



Research Note 85-86

**AD-A160 508**

**EVALUATION OF THE McFANN, GRAY & ASSOCIATES'  
BSEP II CURRICULUM**

**Clifford P. Hahn and Susan C. Stoddart  
American Institutes for Research**

for

**Joan Harman, Contracting Officer's Representative**

**Instructional Technology Systems Technical Area  
Zita M. Simutis, Chief**

**TRAINING RESEARCH LABORATORY  
Harold F. O'Neil, Jr., Director**

**DTIC FILE COPY**



**U. S. Army**

**Research Institute for the Behavioral and Social Sciences**

**AUGUST 1985**

**DTIC  
ELECTE  
OCT 24 1985  
S D  
E**

Approved for public release; distribution unlimited.

**85 10 24 01 8**

**U. S. ARMY RESEARCH INSTITUTE  
FOR THE BEHAVIORAL AND SOCIAL SCIENCES**

**A Field Operating Agency under the Jurisdiction of the  
Deputy Chief of Staff for Personnel**

**EDGAR M. JOHNSON  
Technical Director**

**L. NEALE COSBY  
Colonel, IN  
Commander**

---

**This report, as submitted by the contractor, has been cleared for release to Defense Technical Information Center (DTIC) to comply with regulatory requirements. It has been given no primary distribution other than to DTIC and will be available only through DTIC or other reference services such as the National Technical Information Service (NTIS). The views, opinions, and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy, or decision, unless so designated by other official documentation.**

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM	
1. REPORT NUMBER ARI Research Note 85-86	2. GOVT ACCESSION NO. <i>AD-A160 508</i>	3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle) Evaluation of the McFann, Gray & Associates' BSEP II Curriculum		5. TYPE OF REPORT & PERIOD COVERED Interim Report 11/84-2/85	
		6. PERFORMING ORG. REPORT NUMBER AIR-34512-8/85-FR	
7. AUTHOR(s) Clifford P. Hahn and Susan C. Stoddart		8. CONTRACT OR GRANT NUMBER(s) MDA 903-84-C-0128	
		9. PERFORMING ORGANIZATION NAME AND ADDRESS American Institutes for Research 1055 Thomas Jefferson St., N.W. Washington, C.D. 20007	
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Research Institute 5001 Eisenhower Avenue Alexandria, VA 22333		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 2Q263743A794 3111 5120 053	
		12. REPORT DATE August 1985	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES 264	
		15. SECURITY CLASS. (of this report) Unclassified	
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution unlimited		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
		17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)	
18. SUPPLEMENTARY NOTES  Contracting Officer's Representative was Joan Harman.			
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)  Education, Basic Skills, Functional Literacy, Literacy, Program Evaluation			
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  This report covers the implementation of a newly developed and implemented BSEP II curriculum. The curriculum is paper-based, individualized and self-paced and uses material from the Soldier's Manual of Common Tasks. The curriculum was primarily designed to improve basic academic skills such as those measured by the Tests of Adult Basic Education (TABE). The curriculum included a Mathematics Course with seven separate modules, a Reading Course with three modules, and a Language Course with four modules. All courses and modules were directly related			

to subjects tested by the TABE.

Soldiers were pretested with the TABE. All soldiers scoring below grade level 9.0 in any subject area were to be assigned instruction in that area. Over half of the soldiers were posttested with the TABE and a quarter were posttested on the AFCT. The evaluation was based on data for 3713 soldiers, from seven FORSCOM posts, who were enrolled in the BSEP II program between 1 Nov. 84 and 28 Feb. 85.

Course enrollments varied from post to post and from module to module. Not all soldiers were assigned instruction in accordance with the 9.0 criterion. Some soldiers who pretested below 9.0 did not complete relevant instruction while a greater number who pretested above 9.0 received instruction.

The shortest program averaged 61 total class hours while the longest program averaged 137 hours. The percent of those hours devoted to supplementary materials ranged from four to 35%. The average number of workbook activity sheets completed per soldier was 47, varying from four to 21 per module.

Average pre-instruction scores on module tests ranged from 48% to 87% correct indicating that the soldiers initially had a fair grasp of much of the material. Average post-instruction scores on module tests ranged from 80% to 96% correct indicating that soldiers had learned from the materials but that complete mastery was not demonstrated.

For TABE Total Battery scores, 50% of the soldiers achieved the 9.0 standard established in AR621-5, but only 8% achieved a level of 10.5, a standard suggested by FORSCOM for AFCT retesting purposes. The reported success rates for the fifty-six combinations (seven sites by eight subtests) varied from 17% to 100% for the 9.0 standard and from three percent to 66% for the 10.5 standard. TABE score gains were demonstrated for all subject areas at all evaluation sites.

Of the sample for whom both preprogram and postprogram GT scores were available who pretested below GT 100, 53% posttested at 100 or above.

Improvement in reading comprehension as measured by specially designed CLOZE tests did not reach the target of improvement of twenty percent in correct responses. This finding is of little practical significance due to characteristics of the test instruments and procedures used.



Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



## TABLE OF CONTENTS

	Page
DD Form 1473	
Foreword	i
List of Tables	iv
Brief . . . . .	ix
Requirement . . . . .	ix
Procedures . . . . .	xi
Findings . . . . .	xii
Utilization of Findings . . . . .	xvii
 <b><u>CHAPTER</u></b>	
1. Introduction . . . . .	1
Background . . . . .	1
Development of the MGA Curriculum . . . . .	2
Goals of the Curriculum . . . . .	3
Description of the MGA Curriculum . . . . .	5
Assignment to MGA Modules . . . . .	6
Implementation of MGA Curriculum . . . . .	7
2. Evaluation Activities . . . . .	13
Introduction . . . . .	13
Goals of the Formal Evaluation . . . . .	14
3. Student Characteristics . . . . .	21
Description of the Database . . . . .	21
4. Results . . . . .	29
Introduction . . . . .	29
Similarities and Differences in Course Characteristics . . . . .	29
Did the Course Teach What It Set Out to Teach . . . . .	41
Meeting TABE Grade Level Standards . . . . .	45
TABE Test Score Gains . . . . .	48
Meeting the GT Standard of 100 . . . . .	58
Cloze Testing Procedures . . . . .	61
5. Factors Associated With Obtained Results . . . . .	65
Introduction . . . . .	65
Course and Student Variables . . . . .	65
Summary . . . . .	89

TABLE OF CONTENTS (continued)

6.	Analyses of GT and TABE Scores for Set of Midtermers . . . .	91
	Data Sources . . . . .	91
	Findings . . . . .	92
7.	Perceptions of Program Participants: Teachers . . . . .	103
	Site Visit Activities . . . . .	103
	Teacher Questionnaires . . . . .	104
8.	Perceptions of Program Participants: Soldiers . . . . .	129
	Site Visit Activities . . . . .	129
	Soldier Questionnaires . . . . .	129
	Summary . . . . .	147
9.	The Fort Lewis Experimental Program . . . . .	149
	Background Information . . . . .	149
	Major Differences Between FLX and MGA Programs . . . . .	150
	Description of the Fort Lewis Experiment . . . . .	152
	Classroom Observations . . . . .	155
	Supervisors' Ratings of FLX and MGA Students . . . . .	156
	Findings . . . . .	157
	Summary . . . . .	165
	References . . . . .	167
	APPENDIX A - Tables	
	APPENDIX B - Student Record Sheets, Module Record Sheets, Classroom Observation Form, and Questionnaires	

## LIST OF TABLES

		Page
Table 1-1	TABE Subtest Areas and Corresponding MGA Modules . . . .	4
Table 3-1	Population of Student Record Sheet Data . . . . .	22
Table 4-1	Mean Grade Level Score Differences for TABE Test Forms and Levels . . . . .	31
Table 4-2	Assignment to MGA Instructional Modules in with TABE Grade Level 9.0 Criterion . . . . .	33
Table 4-3	Percent of Soldiers Enrolled in Specific Courses and Modules . . . . .	34
Table 4-4	Average Time Spent in BSEP II . . . . .	37
Table 4-5	Number of Activity Sheets Completed . . . . .	38
Table 4-6	Correlation Coefficients Between Number of Activity Sheets Completed and Time Spent . . . . .	39
Table 4-7	Module Achievement . . . . .	43
Table 4-8	Reported Reasons for Leaving BSEP II Courses . . . . .	44
Table 4-9	Extent to Which TABE Grade Level Standards Were Met . . . . .	46
Table 4-10	Percent of TABE Grade Level Gains by Entry Grade Levels . . . . .	51
Table 4-11	Percent of TABE Grade Level Gains With and Without MGA Instruction . . . . .	53
Table 4-12	TABE Grade Level Gains . . . . .	54
Table 4-13	Mean Grade Level Scores on TABE Tests . . . . .	55
Table 4-14	Mean Grade Level Gains on TABE Tests . . . . .	56
Table 4-15	Mean Gains for All Posts on TABE Subtests by Grade Level . . . . .	57
Table 4-16	Preprogram and Postprogram GT Scores . . . . .	59
Table 4-17	Soldiers Meeting GT 100 Standard . . . . .	61
Table 5-1	Grade Level Scores and Gains in Relation to Direct MGA Instruction . . . . .	66

LIST OF TABLES (continued)

Table 5-2	TABE and GT Gains in Relation to Class Hours . . . . .	70
Table 5-3	TABE and GT Gains in Relation to Hours Reported Spent on Supplementary Materials . . . . .	72
Table 5-4	Correlations Between Program Hours and Grade Level and GT Gains . . . . .	73
Table 5-5	TABE and GT Gains in Relation to Number of Activity Sheets Completed . . . . .	75
Table 5-6	Correlations Between Number of Activity Sheets Completed and TABE Gains . . . . .	79
Table 5-7	TABE Grade Level and GT Gain Scores in Relation to Current Enlistment Status . . . . .	81
Table 5-8	TABE and GT Gains in Relation to Time Between TABE Pretesting and Class . . . . .	83
Table 5-9	Correlations Between Entry GT Scores and Gains . . . . .	84
Table 5-10	Results of Step-wise Multiple Regression Analyses on TABE Gains . . . . .	86
Table 6-1	Percent of Midtermers with Post GT Scores of 100 or Above with ETS Dates in 1984, 1985, 1986, and 1987+ . . . . .	93
Table 6-2	Midtermers Who Achieved 100 or Above on Post GT as Percent of Total Sample of Midtermers by ETS Year . . . . .	94
Table 6-3	Pre- and Post-BSEP GT Scores for Midtermers . . . . .	95
Table 6-4	Pre- and Post-BSEP GT Scores for Midtermers Who Entered BSEP Below 100 and Exited BSEP Above 100 . . . . .	96
Table 6-5	TABE Subtest Scores Predicting Scores of 100 or Above on the Post GT . . . . .	98
Table 6-6	Relationship of Post TABE Scores with Post GT Scores Above and Below 100 . . . . .	100
Table 7-1	Teachers Completing Questionnaires by Army Post . . . . .	104
Table 7-2	Teachers' Experience Teaching the MGA Curriculum . . . . .	104

