

AD A 077542

6

TO READ OR NOT TO READ

Final Rept.

LEVEL II

3

10

ANNE HOIBERG

11 Jul 75

12 10

14

NAV HLT HRSC HC-

REPORT NO. 75-55

16 F51524

17 MF51524002

DDC RECEIVED
DEC 3 1979
RECEIVED
E

DDC FILE COPY



This document has been approved for public release and sale; its distribution is unlimited.

NAVAL HEALTH RESEARCH CENTER

P. O. BOX 85122
SAN DIEGO, CALIFORNIA 92138

NAVAL MEDICAL RESEARCH AND DEVELOPMENT COMMAND
BETHESDA, MARYLAND

79 11 30 VA3
391 642

Handwritten initials/signature

To Read or Not to Read

Anne Høiberg

In 1972, when I arrived for the first time at the Recruit Training Command's Academic Remedial Training Division (ART) in San Diego, I faced a well-kept building which seemed to epitomize the no-nonsense type of architecture of the pre-World War II era that conveyed to me an air of solemnness and functionality. With this setting in mind, my thoughts raced to images of stark classrooms peopled with discouraged recruits being taught the rudiments of reading by stern, disinterested instructors. After only a few moments in the classrooms, however, these visions vanished as I noted the colorful posters and pictures on the walls, bookcases stocked with books, library tables that offered magazines and pamphlets, and blackboards etched with words divided into syllables which seemed to invite even the most casual observer to "sound out" every word on the list. More importantly, though, was the overall feeling of congeniality that pervaded the classrooms. Throughout the class and study areas, the atmosphere was filled with words of encouragement from an instructor listening to a student read aloud, with explanations gently voiced by a teacher correcting a student's worksheet, with sounds of laughter as an instructor acknowledged a comment from a student, with words of reinforcing praise from an instructor to a student enjoying a good grade, and with the muffled expressions of coaching as two students worked together. In such a setting, the joy of learning reigned!

The purpose of my visit to ART was to begin the data collection for a research project conducted by the Navy Medical Neuropsychiatric Research Unit (now the Naval Health Research Center). The project had been designed to assess the effectiveness of the program for improving reading skills and to evaluate the subsequent performance of ART trainees throughout their first enlistments. Feedback from that research would be used by personnel at ART and training planners at CNTT to determine whether or not the program was beneficial. The purpose of this article was to provide the

reader with a summary of the history, curriculum, and research findings obtained for that study.

The Academic Remedial Training Division was established in 1967 at the Naval Training Center, San Diego for the primary purpose of raising the literacy of Navy recruits who have difficulty absorbing military training because of a reading disability. The desired reading level goal of this remedial program is to attain a reading proficiency of at least the fifth grade, a level designated by BUPERS to insure fleet safety. Participation in this program, it is hoped, will help trainees function more effectively and safely in relation to their environment, their shipmates, and to themselves. In addition, the abilities acquired from this program would presumably improve the enlistees' self-confidence and self-esteem and, in extending these benefits further, their military and social endeavors.

The Navy's concern with the problems of the poor reader is more than a humanitarian one. A highly complex and sophisticated organization, such as the Navy, must rely upon men who exhibit common sense, make intelligent decisions, and read with a high degree of understanding. Navy school curricula are designed to teach the skills needed to operate, maintain, and improve the Navy's vast array of hardware. Even though the young men enlisted into the Navy have satisfactorily completed eligibility requirements, some of these enlistees have reading problems which could hinder their effectiveness and overall worth as sailors. The most important reason behind the establishment of ART, therefore, was the fulfillment of two functions: to meet the needs of "marginal" recruits and to provide the Navy with "fleet ready" sailors.

The program at ART consists of a two- to seven-week curriculum of classroom and individual instruction. Trainees are berthed on the main floor of the ART building whereas the classrooms, testing office, instructors' office, and library are located on topside. Although approximately twenty-five hours per week are dedicated to the reading program, trainees also perform military duties such as

holding inspections. Study hours on weekends and during the evenings are also included in the program.

