps, in terms of value lost, would be a considerable sum of money. It must not be forgotten, though, that there are counter balancing benefits which may tend to reduce these costs. Expected increase in performance alone, while unmeasureable by any simple yardstick, would favorably affect efficiency as well as effectiveness. The benefits attributable to a rise in self assurance and self-respect resulting from the attainment of a long sought after goal are without measure, but nonetheless, very real and of unlimited value to the recipient.

Another cost that should be addressed is one that, again, is difficult to quantify. The fact that the NHSG Marine who attends this proposed program is delayed in reporting to his first duty assignment, directly affects the readiness of the Fleet Marine Forces (FMF). His attendance at the proposed schooling leaves a void at the assignment he was scheduled to fill, and this adversely affects unit strength, which,

in turn, directly influences training readiness. A dollar value of this lost or postponed readiness cannot conceivably be calculated, but, it nevertheless is a quality factor to be considered in analyzing capabilities to meet required levels of readiness, as well as feasibility of this alternative.

APPENDIX B

Characteristics of Alternative B

The following description presents a synopsis of the characteristics of Alternative B, the choice selected as being the most feasible method of providing remedial high school level education for Marine enlistees.

What:	Remedial HS level education classes leading to a HS diploma.
Who:	Offered by VA approved educational institutions for all Marine enlistees who are NHSG's on a voluntary and full time basis.
When:	After recruit training and Infantry Training School but before assignment to first duty station.
Where:	At existing military installations (preferably the MCRD's) that (1) can provide living and classroom facilities, and (2) are located near schools that can offer the necessary HS curriculum.
Support:	Requires small administrative headquarters unit to satellite off an existing organization. Housekeeping and guard duties provided by students.
Length:	Varies depending upon each Marine's requirements to complete HS education.

Costs: Payment of educational institutions funded by VA.

To USMC:

(1) pay of small administrative headquarters staff.

(2) additional administrative processes.

(3) reduced readiness caused by Marines being in "pipeline" longer before first assignment.

Benefits:

(1) Greater enlistment incentive.

(2) Increased productivity and performance while on active duty.

(3) Earlier attainment of equality in competition for advancement and reenlistment.

(4) Earlier educational qualification for military schools and programs.

Action Required:

(1) Legislation to change PREP eligibility from 180 days active duty service to about 90 days.

(2) Programming of funds required for costs connected with small administrative unit and additional administrative processing.

(3) Establishment of procedures to incorporate extension of active duty contracts.

(4) Further study to determine satisfactory location for a pilot program, designed to measure costs and benefits for evaluation of future full implementation.

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