LIST OF TABLES (continued)

Table 7-3	Teachers' Experience Teaching in Other Programs . . .	105
Table 7-4	Credentials of BSEP II Teachers . . . . .	106
Table 7-5	Certification of Teachers by Army Post . . . . .	106
Table 7-6	MGA Program Organization . . . . .	107
Table 7-7	Average Number of Students Per Class . . . . .	108
Table 7-8	Average Number of Supervisor Observations Per Month .	109
Table 7-9	Training Received by 101 BSEP II Teachers for MGA . .	110
Table 7-10	Different Kinds of Training Received by Teachers to Teach the MGA Curriculum . . . . .	111
Table 7-11	Teachers' Opinions of the Benefit of FORSCOM Teacher Training . . . . .	111
Table 7-12	Teachers' Ratings of the Class Management System . . .	113
Table 7-13	Teachers' Ratings of Activity Sheets as Instructional Tools . . . . .	115
Table 7-14	Teachers' Ratings of Student Record Sheets and Module Record Sheets . . . . .	116
Table 7-15	Teachers' Ratings of Accuracy of Module Previews and Reviews . . . . .	116
Table 7-16	Teachers' Opinions of Skills Taught by MGA Curriculum . . . . .	117
Table 7-17	Teachers' Preferences of Instructional Methods . . . .	118
Table 7-18	Mean Times Per Day Teachers Meet with Individual Students to Give Instruction . . . . .	119
Table 7-19	Practices of Teachers in MGA Programs . . . . .	120
Table 7-20	Teachers' Use of Military Materials . . . . .	121
Table 7-21	Teachers' Training to Use Military Materials . . . . .	122
Table 7-22	Difficulty Teachers Have Using Military Materials . .	122

LIST OF TABLES (continued)


Table 7-23	Teachers' Opinions of Effectiveness of Materials . . .	123
Table 7-24	Teachers' Use of Learning Center as Part of BSEP II Program . . . . .	124
Table 7-25	Percentage of Teachers Reporting They Give Instruction for GT Improvement . . . . .	125
Table 7-26	Type of GT Instruction Received by BSEP II Students .	126
Table 8-1	Questionnaires Completed by Soldiers . . . . .	130
Table 8-2	Mean Number of Weeks Attending BSEP II When Soldiers Completed Questionnaires . . . . .	131
Table 8-3	Highest Educational Level Attained by BSEP II Students . . . . .	132
Table 8-4	Mean Class Hours Absent from BSEP II Class . . . . .	133
Table 8-5	Students' Ratings of Outcomes Desired From Completing BSEP II . . . . .	134
Table 8-6	Students' Ratings of Their Likelihood of Being Able to Perform Specific Tasks After Completing BSEP. . . .	136
Table 8-7	Students' Reports of Teachers' Practices . . . . .	137
Table 8-8	Frequency of Use of Materials in Class . . . . .	138
Table 8-9	Soldiers' Ratings of Helpfulness of MGA Materials . .	140
Table 8-10	Teaching Methods Rated as Most Helpful to Learning . .	141
Table 8-11	Students' Evaluations of MGA Materials and Methods . .	142
Table 8-12	Students' Ratings of MGA Course Components . . . . .	143
Table 8-13	Students' Evaluations of Class Leader . . . . .	144
Table 8-14	Students' Ratings of Practices to Help Them Learn Better . . . . .	145
Table 8-15	Students' Assessment of Ability of MGA Curriculum to Improve Reading, Writing, and Language Skills Needed on the Job . . . . .	146

LIST OF TABLES (continued)

Table 8-16	Difficulty Level of MGA Curriculum . . . . .	146
Table 8-17	Students' Evaluation of Length of BSEP II Course . . .	147
Table 9-1	Supervisors' Ratings of MGA and FLX Graduates' Use of Reading Skills on the Job . . . . .	158
Table 9-2	Supervisors' Ratings of FLX and MGA Graduates' Use of Writing Skills on the Job . . . . .	160
Table 9-3	Supervisors' Ratings of MGA and FLX Graduates' Use of Mathematics Skills on the Job . . . . .	162
Table 9-4	Supervisors' Ratings of FLX and MGA Graduates' General Performance . . . . .	164
Table 9-5	Mean Grade Level Gains on TABE Subtests for FLX and MGA Students . . . . .	165

## BRIEF

### Requirement



In 1978 Congress mandated that on-duty education programs be related to soldiers' training and Military Occupational Specialty (MOS) needs. As part of the response to this mandate, the Army was to develop a job-related Army literacy program. The program was to be a functional Basic Skills Education Program (BSEP) designed for soldiers at their permanent duty stations. The new BSEP II program was to provide instruction in reading, writing, speaking, listening, and computing skills needed for them to perform military duties through the E-5 level.

The U.S. Army Research Institute (ARI) procured the contractual services of McFann, Gray and Associates (MGA) to develop an appropriate curriculum and course management system. The course was to be specifically designed for soldiers who tested below a 9.0 grade level on the Tests of Adult Basic Education (TABE). The primary objective was to bring soldiers up to the 9.0 level on all subtests of the TABE using a course management plan that would minimize the distractions that existing BSEP II programs were felt to have on effective accomplishment of unit training objectives. The curriculum was developed and field tested during the period September 1981 to September 1983. → see p.

The U.S. Army Forces Command (FORSCOM) adopted the curriculum and course management plan developed by MGA and introduced it at all FORSCOM installations in early 1984. Under the sponsorship of ARI, the American Institutes for Research (AIR) carried out a systematic evaluation of the MGA program at seven



FORSCOM sites. The AIR staff monitored several initial implementation cycles of the program before undertaking the evaluation described in this report.

→ The MGA curriculum was divided into three subject areas or courses: Reading, Language, and Mathematics. Each course was divided into instructional units, or modules. The course modules were directly related to the subtest areas found on the TABE as follows.

<u>Course</u>	<u>Modules</u>	<u>Related TABE Tests</u>
Mathematics	Decimals	Computation
	Fractions	Computation
	Measures	Computation
	Percents	Computation
	Whole Numbers	Computation
	Concepts	Concepts & Problems
	Story Problems	Concepts & Problems
Reading	Locators & Visuals	Comprehension
	Text	Comprehension
	Vocabulary	Vocabulary
Language	Capitalization	Language Mechanics and Expression
	Grammar	Language Mechanics and Expression
	Punctuation	Language Mechanics and Expression
	Spelling	Spelling

Soldiers were to be pretested on the TABE. They were to be assigned only to those modules for which they did not achieve the 9.0 grade level. After completing relevant modules, soldiers were to be retested on the TABE. A

primary objective of the evaluation was to determine the extent to which the MGA course had achieved its educational objectives. During the period that the MGA curriculum was under development and trial, there was a shift of interest in the outcomes from BSEP II. There was the desire that successful completion of BSEP II would allow soldiers to attain a General Technical (GT) composite on the AFCT of 100 or above. FORSCOM experience indicated that a TABE grade level of 10.5 was necessary. However, the curriculum was not redesigned to achieve either of these outcomes. This report describes the implementation of the MGA course at seven FORSCOM installations during the period 1 November 1984 through 28 February 1985 and the extent to which the course meets the Army's current expectations.

### Procedures

Seven FORSCOM sites were designated as evaluation sites for the formal evaluation. These sites were Forts Bragg, Campbell, Carson, Hood, Lewis, Ord and Polk. During the early implementation cycles of the MGA course, the AIR staff visited the evaluation sites, attended training and orientation sessions for the ACES and instructional staffs, and developed and introduced evaluation data collection instruments and procedures.

The primary data collection form was the Student Record Sheet (FORSCOM Form 150) which was used to collect personal information, test information, and course information. Secondary data sources included: a set of 14 Module Record Sheets, one for each of the 14 separate modules, that contained detailed data on module tests; a Soldier's Questionnaire which was used to obtain the reactions of participating soldiers to the course; a Teacher's Questionnaire which was used to obtain the reactions of the instructional staff to the course; and checklists used by the AIR staff to record their observations

during on-site visits during the course of the evaluation. Informal interviews were also conducted with instructional staff and participating soldiers during AIR staff visits to the evaluation sites. All Student Record Sheets and Module Record Sheets were completed by local post personnel at the evaluation sites and copies were forwarded to the AIR staff for analysis and reporting purposes.

## Findings

### Composition of the Sample

The primary data source from which objective data were obtained was the Student Record Sheet. After the AIR staff edited for completeness, clarity, and dates of attendance, the primary data base consisted of 3,713 cases. The range was from 311 cases from Fort Ord to 751 cases from Fort Campbell. Over four-fifths of the participating soldiers held ranks of E-3 through E-5. The sample included soldiers from 30 different Career Management Fields (CMF) with five combat CMF accounting for almost one-half of the sample. The sample was almost evenly split between Black and White with only a small percentage of other races. About one-tenth of the soldiers reported that English was not their native language. One-third of the sample was under 21 years of age and over one-half was 23 years or younger. Approximately nine out of ten soldiers in the sample were male. Over four-fifths of the soldiers reported that they held a high school diploma. The outcome most desired by soldiers from enrollment in the BSEP II course was an increase in their GT scores.

### Similarities and Differences in Course Characteristics

TABE test forms and levels. Not all soldiers were pretested on TABE Level D - Form 3 and posttested on TABE Level D - Form 4 as requested. The TABE D-4 yielded significantly higher grade level scores on the Mathematics subtests of

the TABE. The TABE Level M - Form 3 yielded significantly lower grade level scores than either the D-3 or D-4 formats for most of the TABE subscores. In order to avoid confounding TABE data because of level and form differences, only a subsample of approximately 2,600 cases that had taken the D-3/D-4 sequence was used for analyses of TABE scores in this report.

Course enrollments. For the various post-module combinations, from 53 percent to 82 percent of the soldiers were assigned to modules in accordance with the 9.0 pretest criterion. This means that between 18 and 47 percent, depending upon which modules are considered, were not assigned in accordance with the recommended procedures. The mathematics modules were most often assigned correctly and the Mechanics and Expression and the Spelling modules were most often assigned incorrectly. Most errors consisted of assigning instruction to soldiers who pretested above 9.0 rather than not assigning instruction to soldiers who pretested below 9.0. The preponderance of soldiers were enrolled in the Mathematics course but only a little over half were enrolled in the Reading and Language courses. The variance in course and module enrollment among posts was substantial.

Effort devoted to learning tasks. The total average class hours devoted to the MGA course ranged from a low of 61 at Fort Lewis to a high of 137 at Fort Bragg. The average number of those total hours spent on non-MGA supplementary materials ranged from three at Forts Carson and Ord to 48 at Fort Bragg. The percent of time spent on supplementary materials ranged from four percent at Fort Carson to 35 percent at Fort Bragg.