Between 1967 and 1971 an average of 275 men per year were assigned to ART; during the last three years, however, the number of men has increased substantially from 598 in 1972 and 405 in 1973 to 785 in 1974. This enrollment influx was attributed to the introduction of new screening and selection techniques. Prior to 1973, if a recruit failed to pass the academic test during the third week of recruit training, he was sent to ART for an evaluation of his reading skills. After this assessment, a recruit could be assigned to ART if his reading grade level, as measured on the Gates-MacGinities Reading Test, was between the second and fifth grade. Since then, all recruits are administered a reading test on their second day of recruit training and those who have scores below the fifth grade, fifth month reading level, are re-evaluated at ART as possible assignees to the school. Collecting reading test scores on the entire recruit population, therefore, has resulted in a larger pool from which to select ART trainees. Because of the costs involved in administering and scoring these tests for all recruits, however, this selection procedure may be discontinued.

After determining that an enlistee has a reading grade level between the third and 5.5 grade level, he completes a series of tests at ART which aid the instructors in their selection of the appropriate program that he should follow. Three courses are offered within the new curriculum, "Individually Paced Instruction," a series designed by the instructors that allow a student to be self-paced under the close supervision of an instructor who is assigned to that student throughout his stay at ART. This new series consist of one phonics program and two reading courses; the content of these three is geared to the reading grade level and skills of the students. For those who have very limited reading abilities, assignment to the phonics class for approximately one week is recommended. The phonics instruction

is designed to help the trainees "sound out" at least 65 percent of the words that they will encounter in their subsequent reading. Upon completion of this class, the trainees can begin one of the reading courses.

All students are assigned to either the course for readers with skills measured below the fourth grade level of proficiency or to the program for those who read at ^{or} higher than the fourth grade. The reading grade level of each course gradually increases until the students are exposed to reading material above the mid-fifth grade level. The emphasis in these courses is upon improving comprehension; grammar and vocabulary are also taught. To increase the enlistees' interest, vocabulary words are selected from Navy manuals. In addition to completing the material in the course books, students work at improving their reading speed through the use of controlled reading, pacers, and timed tests. As they progress through their programs, the enlistees are evaluated on questionnaires and worksheets, which provide a means of discovering specific problem areas. When all of the course work has been satisfactorily completed, the students are given the final examination which, if passed, will qualify them for graduation from ART and assignment to a regular training company. For those who do not pass the exam, remedial work may be assigned or a discharge from the Navy may be recommended.

For purposes of the research project, information was collected on all recruits who had attended ART from March 1967 through September 1972. The data to be discussed in this article included scores for initial and final reading grade levels, the General Classification Test (GCT), Arithmetic Reasoning Test (ARI), and Mechanical Aptitude (MECH), as well as years of schooling completed prior to entry into the Navy. To present the most current data, information for average GCT and reading level scores was also obtained from the Comprehensive Document written by the instructors at ART in 1975. Computer tapes distributed by the Bureau of Personnel

were scanned at six-month intervals to obtain discharge information on all men who had been assigned to ART.

During this six-year time frame, 1517 men were assigned to ART. By dividing the sample into one-year time periods, it was possible to determine whether or not changes in these characteristics had occurred over time. From 1967 to 1974, average GCT scores were within a four-point range (31.6 to 35.3). The other aptitude scores of ARI and MECH were relatively stable over the six years; average ARI scores fell within the 37.4 to 39.0 range and average MECH scores varied slightly from 42.2 to 44.1. Average years of schooling completed steadily improved from a little over 10 years to an average of slightly above 11 years.

Average scores for reading grade level were also obtained for both the initial and final test administrations during the years of ART's existence. For initial scores, the averages ranged from 3.3 in 1967 to 4.3 in 1972 and 4.1 in 1974. The values for final reading grade level seemed to increase quite dramatically; these rose from an average of 3.9 in 1967 to 5.5 in 1972 and 5.9 in 1974. In tabulating the average gain in reading improvement over the years, the results indicated that increases occurred in average grades gained from 0.8 in 1967 to 1.3 in 1972 and 1.7 grades in 1974.