Overall, the average number of MGA activity sheets completed per soldier was 47. The average number per module was between four and seven for ten of the modules and between nine and ten for three of the remaining modules. The

observed variance was both between the number of sheets per module and among posts across all modules. The relationship between time spent and the number of activity sheets completed was not a simple linear one. More time spent was not necessarily associated with more activity sheets completed.

### Did the Course Teach What it Set Out to Teach?

No summary measures of preprogram and postprogram proficiency were available. Scores on module-specific tests given before and after instruction were therefore used to measure if soldiers learned what they were exposed to. Average preinstruction scores ranged from 48 to 87 percent correct indicating that the students initially had a fair grasp of much of the materials included in the course. Average postinstruction scores were considerably higher than average preinstruction scores indicating that learning of the materials presented had taken place. Since postprogram scores ranged from 80 to 96 percent correct, complete mastery of the materials was not attained.

### Meeting TABE Grade Level Standards

Grade level standards. Both AR 621-5 and the Contractor's Guide supplied with the MGA curriculum materials specify achieving a grade level of 9.0 as the objective of BSEP II. Because some posts have found that higher TABE scores are needed to increase a soldier's probability of obtaining a score of 100 or more on the GT composite of the AFCT, some posts have used a grade level of 10.5 as the goal to be met. In order to facilitate the broadest possible interpretation of results, we chose to examine the MGA course in terms of both the TABE 9.0 and 10.5 levels.

The reported success rate on the TABE Total Battery score was 50 percent for the 9.0 standard and only eight percent for the 10.5 standard. This is a conservative estimate because we asked installations to posttest on the total TABE whether or not relevant instruction had been given. The primary objective of 9.0 was achieved by 60 to 66 percent of the soldiers for six of the eight TABE subtests. The 10.5 level was achieved by 20 to 36 percent for each of the same six subtests. The relatively low percentages for the Spelling and the Mechanics and Expression subtests (26-48 percent and 8-18 percent respectively) were responsible for lowering the Total Battery score.

The reported success rates for the 56 combinations (seven sites by eight subtests) varied from 17 to 100 percent for the 9.0 standard and from three to 66 percent for the 10.5 standard. These rates are valid indices of the proportions of soldiers reported to have achieved the grade level standards; they are NOT valid indices to evaluate the quality of staff effort or the quality of the program in terms of cost/benefit concepts. There are too many differences among posts in the subject matter taught, the amount of time spent, and the testing procedures used, to allow for direct valid comparisons on those bases.

#### TABE Test Score Gains

The distributions of TABE gains revealed higher proportions of negative gains (losses) than expected. For every TABE subtest, the proportion of negative gains was lowest at the lower grade levels and highest at the upper grade levels and the progression approached an accelerating linear function. Topping- and bottoming-out of the score distributions, the manner in which grade level equivalents are derived from raw item scores for the TABE, and the

effects of regression toward the mean could all help account for the distributions obtained.

Mean posttest scores ranged from a low of 8.6 for Spelling to a high of 10.4 for Computation. The Spelling subtest was the only one for which the overall mean postprogram level did not reach the 9.0 standard, and, of course, none of the average postprogram scores reached the 10.5 standard. Average scores for individual posts did achieve both standards. Mean pretest scores for the three reading subtests exceeded the 9.0 standard whereas the grade levels for the other subtests ranged from 7.9 to 8.2. Greater gains were made in the mathematics area than in the reading area. Whereas there were some differences among posts, greater gains were made in the mathematics area than in other areas at all posts. Greater gains were made by the primary target group than by soldiers with higher entry scores.

#### Meeting the GT Standard of 100

Eighty-nine percent of the soldiers had preprogram GT composites below 100. For the majority of these soldiers, raising their GT to 100 or better was a primary goal. Postprogram GT composites were reported for only about one-quarter of the overall sample. Of those soldiers for whom data were available, 53 percent who had preprogram GTs below 100 had postprogram GTs of 100 or above. If all soldiers at Forts Carson, Hood, Lewis, and Ord had been retested on the AFCT, and if the overall success rate of 53 percent were maintained, an additional 860 soldiers would have successfully achieved the GT standard.

### Meeting CLOZE Test Expectations

Three forms of a reading comprehension test using CLOZE testing procedures, originally developed for the Fort Lewis experimental reading program, were utilized at five of the seven evaluation sites. CLOZE tests are scored on a percent correct basis. The objective set for the MGA course was that "each soldier completing the program shall demonstrate an increase of twenty percent." Because of the rigorous scoring procedures used, the fact that various combinations of test forms were used as pre and posttests, and because it was found that the three forms were of unequal difficulty, results of the CLOZE testing are of little practical significance.

### Utilization of Findings

The sample used was of sufficient size and diversity to warrant generalization of the results to other FORSCOM sites and to other permanent duty stations throughout the Army. The BSEP II programs at the evaluation sites had been through several cycles prior to the evaluation so the courses had somewhat stabilized. Nevertheless, activities were already underway for changes in course materials and procedures for implementation at a later date.

The MGA materials used during the evaluation produced gains for both the primary target and non-target groups. The advantages of having MGA instruction were apparent for all subject matter areas for the primary target group but only for mathematics for the non-target group. For greater program efficiency using present materials, enrollment procedures should emphasize assignment of soldiers below 9.0 to all courses and modules, and the assignment of soldiers exceeding 9.0 to the Mathematics course. To increase the attainment of existing and higher standards, more time will have to be allowed for the



shorter programs, to allow more soldiers to enroll in all courses needed. In addition, materials other than additional drill exercises will have to be added to the curriculum.

Increased TABE and GT gains to some extent can be achieved by allowing greater time for BSEP II to be devoted to appropriate materials. For TABE gains, the addition of large numbers of hours will be necessary to achieve noticeable gains. For GT gains, relatively large numbers of hours will also be necessary and these hours will have to be spent on materials specifically designed to improve GT composites and not merely on additional drill exercises on MGA activity sheets.

The relationship between the number of drill exercises completed on MGA activity sheets and gains was not a simple or direct one. Completion of activity sheets was associated with learning the materials but soldiers completing the greatest number of sheets did not register the greatest TABE or GT gains. It appears, therefore, that not all of the skills measured by the TABE and AFCT tests were adequately covered in the MGA materials. Course revisions will have to include some different content and methods in order to improve TABE and AFCT test scores.

While indices of time spent and activity sheet completion entered regression formulas for explaining the obtained variance in TABE and GT gains, they accounted for a very small amount of the total variance. The level of preprogram proficiency in different subject areas accounted for a greater share of the variance. Greater gains were made by soldiers with lower entry scores. Some, but not all, of this may be explained by the procedures used to grade-norm the TABE and by the regression to the mean phenomenon. If the Army is currently interested in achieving the higher standards, the curriculum will

have to be embellished with additional content and procedures designed to raise soldiers to these higher levels.

The reported success rates for the seven evaluation sites varied considerably depending upon which TABE test was considered and whether the 9.0 or the 10.5 grade level was used. These rates do reflect the proportions of soldiers reported to have achieved the grade level standards. Because of the wide differences among posts in course and module enrollments, amount of time spent on MGA and supplementary material, and testing procedures and policies, these relative success rates are NOT valid indices of the quality of staff effort or the quality of the programs themselves in terms of cost/benefits factors.

Over half of the soldiers with preprogram GT composites below 100 who had the opportunity to take the AFCT after the program obtained a GT above 100. Since postprogram GT composites were reported for only about one-quarter of the overall sample, it is assumed that about three-quarters of the sample did not have the opportunity to take the AFCT after completion of BSEP II. If the success rate for this untested subsample approached that of the tested subsample, over 800 additional successes would have to be credited to the program. The Army and the individual installations may wish to reconsider current AFCT testing policy and procedures.

## CHAPTER I. INTRODUCTION

This is a final report describing the evaluation activities of the American Institutes for Research (AIR) under contract to the Army Research Institute (ARI). AIR is responsible for evaluating the U.S. Army Forces Command (FORSCOM) Basic Skills Education Program (BSEP) II developed by McFann, Gray & Associates (MGA). Two previous interim reports on the MGA evaluation submitted to ARI were entitled: Preliminary Report of Initial Implementation of the McFann, Gray & Associates' BSEP II Curriculum, October 1984, and Preliminary Report of the Formal Evaluation of the McFann, Gray & Associates BSEP II Curriculum, February 1985. This report covers the MGA program activities during the "evaluation window" period of the evaluation from 1 November 1984 through 28 February 1985.

### Background

In response to recommendations by the Government Accounting Office (GAO), Congress mandated in 1978 that on-duty education programs be related to soldiers' training and Military Occupational Specialty (MOS) needs. With the goal of making the BSEP I, II, and Advanced Skills Education Programs (ASEP) job-related, the Army undertook a major revision of the BSEP programs beginning in FY78.

In a later assessment of BSEP programs, the GAO found that the programs were decentralized and lacked common standards. The installations contracted with educational institutions to administer the BSEP programs. The curricula they used were general literacy rather than specifically job-related literacy

programs. In FY83, the Army initiated the development of a comprehensive basic skills curriculum called the Job Skills Education Program (JSEP). The JSEP curriculum development is based on an analysis of the basic skills required for learning and performing job tasks found in the Soldier's Manual of Common Tasks for skill levels 1 and 2 and in 94 high density MOS. JSEP is still under development and field testing began in 1985. As part of a development effort that partially pre-dated and partially ran concurrent with the development of JSEP, a common curriculum developed by MGA was adopted by FORSCOM and introduced at all FORSCOM installations in early 1984. This curriculum was developed by MGA under contract to ARI.

#### Development of the MGA Curriculum

MGA conducted a study for ARI on detractors to combat training (Funk, et al., 1980). In their final report, MGA identified BSEP as one of the detractors to unit training. They noted that soldiers' attendance at BSEP frequently interfered with their unit training schedules. In addition, some commanders reported that they saw no change in soldiers' job performance after they completed BSEP instruction.

Based partly on the results of this study, MGA was contracted in September 1981 for a one-year period to develop and test prototype lessons using job-related curriculum materials to improve language, reading, and math skills of soldiers as measured by the Tests of Adult Basic Education (TABE).

Following the development of the prototype lessons, MGA was contracted to complete the development of 14 modules, (i.e., units of instruction) for the Mathematics, Reading, and Language courses to teach those basic skills tested by the TABE, to develop a comprehensive test of achievement of the skills

taught in the program, and to measure the effects of the program on soldiers' achievement.

### Goals of the Curriculum

#### Improve Literacy Skills

The MGA curriculum was designed to increase students' basic academic skills to enable them to achieve scores of at least a 9.0 grade level on the TABE. As stated on the Report Documentation Page of the three volume manual for the curriculum, (Management System for Integrating Basic Skills II Training and Unit Training Programs, August 1982),

. . . The curriculum components are designed to develop basic literacy skills required to attain 9th grade level in reading, language, and math (as measured by the Test of Adult Basic Education (TABE)...

As shown in Table 1-1, the TABE is divided into three subject areas: Reading, Mathematics, and Language. The MGA curriculum is divided into those three subject areas and course units or modules teach the skills needed to perform well on the TABE.

Table 1-1

TABE Subtest Areas and Corresponding MGA Modules

<u>TABE Subtest Areas</u>	<u>MGA Modules</u>
<b>READING</b> <ul style="list-style-type: none"><li>● Vocabulary</li><li>● Comprehension</li></ul>	<b>READING</b> <ul style="list-style-type: none"><li>● Vocabulary</li><li>● Text</li><li>● Locators &amp; Visuals</li></ul>
<b>MATHEMATICS</b> <ul style="list-style-type: none"><li>● Computation</li><li>● Concepts &amp; Problems</li></ul>	<b>MATHEMATICS</b> <ul style="list-style-type: none"><li>● Whole Numbers</li><li>● Fractions</li><li>● Decimals</li><li>● Percents</li><li>● Measures</li><li>● Concepts</li><li>● Story Problems</li></ul>
<b>LANGUAGE</b> <ul style="list-style-type: none"><li>● Mechanics &amp; Expression</li><li>● Spelling</li></ul>	<b>LANGUAGE</b> <ul style="list-style-type: none"><li>● Capitalization</li><li>● Punctuation</li><li>● Grammar</li><li>● Spelling</li></ul>

Class Management System Compatible with Unit Training Schedule

MGA developed a management system to integrate BSEP II with unit training. This included an open-entry/open-exit enrollment procedure whereby soldiers could enter and exit classes on a flexible basis to accommodate their unit training schedules.

## Description of the MGA Curriculum

The curriculum developers integrated materials from the Soldier's Manual of Common Tasks (FM21-2) into the curriculum, where appropriate. The materials were designed to be individualized (i.e., soldiers could be assigned to study only those materials in which they showed deficiencies on a pretest). They were also designed so that soldiers could work at their own pace. To make the course content applicable to the individual posts, MGA originally prepared a Lesson Developer's Guide and prototype lessons. The guide and lessons were to enable individual posts to develop lessons pertinent to the specific MOS at each post. In order to achieve as much standardization as possible, it was subsequently decided to limit local development of additional lessons.

An integral part of the MGA curriculum design is a class leader. One of the students in the class is designated as class leader for a day, on a rotating basis. The class leader's role is to correct papers and to alert the teacher to the need to work individually with students. There is also an incentive system designed to motivate students. The teacher is directed in the Course Management Plan to use such incentives as rubber stamps on the best papers, wall charts showing a record of students' progress, and time off for good work (i.e., allowing students to leave class a few minutes early).

Originally, the course materials included: a Course Management Plan; Forms A and B of the Survey of Basic Skills, a comprehensive pretest and posttest on the content of the curriculum; two parallel versions of individual activity sheets (A and B sheets), each teaching a different skill; Module Previews and Reviews (module pretests and posttests); the Course Developer's Guide; teachers' record keeping materials; and wall charts.

When the MGA curriculum was adopted as the interim BSEP II program, the A and B activity sheets were printed individually and were housed in large boxes. Students could keep the activity sheets they had studied and use them for reviewing their work. However, replacement of the individual sheets for the three courses was a complicated task and maintenance of a full supply of activity sheets required staff at the installations to be engaged continually in reproducing materials.

FORSCOM contracted for the individual activity sheets to be packaged into workbooks. Each module had an A and B workbook. The workbooks were reusable: students wrote their answers to problems on expendable answer sheets. Currently, the MGA materials used by the posts include a revised and expanded Course Management Plan, record-keeping forms, Module Previews and Reviews, the A and B workbooks, answer sheets, class leader materials, and wall charts.

#### Assignment to MGA Modules

During the evaluation window period, students were identified for a BSEP course according to their grade level scores on a pretest of the TABE. If a student scored below 9.0 on any of the six subtest areas in either the Mathematics, Reading, or Language sections of the TABE, the student was assigned to one or more of the courses. For any subtest on which the student scored below the 9.0 grade level, the student was to be assigned the relevant course modules as shown in Table 1-1. For example, if a student scored above 9.0 on the pretest of the Mathematics Computation subtest, but scored below 9.0 on the Mathematics Concepts and Problems subtest, the soldier was to be assigned to study only the Concepts and the Story Problems modules.



For any module assignment, the student would first take the Preview for the module. If the student scored 100 percent on the first Preview, the soldier would be exempt from completing any of the activity sheets in the module and would then take the module Preview for another assigned module. If the student did not achieve 100 percent, the teacher would assign the student to study specific activity sheets from Workbook A, depending on the particular errors the student made on the Preview. After a soldier completed the A activity sheets in a module, the teacher would assign the student to take the module Review, a posttest. If the student made errors on the Review, the teacher would intervene and provide remedial attention, sometimes using supplemental materials. If the teacher felt the student needed reinforcement, she or he would assign a B activity sheet, (i.e., a parallel sheet with the same instructional information and additional practice drills or problems addressing the same skill). Once the teacher was satisfied that the student understood the problem and had completed the B sheet satisfactorily, the teacher would assign the student to take the Preview again. If the student performed well, the teacher would assign the student to the next module. If the student did not perform well, the teacher would intervene by giving additional instruction or supplementary materials until the teacher was satisfied that the student could take the Review again and perform well.

#### Implementation of MGA Curriculum

FORSCOM conducted regional training sessions for ACES personnel, and installation training sessions for teachers and contract personnel between June 1983 and June 1984 to ensure that procedures were standardized at the installations. These sessions gave program administrators and teachers hands-on experience using the new curriculum. At each of the sessions,

teachers offered suggestions about the administration of the curriculum at the installations. These suggestions were considered by the FORSCOM staff and ultimately changes were made in the Course Management Plan during the year long period.

Following the implementation of the curriculum at each of the FORSCOM installations, Headquarters FORSCOM received comments from the installations concerning the large number of errors in the curriculum materials. As they began to use the curriculum, teachers found typographical errors, misspellings, and incorrect answers. Teachers also contended that certain modules did not give instruction in key areas and that other modules over-emphasized skills that were secondary in importance. Teachers also questioned the methodology on which the curriculum was based and suggested that different approaches be taken to teach certain skills.

Responding to the reactions and suggestions received from installation personnel, FORSCOM asked teachers to compile and forward them any errors they found in the MGA materials. These comments were, in turn, forwarded to MGA who printed errata sheets and distributed the sheets to the installations.

Headquarters FORSCOM was committed to ensuring that the new curriculum was implemented in a common fashion at the posts and that the program was of the highest quality. A meeting of BSEP coordinators from FORSCOM installations was held in Savannah, Georgia in October 1984 for the purpose of assessing the implementation of the program, for reviewing the progress on the AIR/ARI evaluation of BSEP II, and for discussing plans for making major revisions in the curriculum. A team of BSEP coordinators was formed at that time to revise the curriculum over a one-year period. The objective was to make substantial changes in the content and methodology and then to reprint the materials. One

of the goals in the revision was to incorporate into the new materials as many of the JSEP objectives as possible.

In its review of the curriculum, the FORSCOM team decided that the curriculum had several general weaknesses. The instruction section on each of the activity sheets was too short and needed to be expanded. In most cases, the instructions needed to provide alternative approaches to solving problems. The activity sheets presented rules or procedures, but did not provide sufficient examples or opportunities to apply the skills taught.

The FORSCOM team determined that the reading curriculum began at a level that was too advanced for many of the soldiers enrolled in BSEP II. They felt that the curriculum should begin at a very basic level and that it should provide soldiers with more practice reading the type of material they used on the job. Soldiers' reading material is generally not written in a narrative style but is concerned with communicating instructions, procedures, or lists of facts. The team decided to focus the reading practice in the curriculum on Soldier's Manuals, Army forms, and instructions. They also determined that the vocabulary module was too narrow in its approach. It needed to focus on the structure of words and to teach soldiers' skills for analyzing the structures.

The mathematics curriculum also received considerable attention. The team felt that students needed more work in such areas as ratio and proportion, fractions, and applying skills by solving story problems. The language curriculum also needed to be revised. In particular, they felt that the course focused too much on grammar and that unnecessary and antiquated grammar rules were being taught.

During the evaluation window period, no curriculum revisions had taken place and students performed their work using the A and B workbooks developed by MGA. The only changes made in the materials were in the form of corrections made to the typographical errors and the incorrect answers.

During the period that the MGA curriculum was being implemented, the Department of the Army was examining the requirements for reenlistment in terms of the General Technical (GT) composite of the Armed Services Vocational Aptitude Battery (ASVAB) and the ability of BSEP II to raise soldiers' GT scores. The MGA curriculum, however, was designed specifically to increase students' academic skills as measured by scores on the TABE, not on the GT. It did not address some of the skills needed to perform well on the GT (e.g., there were no timed tests in the MGA curriculum and there was insufficient emphasis on vocabulary development and mathematics problem solving skills).

In accordance with the originally requested development concept, the MGA curriculum was designed to increase soldiers' TABE scores to the 9.0 grade level. FORSCOM, however, determined that the minimum TABE score required to succeed on the GT (i.e., attain a GT score of 100 or above), was a grade level score of 10.5 in the reading, vocabulary, and mathematics areas. To increase soldiers' TABE scores from the 9.0 to 10.5 grade level, FORSCOM developed an on-duty GT improvement curriculum primarily for midtermers called the BSEP II Plus Curriculum. It consisted of A and B mathematics books and a reading book of comprehension and vocabulary exercises. The BSEP II Plus Curriculum will be implemented in the latter part of FY85. It is estimated to be an 80 hour curriculum and will be included as an additional module to the MGA curriculum. Once midtermers attain TABE scores of 9.0 after completing the MGA modules, they can then be assigned to study the BSEP II Plus materials.

The development of any operational course is never complete. Revisions and expansions of the course are made in response to changing needs and their related educational objectives and to the results obtained. And so it is with the BSEP II curriculum. Changes are already being planned, developed and implemented by FORSCOM to meet current Army priorities. Interim evaluation results have been supplied to the FORSCOM staff to facilitate this development. By and large, however, the results presented in this report are based on the MGA materials originally provided along with errata materials.

## CHAPTER 2. EVALUATION ACTIVITIES

### Introduction

The structure of project activities followed the major aspects of an evaluation plan developed prior to the staff's undertaking of any activities during the evaluation of the MGA curriculum. This plan was developed on the basis of information obtained during the staff's early monitoring of the initial implementation cycles of the curriculum. The essential features of the plan and descriptions of the development and pilot testing of data collection procedures were previously presented in some detail in interim reports. The instruments and procedures used during the formal evaluation were those developed as a result of these early activities.