The program at ART, therefore, is quite effective in helping problem readers to improve their reading abilities. As can be inferred from the results obtained, the quality of the students assigned to ART, as reflected by average GCT scores, has changed only slightly over the years whereas the gains in reading improvement have increased quite substantially. The personnel and atmosphere within the school have no doubt contributed a great deal to the achievement attained by these recruits. All of the instructors are enlisted personnel who have either attended college or are college graduates. The curriculum also underwent some changes over the years, a finding that would not be unexpected from these instructors whose

primary concerns seemed to be the welfare of their students, how to teach effectively and how to improve the program. Class size ranges from eight to twenty and the teacher-pupil ratio is between four and ten pupils per instructor. Individual attention, therefore, is assured for each student. Teaching machines and other costly devices are not used at ART; most of the teaching aids have been designed and constructed by the instructors..

While these achievements in reading improvement are quite phenomenal for an average of three weeks in a reading program and, therefore, very commendable, the long-term effects of this program must be determined through an examination of the subsequent performance of men assigned to ART. In interpreting discharge information collected on these men, a dichotomous criterion of effectiveness and non-effectiveness was used to distinguish those who had successfully completed their active duty obligations from those who had not. An effective sailor was defined as one who had completed his first tour of duty and was recommended for reenlistment. Being on active duty would also fall into the effectiveness category. A non-effective sailor, conversely, was one who had either completed his active duty obligation and was not recommended for reenlistment or one who had been prematurely discharged for unsuitability, unfitness, misconduct, or bad conduct.

The discharge information divided into the two criterion categories indicated that the effectiveness percentage of ART trainees had increased over the years. That is, for those men assigned to ART in 1967, 35.6 percent were considered effective sailors whereas by 1971 and 1972, the percentages had increased to 51.2 and 60.3, respectively. These latter two percentages include a small number of men still on active duty. These results are lower than the rate of effectiveness for all sailors (72.4 percent). It would be interesting to tabulate the discharge information, as it matures, for ART assignees since 1972 to see if this trend continues.

In conclusion, this evaluation of ART has shown that participation in the program can help trainees improve their reading skills. For many of these young men, graduation from ART may be their first successful completion of a program, a factor that may contribute to an increase in the trainees' self-esteem and self-confidence. Another positive aspect of ART is that assignment to the program has provided the opportunity for these men to remain in the Navy. Without ART, most of these men would have been discharged. More importantly, however, is the finding that, although not as high a percentage as for all sailors, close to 50 percent of ART entrants within the last few years have performed effectively in the Navy.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER 75-55 ✓	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) (U) To Read or Not to Read		5. TYPE OF REPORT & PERIOD COVERED Final
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Anne Hoiberg		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Naval Health Research Center P. O. Box 85122 San Diego, California 92138		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS MF51.54.002-5014DX5F
11. CONTROLLING OFFICE NAME AND ADDRESS Naval Medical Research and Development Command Bethesda, Maryland 20014		12. REPORT DATE July 1975
		13. NUMBER OF PAGES 7
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Bureau of Medicine and Surgery Dept. of Navy Washington, DC 20372		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Academic Remedial Training (ART) Individually Paced Instruction General Classification Test (GCT) Percentage of Effectiveness Arithmetic Reasoning (ARI) Reading Grade Level Mechanical Aptitude (MECH)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The purpose of this study was to present the research findings of an evaluation of the program at the Academic Remedial Training Division (ART). A summary of the history and curriculum was also reported. Comparisons across years were conducted of average scores for initial and final reading grade levels, the General Classification Test (GCT), Arithmetic Reasoning (ARI), and Mechanical Aptitude (MECH), as well as gains in reading improvement, years of schooling completed, and percentages of successful completion of the first enlistment (effectiveness). These figures indicated (cont on back of page)		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102 LF-014-6401

Unclassified
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

20. ABSTRACT (con't from front of page)

that although average aptitude scores remained relatively stable over the years, average final reading grade level scores and average gains in reading increased quite substantially. The percentages of effectiveness ranged from 35.6 percent in 1967 to 60.3 in 1972 for men assigned to ART. The results indicated that the program has helped recruits improve their reading skills. The percentage of subsequent effectiveness of close to 50 percent was lower than th 72.4 percent reported for all sailors.

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced Certification	<input type="checkbox"/>
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A	