### Preliminary Activities

AIR began conducting preliminary evaluation activities in September 1983. An interim report, detailing those activities, was submitted to ARI in October 1984. The installations involved in the preliminary evaluation included:

- Fort Bragg
- Fort Campbell
- Fort Hood
- Fort Lewis
- Fort Ord
- Fort Polk
- Fort Stewart

PREVIOUS PAGE  
IS BLANK

AIR conducted site visits to the installations to attend teacher-training sessions and to introduce data collection forms. AIR attended teacher-training sessions at Forts Bragg, Lewis, Campbell, and Stewart. No sessions were held at Forts Carson and Hood. Because Fort Stewart did not implement its program

in time to be part of the formal evaluation, Fort Carson was selected to replace Fort Stewart.

During the preliminary evaluation period, AIR engaged in the following activities:

- developed data collection instruments (e.g., Student Record Sheets and Module Record Sheets for recording course data and demographic data about students, and classroom observation forms for recording classroom activities),
- attended teacher-training sessions conducted by FORSCOM,
- established evaluation procedures through site visits and telephone and written communications,
- developed questionnaires for teachers, soldiers, and supervisors of BSEP II students, and
- analyzed preliminary data for an Interim Report.

#### Goals of the Formal Evaluation

The formal evaluation of BSEP II had three major goals:

- to determine if the course taught what it set out to teach
- to determine how participation in the course affected students' performance on non course-specific variables
- to determine the acceptance of the program by those who participated in it

In order to accomplish these goals, we arranged for local post personnel to record and forward to us detailed data on standardized report formats. Data for all soldiers taking BSEP II during the period 1 November 1984 and 28 February 1985 were forwarded to AIR. In addition, we made on-site visits and

maintained extensive telephone liaison with personnel at the evaluation sites during this period.

### Data Sources

The following posts were included in the formal evaluation of the MGA curriculum:

- Fort Bragg
- Fort Campbell
- Fort Carson
- Fort Hood
- Fort Lewis
- Fort Ord
- Fort Polk

The primary data source for objective data regarding demographic variables, course information, and test data was the Student Record Sheet (FORSCOM Form 150). These Student Record Sheets were completed by local personnel and forwarded to us for analysis. The demographic information collected on all students enrolled in BSEP II programs at the seven posts included:

- student's name
- social security number
- age
- sex
- race
- place of birth
- native language
- rank
- MOS
- educational level
- time on active duty

Course data collected included courses and modules assigned, scores on Module Previews and Reviews, and reasons for exiting from the course. Test data collected included preprogram and postprogram TABE scores, both in raw



score and grade level form, as well as preprogram and postprogram GT composites and postprogram ASVAB composites for all areas.

A secondary data source was a set of Module Record Sheets, one for each of the 14 modules included in the curriculum. The sheets were also completed by local personnel and forwarded to us. These Module Record Sheets contained data on the following elements in the curriculum.

- module Previews and Reviews for any of the 14 modules that were assigned and studied
- number and type of activity sheets assigned and completed
- number and type of follow-up activity sheets assigned and completed
- number and type of remedial activities prescribed by the teacher

Additional secondary data sources included questionnaires administered by our staff and checklists used by our staff to record observations during visits to the evaluation sites. During the formal evaluation period, AIR made site visits to each of the posts to observe classes, to interview personnel, to monitor the data collection process, and to administer questionnaires.

We also held meetings with the teachers at each of the installations. The purpose of the meetings was to learn about the teachers' experiences with the MGA curriculum and to solicit from them their opinions about the positive and negative characteristics of the curriculum and Course Management Plan. An additional purpose of these meetings was to assist the teaching staff by answering questions and offering information about positive practices at other installations.

We administered a Questionnaire for Soldiers at each of the evaluation sites (see Appendix B). The questionnaires asked soldiers about their educational backgrounds and their experiences studying the MGA curriculum in BSEP II. We also administered a Questionnaire for Teachers at each of the posts (see Appendix B). The questionnaire asked teachers about their qualifications and experience and their opinions about the MGA curriculum.

AIR also developed a Questionnaire for Supervisors (see Appendix B). This questionnaire asked supervisors of MGA graduates and graduates of an experimental BSEP II program conducted at Fort Lewis to rate soldiers on tasks found in the Soldier's Manual of Common Tasks requiring reading, writing, and mathematics skills. These questionnaires were completed by a sample of supervisors at Fort Lewis and forwarded to AIR.

### Analyses

The data supplied by local personnel at the evaluation sites were carefully edited and transcribed into a computer database. The data collected by our staff during on-site visits were added to this database. This database was used to conduct analyses designed to meet the goals of the evaluation.

In order to determine if the course taught what it set out to teach, data from the Module Record Sheets were examined to determine the extent to which soldiers were assigned to and completed instructional work sheets in the areas in which they pretested below standard. Data on Module Previews and Reviews were analyzed to determine the amount of learning of course materials that had taken place.

In order to determine how participation in the courses had affected soldiers' performance on non course-specific variables, analyses were made of the relationship between performance in the course, demographic variables, and performance on measures not directly included in the instructional materials of the courses. The primary non-course variables examined were scores on the TABE, the GT composite derived from the ASVAB or AFCT, and scores on reading comprehension tests utilizing CLOZE testing procedures.

The data from the sample of supervisors from Fort Lewis were examined to determine the perceived direct effects of participation in BSEP on rated performance of reading and writing job tasks.

The original evaluation plan had included activities to determine longer range effects on non course-specific variables by studying general performance variables such as:

- SQT performance
- CTT performance
- the effects of students' performance in NCOES courses
- students' rate of enrollment in other education courses and their performance
- the effects of the course on reenlistment rates

Feasibility constraints precluded the inclusion of these activities in the current evaluation.

To determine the acceptance of the program by the participants, we analyzed the information collected through interviewing, observing, and administering questionnaires to Commanders and NCOs, ACES staff and teachers,

and soldiers who participated in the course. These analyses involved the following topics.

- the strengths and weaknesses of the program
- variations in the classroom management of the course at the different posts
- how the BSEP II program was organized at each post
- the background and education of the teachers
- activities within individual classes

The results of these analyses are presented in the following sections of this report.

## CHAPTER 3. STUDENT CHARACTERISTICS

### Description of the Database

With the exception of recorded classroom observations and the results of on-site interviews, all field data were collected by local ACES personnel or the staff of the institutional contractors at the seven FORSCOM evaluation sites. Copies of these data were forwarded to the project staff for analysis. The primary data collection form was the Student Record Sheet. Other data collection forms were Module Record Sheets, Soldier Questionnaires, Teacher Questionnaires and Supervisors Questionnaires.

This chapter describes the sample of soldiers for whom data were reported during the evaluation window period (1 November 1984- 28 February 1985). The overall sample is identified and then described in terms of demographic variables. Detailed data are summarized in a set of tables included in Appendix A.

#### Overall Student Population

PREVIOUS PAGE  
IS BLANK

During the formal evaluation, demographic and program data were recorded on Student Record Sheets for all students from seven posts. The completed Student Record Sheets were scanned by the project staff for completeness, clarity, and dates of attendance. Student Record Sheets were included in the analyses if they met two criteria: they contained an essentially complete record of a soldier's instruction and testing, and if more than half of that instruction had been received during the evaluation window period. A total of 3,713 Student Record Sheets representing a like number of soldiers was

available for analysis (see Table 3-1). A total of 45 cases of duplicate SSNs was discarded because it could not readily be determined if these were instances of multiple cycle enrollments or of recording error.

Table 3-1

Population of Student Record Sheet Data

Post	Percent by Test Combination			Total	
	D3/D4	M3/D4	Other/Unknown	<u>N</u>	%
All Posts	61%	13%	26%	3713	100%
Fort Bragg	8%	81%	11%	577	16%
Fort Campbell	72%	0%	28%	751	20%
Fort Carson	66%	0%	34%	485	13%
Fort Hood	65%	0%	35%	581	16%
Fort Lewis	64%	0%	36%	573	15%
Fort Ord	79%	0%	21%	311	8%
Fort Polk	83%	0%	17%	435	12%
<u>N</u>	2261	469	983		

An important variable for the evaluation was gain on TABE scores. In order to control for any differences in TABE test forms and levels, the total sample was divided into three groups as shown in Table 3-1. The evaluation sites had been requested to use TABE Level D-Form 3 as the preprogram test and Level D-Form 4 as the postprogram test. The majority of the sample represents the requested D3/D4 format and most of the analyses of TABE scores included in this report are based on this subsample. Over 80 percent of the Fort Bragg students, however, received TABE Level M-Form 3 as the preprogram test and TABE

Level D-Form 4 as the postprogram test. About one-quarter of the soldiers for whom Student Record Sheets were available received some other combination of tests or the test forms used were not recorded.

### Demographic Variables

Rank. The modal rank for the overall sample was E-4 accounting for 40 percent of the sample (see Table A3-1). The modal rank for all separate posts was also E-4. The next most frequent rank for Forts Bragg, Campbell, Carson, Hood, and Polk was E-5. The second most frequent rank for Forts Lewis and Ord was E-3. These three ranks accounted for between 76 to 89 percent of the samples for individual posts and for 82 percent of the overall sample. While a chi-square test of the entries in Table A3-1 indicates a statistically significant difference between the rank distributions at the seven posts ( $p=.001$ ), the magnitude of the differences is of no practical significance.

Career Management Fields (CMF). The overall sample included soldiers from 30 different CMF. The highest concentration was in CMF 11 - Infantry, which represented about one-quarter of the overall sample. Five combat CMF, including Infantry, accounted for almost half of the overall sample. Maintenance CMF, both electronic and mechanical, contributed sizeable numbers of soldiers to the sample (see Table A3-2).

Native language. English was the native language of 89 percent of the overall sample (see Table A3-3). English was also the predominant native language for all seven posts ranging from 86 to 91 percent of the posts' samples. Spanish was the native language of eight percent of the overall sample. The percent of native Spanish speakers at the separate posts ranged from six percent to ten percent. While a chi-square test of the entries in

Table A3-3 indicates a statistically significant difference between the native language distributions at the seven posts ( $p=.001$ ), the magnitude of the differences is of little practical significance.

Age. The overall modal age category was 20 to 21 years. This was true of all seven posts (see Table A3-4). Almost one-third of the overall sample was 21 or younger and slightly over one-half of the overall sample was 23 or younger. The over-28-year age groups ranged from 15 to 20 percent between posts, with an overall percentage of 18. A chi-square test of the age distributions in Table A3-4 did not indicate a statistically significant difference ( $p=.194$ ).

Racial designations. Reported racial designations for the overall sample were Black, 51 percent; White, 45 percent; and Other Races, four percent (see Table A3-5). Five of the seven posts reported Black pluralities, while two posts reported slight White pluralities. A chi-square test of the entries in Table A3-5 indicated that the reported racial designations between posts was statistically significant ( $p=.001$ ). While most of the interpost differences were small, Fort Ord reported a disproportionate share of Black racial designations and a relatively high percentage of other race designations.

Sex. The overall sample was 94 percent male (see Table A3-6). The percent of males at the seven posts varied from 92 to 97 percent. While these differences were significantly large to yield a chi-square that was statistically significant ( $p=.002$ ), these differences were of no practical significance.



Educational background. Over four-fifths of the overall sample for whom educational credentials were reported had a high school diploma (see Table A3-7). This represents a substantially higher percentage than was reported during the early implementation phases of the program. Of the students not having high school diplomas, half were reported to have a General Educational Development (GED) certificate. A small number of students having a high school diploma were also reported as having a GED.

The percentage of soldiers having various combinations of high school educational credentials varied between posts (see Table A3-8). A chi-square of the entries in Table A3-8 indicated that between-post differences were statistically significant ( $p=.001$ ). The percentage of soldiers having high school diplomas ranged from 74 percent at Fort Polk to 88 percent at Fort Campbell.

Months in service. The average months of service ranged from 40 months at Fort Lewis to 49 months at Fort Carson. For the total sample, the average months of service was 45 (see Table A3-9). Between-post differences are of no practical significance.

Months of remaining service. The average months of service remaining on the current enlistment ranged from 16 months at Fort Campbell to 21 months at Fort Carson. For the total sample, the average months of remaining service was 19 (see Table A3-10). Between post differences are of no practical significance.

Reported reasons for enrolling in BSEP II. As had been true during the early implementation of the MGA program, students predominately reported enrolling in BSEP II because of low GT scores (see Table A3-11). Over four-fifths of the overall sample reported this as a reason for enrollment. Only a small proportion of the overall sample reported other reasons for their enrollment. The percentage reporting low GT scores as the primary reason ranged from 60 percent at Fort Bragg to 94 percent at Fort Campbell. Chi-square tests of reported differences between posts indicated statistical significance in all cases ( $p=.001$ ). These are of no practical significance because of the preponderance of low GT score responses at all posts.

Prior BSEP enrollment. Enrollment in BSEP courses prior to enrollment in the MGA program was reported by 30 percent of the overall sample (see Table A3-12). Heaviest prior enrollment was reported in Mathematics and Reading courses with less involvement in Language and Communication courses. This means that about one-third of the soldiers were at least somewhat familiar with the general subject matter, and with TABE testing in particular, before involvement in the MGA curriculum. Eight percent reported having previously taken a course specifically designed to improve GT scores. Nine percent reported having taken an English-as-a-second-language (ESL) course, indicating that English was not their native language.

Chi-square tests of reported between-post differences for the various tests were all statistically significant ( $p=.001$ ). Forts Lewis and Polk reported a noticeably higher percentage of prior BSEP enrollments and Fort Bragg reported a substantially lower percentage of prior BSEP enrollments. Fort Bragg and Fort Carson reported substantially higher prior enrollments in

ESL courses, although this is not reflective of the number of soldiers reporting other than English as a native language in Table A3-3.

## CHAPTER 4. RESULTS

### Introduction

This chapter reports the objective results of data collected on the Student Record Sheets and the Module Record Sheets. Results are discussed in terms of the extent to which

- general course characteristics were common to the seven evaluation sites
- the course taught what it set out to teach
- targeted grade level objectives were attained
- grade level improvement was demonstrated regardless of targeted objectives met
- targeted GT improvement objectives were attained
- targeted CLOZE reading test objectives were attained

The tables in this chapter show summary results. More detailed data regarding these summary results are presented in a set of tables included in Appendix A.

### Similarities and Differences in Course Characteristics

#### TABE Test Forms and Levels

The evaluation sites had been requested to use TABE Level D-Form 3 as a preprogram measurement instrument and TABE Level D-Form 4 as a postprogram instrument. Not all posts followed this procedure for all soldiers tested in the evaluation window period. Since TABE score levels and the differential between preprogram and postprogram performance were to be important evaluation

indices, an analysis of mean score differences was made between the various TABE levels and forms used. Mean scores and differences are shown in Table 4-1.

The majority of the sample used the prescribed D-3-pre/D-4-post format. A group of approximately 500 soldiers at Fort Bragg was pretested using the M-3 versions of the TABE and posttested with the D-4 version. Another group of about 300 soldiers was pretested with the D-4 version and posttested with the D-3 version. For another group of about 300 soldiers, the versions of the TABE tests used were unknown.

As shown in Table 4-1 the Vocabulary, Comprehension, Total Reading, Language Mechanics and Expression, and Total Battery scores did not show statistically significant mean differences between version D-3 and D-4 where either was used as a pretest. The three mathematics tests did show statistically significant grade level differences ranging from .5 to 1.4 grade levels. The D-4 version yielded higher grade levels presumably indicating that it was a somewhat easier test. For the Spelling test, however, the reverse was true.

A comparison of the M-3 version used as a pretest with both the D-3 and D-4 versions showed statistically significant mean grade level score differences for all TABE subtests including the Total Battery. Spelling, for which there was no difference, was the only exception. The M-3 version yielded lower grade level scores than either the D-3 or D-4. This is contrary to expectations since the M version was constructed to be of medium difficulty, whereas the D version was constructed to be more difficult.

Table 4-1

Mean Grade Level Score Differences for TABE Test Forms and Levels

	D3		D4		M3		D3/4 Diff.	D3/M3 Diff.	D4/M3 Diff.
	N	Mean	N	Mean	N	Mean			
<u>Used as a Pretest</u>									
Vocabulary	2611	9.6	317	9.6	509	8.4	0.0	1.2**	1.2**
Comprehension	2613	9.2	317	9.4	509	8.8	0.2	0.4**	0.6**
Reading	2606	9.3	318	9.5	509	8.5	0.2	0.8**	1.0**
Computation	2608	7.9	318	9.3	510	7.4	1.4**	0.5**	1.9**
Concepts & Problems	2608	8.2	319	8.8	509	7.8	0.5**	0.4**	1.0**
Mathematics	2602	8.0	319	9.0	510	7.5	0.9**	0.5**	1.4**
Mechanics/Expression	2603	8.0	306	8.0	508	7.3	0.0	0.7**	0.7**
Spelling	2596	8.1	300	7.8	506	7.8	0.3*	0.3**	0.0
Total Battery	1860	8.2	131	8.2	498	7.6	0.1	0.6**	0.7**
<u>Used as a Posttest</u>									
Vocabulary	99	10.5	2834	10.3	-	-	0.2	-	-
Comprehension	99	9.9	2834	10.2	-	-	0.4	-	-
Reading	99	10.2	2771	10.3	-	-	0.1	-	-
Computation	99	9.5	3004	10.5	-	-	1.0**	-	-
Concepts & Problems	99	9.2	2980	9.8	-	-	0.7**	-	-
Mathematics	99	9.3	2917	10.0	-	-	0.8**	-	-
Mechanics/Expression	97	8.8	2748	9.2	-	-	0.4*	-	-
Spelling	96	8.5	2660	8.6	-	-	0.2	-	-
Total Battery	93	9.0	1768	9.5	-	-	0.4**	-	-

\*Statistically significant p=.05

\*\*Statistically significant p=.01

When used as a posttest measurement instrument, the D-4 version yielded statistically significant higher grade level scores than did the D-3 for all subtests except Vocabulary, Comprehension, Reading, and Spelling.

In order not to confound reported TABE score data with differences attributable to the test level and form, most of the TABE score analyses included in this report used only data from soldiers who had been pretested on the D-3 version and posttested on the D-4 version. For some analyses, separate results are reported for the soldiers who were pretested on the M-3 version and posttested on the D-4 version.

### Course Enrollment

The MGA curriculum was designed to include a comprehensive curriculum covering a variety of basic educational skills deemed requisite to the learning and performance of job tasks. As indicated previously, the total curriculum was structured into three courses and 14 separate modules. An individual soldier's assignment to a particular course was to be determined by preprogram TABE subtest scores below grade level 9.0. If a soldier scored above 9.0 on a subtest, theoretically the soldier was not assigned course work in that area. An individual soldier's assignment to specific modules was to be determined on the basis of less than perfect scores on relevant module Previews. The extent to which these course and module assignment procedures were followed is shown in Table 4-2 and Table A4-1. For all posts, between 53 percent to 82 percent of soldiers were correctly assigned to MGA modules. Individual posts differed somewhat in their adherence to the prescribed assignment procedures. With the exception of the Concepts and Problems, Mechanics and Expression, and the Spelling subtest areas, most posts strayed in the direction of assigning

materials to soldiers who pretested above 9.0 rather than not assigning relevant work to soldiers who pretested below 9.0.

Table 4-2

Assignment to MGA Instructional Modules in Accordance with  
TABE Grade Level 9.0 Criterion

TABE Subtest	Percent of Sample (N=2261)		
	Correctly Assigned	Pretest Below 9.0, Did Not Get Instruction	Pretest Above 9.0, Received Instruction
Vocabulary	74%	7%	19%
Comprehension	74%	11%	16%
Reading	69%	6%	24%
Computation	81%	1%	18%
Concepts & Prob.	57%	27%	16%
Mathematics	82%	1%	17%
Mech./Expr.	64%	29%	7%
Spelling	53%	43%	4%

Enrollments in specific courses and modules during the evaluation period are shown in Table 4-3 and Table A4-2. The MGA curriculum was designed so that individual soldiers would be assigned only to those portions of the curriculum for which they had demonstrated an inadequacy through program placement tests. Because of this design characteristic, no soldier was enrolled in the entire curriculum. The preponderance of soldiers were enrolled in the Mathematics Course. The percentage of enrollment varied from 80 percent at Fort Bragg to 97 percent at Forts Campbell and Lewis with an overall 91 percent. Overall



enrollment in the seven modules included in the Mathematics Course varied from a low of 50 percent for the Concepts module to a high of 77 percent for the Fractions and the Whole Numbers modules. There was considerable variance between posts in the percentage of soldiers assigned to the seven modules. The range was from 18 percent enrolled in the Concepts module at Fort Ord to 93 percent enrolled in the Whole Numbers module at Forts Hood and Lewis.

Table 4-3

Percent of Soldiers Enrolled in Specific Courses and Modules

Course or Module	Percent Enrolled (N=3713)
<u>Mathematics Course</u>	91%
Concepts	50%
Story Problems	52%
Decimals	72%
Fractions	77%
Measures	58%
Percents	68%
Whole Numbers	77%
<u>Language Course</u>	52%
Capitalization	46%
Grammar	29%
Punctuation	41%
Spelling	32%
<u>Reading Course</u>	57%
Locator & Visuals	40%
Text	50%
Vocabulary	52%

A little over half of the soldiers were enrolled in the Language Course. The percentage of enrollment varied from 18 percent at Fort Campbell to 72 percent at Fort Polk with an overall 52 percent. For the total sample,

enrollment in the four modules included in the Language Course varied from 29 percent in the Grammar module to 46 percent in the Capitalization module. As was true for the Mathematics Course, there was considerable variance between posts in the percentage of soldiers assigned to the four Language Course modules. The range was from one percent in the Grammar and Spelling modules at Fort Carson to 67 percent in the Capitalization module at Fort Ord.

The enrollment in the Reading Course for the overall sample was 57 percent with a range from 43 percent at Fort Lewis to 66 percent at Fort Campbell. The variance in the percentage enrolled in the three modules in the Reading Course was somewhat less than for the other two courses. The range was from 40 percent for the Locators and Visuals module to 52 percent for the Vocabulary module. Whereas the between-post variance in the percentage assigned to various modules in the Reading Course was somewhat less than for the other courses, they ranged from 30 percent in the Locator and Visuals module at Fort Bragg to 59 percent in the Text module at Fort Ord.

What implications do these enrollment data have for evaluation of the MGA curriculum? First, it can be inferred that the differential assignment concept of the curriculum design was, in fact, implemented. It can only be hoped that the differential assignments were based on valid indications of individual soldiers' needs. Second, it is clear that while all the programs from the seven separate evaluation sites drew a major share of their learning materials from a standardized pool, it is also clear that the mix of curriculum materials was not at all standardized either by post or by individual soldier on any single post. Use of supplementary materials increased the amount of non-standardization. This is another manifestation that the MGA curriculum was being implemented as designed. What this means, however, is that general

overall comparisons of results between programs at different posts must be made with a great deal of caution. One would ordinarily expect that differences in the subject content would be reflected in measured postprogram gains. In this connection, it should be remembered that the posts were requested, often to the dismay of the staff, to test soldiers on the total TABE battery whether or not specifically relevant instruction had been assigned. Most, but not all, evaluation sites complied with this request. Inter-program comparisons must take into consideration the variance in course content reflected by these enrollment data.

#### Effort Devoted to Learning Tasks

Just as considerable variance among posts was found regarding the size of enrollments in various portions of the overall MGA curriculum, considerable variance was also found in the amount of effort devoted to learning tasks associated with the program. Data were collected on two aspects of learning effort, namely the amount of time spent and the number of activity sheets completed. Tables 4-4 and A4-3 present two measures of time spent. One is the average reported number of total hours spent on BSEP II during the evaluation window period. The other is the average number of those total hours which were reported as being spent on other than MGA module activity sheets. The shortest average program time was at Fort Lewis, (61 hours) but the average time spent on programs at Forts Ord, Campbell, and Carson were within four hours of the Fort Lewis time. The average total time spent on programs at Forts Polk (92 hours) and Hood (96 hours) were about half again as long as the Fort Lewis time. The average total time spent on the program at Fort Bragg (137 hours) was about two-and-a-quarter times as long as the Fort Lewis time. One would

expect that such observed differences in time spent on the program among posts would be reflected in postprogram educational gains.

Table 4-4

Average Time Spent in BSEP II

Time	Hours	Percent
Total Class Hours	83.1	100%
Hours Spent on Non-MGA Supplementary Materials	15.1	18%

Added to this overall time-related source of program variance is the variance associated with the percentage of hours reported as having been spent on non-MGA module activity sheets. This ranges from a low of four percent at Fort Carson to 35 percent at Fort Bragg. What effect this would have on program outcomes is largely dependent upon the relevance of the supplementary instruction to measured program outcomes.

Data regarding another aspect of learning effort are presented in Table 4-5 and Table A4-4. The average number of reported MGA module activity sheets completed is shown in these tables. These data are based on a sample of Module Record Sheets collected during the evaluation period (see Appendix B for a copy of the Module Record Sheets). The sampling plan called for randomly drawing 100 cases from each of the seven FORSCOM evaluation sites. An additional criterion of completeness of data was also imposed on the sample selection which precluded obtaining 100 cases from each site. The total number of cases included in this subsample was 663 distributed across posts as indicated in Table A4-4.

Table 4-5

Number of Activity Sheets Completed

Course or Module	Number of Cases	Mean Number of Sheets
<u>Mathematics Course</u>	607	25.8
Concepts	301	5.6
Story Problems	251	7.1
Decimals	416	5.0
Fractions	458	10.9
Measures	326	4.2
Percents	327	3.5
Whole Numbers	417	6.3
<u>Language Course</u>	368	28.5
Capitalization	312	5.1
Grammar	282	9.4
Punctuation	207	21.3
Spelling	188	9.8
<u>Reading Course</u>	384	12.5
Locators & Visuals	219	3.6
Text	304	6.1
Vocabulary	316	7.0
All Courses/Modules	663	46.7

Across the total subsample, the average number of MGA module activity sheets completed per soldier was 46.7. The average number of activity sheets completed per module was between four and seven for ten of the 14 modules. Three of the remaining modules had an average of nine or ten activity sheets per module. The Punctuation Module had an average of 21 activity sheets completed. The observed variance was, therefore, both between number of activity sheets completed per module (from 3.6 to 21.3), and between posts across all modules (from 21.0 to 71.6). Again, one would expect that such

observed differences between posts in the number of activity sheets completed would be reflected in postprogram educational gains.

A correlation analysis was performed to examine the relationship between the number of activity sheets completed and reported time spent on BSEP II. Three indices of time spent were used: total reported class hours, hours reported as being spent on non-MGA supplementary materials, and net hours. Net hours were derived by subtracting the number of hours spent on supplementary materials from total class hours. The Pearson product-moment correlation coefficients are presented in Tables 4-6 and A4-5.

Table 4-6

Correlation Coefficients Between Number of Activity Sheets Completed and Time Spent

Course	Total Class Hours	Supplementary Materials Hours	Net Hours
All Courses	39	-17	51
Mathematics Course	25	-15	35
Language Course	(12)	N.S.	N.S.
Reading Course	N.S.	N.S.	(11)

Note: Decimal points omitted. Coefficients in parentheses are significant at the .05 level, all others at the .01 level.

When total modules are considered, six of the seven posts and all posts combined, demonstrated a positive relationship between total class hours and number of MGA activity sheets completed. The longer the program, the more sheets were completed. While none of the separate posts demonstrated a relationship between hours spent on supplementary materials and the number of

activity sheets completed, a statistically significant relationship was found for the overall sample. The relationship was a negative one, (i.e., the more hours spent on supplementary materials, the fewer MGA activity sheets were completed).

When the relationships between time and activity sheet completion were examined according to the modules associated with each of the three courses, the pattern became more blurred. For the Mathematics course, only two posts showed a positive relationship between total class hours and activity sheet completion, one post demonstrated a negative relationship between hours spent on supplementary material and activity sheet completion, and three posts demonstrated a positive relationship between net hours and activity sheet completion. For the Language and Reading courses no individual posts demonstrated significant relationships between either total class hours or hours spent on supplementary materials and activity sheet completion. For each of these courses, a different post demonstrated a relationship between net class hours and activity sheet completion.

These results illustrate the lack of homogeneity among the seven posts. While there is a general overall tendency for a greater number of hours spent to be associated with more MGA activity sheets completed, the pattern is not consistent among posts, nor even among courses on the same post. That time, per se, did not equal activity sheet completion, is illustrated by the fact that the correlation between the average number of activity sheets completed per post and total reported class hours was .39. When net class hours were used the correlation between time and activity sheet completion was .51. Rule-of-thumb guidelines on how many hours of instruction could be expected to lead to how many activity sheets completed could, therefore, not be developed.

## Did the Course Teach What it Set Out to Teach?

### Summary Measures

A fundamental question in any evaluation of an educational or training program is the extent to which the students learned the materials to which they were exposed. If it cannot be demonstrated that the students achieved an increased mastery of the skills and knowledge of the course materials, there would be little reason to suspect that other postprogram effects that could be attributed to program participation would be discernible.

Originally, as reported in a previous report (Stoddart & Hahn 1985), the MGA curriculum included two supposedly equivalent forms of the Survey of Basic Skills. These tests were purported to systematically sample the skills and knowledge included in the total MGA curriculum. The tests were originally designed to serve both as diagnostic, program placement tools and as measures of preprogram and postprogram proficiency. As indicated by Stoddart and Hahn and by three independent consultants who reviewed the MGA materials for the Education Division (DAPE-MPE), the Survey of Basic Skills had inadequacies in its present form too extensive to adequately serve either purpose. It therefore was not used during the formal evaluation of MGA. A properly designed measurement instrument, of the kind the Survey of Basic Skills was intended to be, would be a useful addition to the total program. Similar types of instruments are currently being developed by Florida State University for use with the JSEP and by Big Bend Community College for use in connection with the current BSEP II program in USAREUR. The relatively small amount of effort necessary to correct the deficiencies in the current forms of the Survey of Basic Skills and to align it with the revised and expanded FORSCOM BSEP II curriculum may be warranted.



## Module Measures

In the absence of any summary measures of the extent to which students learned the materials presented on the activity sheets the only direct indices of learning were provided by reported scores on module Previews and Reviews. The intended sequence was that, if a student was assigned to a module based on TABE scores, the student was to take the module Preview. If the student scored 100 percent, the student would move on to another assigned module. If the student missed items on the Preview, the student would be assigned relevant activity sheets and/or supplementary material. After completion of these materials, the student would take the module Review. If the student reached criterion level, the student would proceed to the next assigned module. If not, the student would be assigned additional instructional materials. Upon completion of the materials, the student would take a follow-up test. It was intended that the follow-up test be the Preview, but in many cases the Review was readministered. The mean Preview, Review, and follow-up scores for the various modules are presented in Tables 4-7 and Table A4-6.

Table 4-7

Module Achievement

Module	Percent Correct		
	Preview	Review	Follow-up
Concepts	70.3%	90.9%	89.3%
Story Problems	82.6%	85.4%	98.5%
Decimals	70.1%	91.5%	89.5%
Fractions	57.6%	92.1%	89.4%
Measures	58.8%	88.9%	87.8%
Percents	69.7%	92.8%	90.3%
Whole Numbers	86.8%	96.0%	96.0%
Capitalization	60.3%	86.1%	84.8%
Grammar	65.2%	78.3%	80.6%
Punctuation	48.4%	85.3%	79.6%
Spelling	69.3%	85.9%	85.0%
Locators & Visuals	84.6%	89.6%	93.2%
Text	65.1%	85.8%	85.3%
Vocabulary	76.7%	91.0%	90.3%

The average Preview scores shown in Table 4-7, ranging from 48 to 87 percent, indicate BSEP II students initially had a fair grasp of much of the material presented. Such results tend to support the supposition that much of the instruction represents a review of previously learned materials rather than initial learning. For all modules, the Review average scores are considerably higher than the corresponding Preview scores, indicating that learning of some of the materials presented had indeed occurred. On the other hand, since the Review and Follow-up scores for the various modules were less than 100 percent, complete mastery of the materials was not attained.

Students started work with the best grasp of the materials presented in the Locator and Visuals and the Whole Numbers modules. They demonstrated the least preprogram grasp of the materials presented in the Punctuation, Fractions, and the Measures modules. They demonstrated the highest postprogram

proficiency on the materials in the Whole Numbers module and the lowest proficiency on the materials included in the Grammar module.

Reported reasons for exiting the BSEP II course are presented in Tables 4-8 and A4-7. While reasons were not reported for many students, completion of all assigned materials was reported for 32 percent of the students in the Mathematics Course, 18 percent in the Language Course, and 27 percent in the Reading Course. Had additional time been allowed for more completions of assigned materials, the average Review and follow-up scores could have been expected to be higher.

Table 4-8

Reported Reasons for Leaving BSEP II Courses

Reasons	Percent of Students (N=3713)		
	Reading Course	Language Course	Mathematics Course
Completed assigned materials	27%	18%	32%
Administrative	1%	1%	1%
Recalled by unit	6%	7%	8%
Maximum hours	12%	21%	26%
Combinations	1%	1%	1%
None reported	54%	53%	32%

With the exception of three modules, average scores for follow-up testing approached, but did not quite equal, average Review scores. Since these students had failed to pass the initial Review, and thus required additional instruction, these results are not unexpected. The follow-up scores did slightly exceed the Review scores for the Locator and Visuals and the Grammar modules, and equaled them for the Whole Numbers module.

In summary, the data from the program specific, module Previews and Reviews indicate that substantial learning of the materials presented did, in fact, occur, but that total mastery was not achieved. More time would undoubtedly increase the mastery level, but some changes in instructional content and/or procedures are probably also required.

#### Meeting TABE Grade Level Standards

Included in the list of program target objectives in the Contractor's Guide supplied with the MGA learning materials is the statement, "Each soldier completing a class in BSEP II shall achieve a TABE (grade level) score of 9.0 or higher in each area measured by the test." The officially stated objective in AR 621-5 is also the attainment of grade level 9.0 in all areas of the TABE. It is, therefore, theoretically appropriate and proper that the MGA program be evaluated against an index of grade level attainment.

Because of the Army's interest in the extent to which BSEP II facilitated soldiers' attainment of a GT composite of 100 or more, an exception to AR 611-5 was authorized to allow for all personnel who successfully completed BSEP to be retested on the AFCT immediately after completing BSEP regardless of the time elapsed since the last retest and the number of previous retests. The use of ACES' funds for GT improvement as a part of BSEP II was also authorized in support of midterm reenlistments. BSEP II completion for midterm reenlistment candidates was defined as attainment of 100 or more on the GT portion of the AFCT. A FORSCOM message to Education Service Officers indicated that "experience indicates that a GT score of 100 correlates with a score of at least 10.5 on the Vocabulary, Reading Comprehension, and Total Mathematics portions of the TABE. Accordingly, the 10.5 TABE score may be used as an

indicator of readiness for AFCT retesting. So, for practical rather than theoretical reasons, a second TABE grade level standard may also be appropriate as an index with which to evaluate success of the MGA materials. The extent to which primary target soldiers (those with preprogram TABE grade level scores below 9.0) reach the 9.0 and 10.5 standards is shown in Table 4-9 and Tables A4-8 through A4-16.

Table 4-9

Extent to Which TABE Grade Level Standards Were Met

TABE Subtest	<u>N</u>	Percent of Primary Target Soldiers Attaining Grade Level		
		10.5 or Above	9.0 through 10.4	9.0 or Above
Vocabulary	910	20%	40%	60%
Comprehension	1051	26%	38%	64%
Reading	897	22%	41%	63%
Computation	1713	36%	30%	66%
Concepts & Problems	1648	24%	40%	64%
Mathematics	1691	29%	34%	63%
Mechanics & Expr.	1503	18%	30%	48%
Spelling	1357	8%	18%	26%
Total Battery	823	8%	42%	50%

In terms of achieving grade level standards objectives, the reported MGA program success rates varied both between the various subject areas represented on the TABE tests and among Army posts. The primary grade level objective of 9.0 was achieved by 60 to 66 percent of the soldiers in the overall sample for the Vocabulary, Comprehension, Total Reading, Computation, Concepts and Problems, and Total Mathematics TABE subtests. The secondary grade level objective of 10.5 for the same tests was achieved by 20 to 36 percent of the overall sample.

The reported success rate for scores on the TABE Total Battery score were 50 percent for the 9.0 standard and only 8 percent for the 10.5 standard. The reported success rates for the Language Mechanics and Expression and Spelling areas were even lower. These areas tended to receive less emphasis since they are not as closely related to the skills tested for determining the GT composite. Reported success rates for the 9.0 standard were 48 percent and 26 percent for Mechanics and Expression and Spelling, respectively. For the 10.5 standard, the success rates reported were 18 percent and 8 percent respectively.

The reported success rates for the seven separate Army posts are reported in Tables A4-8 through A4-16 in Appendix A. These data must be interpreted carefully. The relative success rates represent valid indices of the numbers and percentage of soldiers at the different posts who achieved the listed grade level standards. These relative success rates CANNOT and MUST NOT be used to evaluate the quality of the staff effort or the quality of the program itself in terms of cost/benefit concepts. There are too many differences among posts in the subject matter taught, the amount of time spent, and the testing procedures used to allow for direct valid comparisons on these bases.

Whether the obtained success rates are good enough is a value judgment that cannot be made solely on the data obtained. The less-than-two-thirds success rate for the 9.0 standard for the total sample is certainly lower than the more usual 80 to 90 percent success goal often stipulated as an acceptable level for instructional materials. It should be remembered that the 80 percent criterion was reached for end-of-program proficiency on module tests, but this did not translate to meeting the TABE 9.0 grade level standard. On the other hand, at least one post reported consistently high levels. This post put

soldiers through as many iterations of instruction-followed-by-test cycles as necessary until the 9.0 level was reached. The post then reported only the final scores. Had all seven posts followed this same procedure, the overall success rate would have approached or exceeded the 90 percent level. The post which reported the second highest success rates across the different areas was the post with the highest reported number of total class hours. This post's average class hours were over twice that of the shortest program. If all posts had devoted an equivalent number of hours to their programs, the program success rate would have been substantially higher. So what is good enough depends, in part, on the amount and type of resources available for making the program better. Increases in reported success rates could be achieved by changing program characteristics unrelated to the curriculum materials themselves. Or, resources could be devoted to revising and expanding current curriculum materials. Both approaches are warranted. On the other hand, if the Education Division (DAPE-MPE), or the education divisions of the MACOMS are interested in making direct post-to-post evaluative comparisons, considerable effort will be needed to ensure that more standard instructional, testing, and reporting procedures are used by all posts. Under the present circumstances such direct evaluative comparisons cannot properly be made.

### TABE Test Score Gains

#### Interpreting Gain Scores

Another index often used to evaluate education and training programs is movement toward the prescribed objectives without consideration of whether prescribed levels have been attained. TABE score gains represent such an index of movement in the desired direction, and analyses of such gains were therefore made.

Interpreting gain scores on the basis of supposedly equivalent test-forms used as preprogram and postprogram measures must take into consideration several factors. One, of course, is the actual equivalence of the forms. As previously indicated in Table 4-1, the M-3, D-3, and D-4 forms of the TABE do not appear to be of equal difficulty for Army BSEP II populations. Therefore, all TABE gain analyses presented in this report include only those cases reporting the use of D-3 as a pretest and D-4 as a posttest, unless specifically noted to the contrary.

Another factor to consider in interpreting gain scores is the effect of the regression to the mean phenomenon. All test instruments and procedures have errors of measurement associated with their use. Very low scores on a pretest are likely to be underestimates of the soldiers' true ability because of chance measurement errors. Even without any remedial intervention, it can be expected that such soldiers would obtain a higher score upon retaking the same test or an equivalent test. On the other hand, very high scores on a pretest are likely to be overestimates of the soldiers' true ability because of measurement error. Again, even without any remedial intervention, it can be expected that such soldiers would obtain a lower score upon retaking the same test or an equivalent test. The scores of both extremes of the pretest group could be expected to move toward the mean of the total distribution merely as an artifact of measurement error.

Two other factors particularly associated with the interpretation of TABE gain scores involve the topping out phenomenon and the manner in which grade level scores are determined from raw test scores. Grade level norms are provided for Level D that range from 5.0 through 12.0. These equivalents are derived on the basis of a regular civilian school year of nine months. The



number to the left of the decimal is the grade level and the number to the right represents the number of months into the school year. There is not a direct linear relationship between the number of test items answered correctly and the grade equivalent. For example, for the Vocabulary Test for Form D-3, a raw score change from 15 to 16 is the equivalent of moving from grade level 5.0 to 5.1 or one month. On the other hand, a raw score change from 36 to 37 is the equivalent of moving from grade level 11.9 to 12.9 or one full school year. In general, more items are needed to change grade levels at the lower grades than the higher. In addition, at the 12.9 level, changes of from three to 20 items, depending upon which subtest is involved, result in no grade level changes because 12.9 is the top score designation.

#### Distribution of Gain Scores

An initial review of the distributions of TABE grade level gains revealed larger than expected numbers of soldiers demonstrating losses rather than the anticipated gains. Analyses of these distributions were made in order to determine what factors were associated with negative and positive gains. The data in Table 4-10 demonstrate how entry grade level was associated with negative, zero, and positive grade level gains. For every TABE subtest, the proportion of negative gains was lowest at the lower grade levels and highest at the upper grade levels, and the progression was close to an accelerating linear function. The percentage of negative gains ranged from a low of one percent for the Computation subtest at a grade level below 5.9 to a high of 56 percent for the Comprehension subtest at grade level 12.0 to 12.9. Factors accounting for these results might be that the lower grade levels had little place to go but up while the reverse was true for the very top grade levels. Regression toward the mean would also be consistent with these results since

Table 4-10

Percent of TABE Grade Level Gains by Entry Grade Levels

Test and Pretest Grade Level	Negative Gains	Zero Gains	Positive Gains	N
<u>Vocabulary</u>				
Below 5.9	4%	4%	92%	55
6.0 - 6.9	10%	1%	89%	144
7.0 - 7.9	7%	4%	89%	358
8.0 - 8.9	17%	0%	83%	351
9.0 - 9.9	25%	5%	70%	261
10.0 -10.9	42%	3%	55%	305
11.0 -11.9	53%	0%	47%	260
12.0 -12.9	51%	48%	1%	248
All grade levels	28%	8%	64%	1982
<u>Comprehension</u>				
Below 5.9	5%	5%	90%	111
6.0 - 6.9	12%	0%	88%	81
7.0 - 7.9	10%	0%	90%	367
8.0 - 8.9	19%	0%	81%	488
9.0 - 9.9	24%	1%	75%	361
10.0 -10.9	30%	4%	66%	289
11.0 -11.9	45%	0%	55%	156
12.0 -12.9	56%	22%	22%	129
All grade levels	23%	3%	74%	1982
<u>Reading</u>				
Below 5.9	2%	4%	94%	49
6.0 - 6.9	7%	0%	93%	113
7.0 - 7.9	9%	3%	88%	358
8.0 - 8.9	8%	3%	89%	373
9.0 - 9.9	12%	2%	86%	377
10.0 -10.9	23%	5%	72%	371
11.0 -11.9	38%	1%	61%	138
12.0 -12.9	41%	29%	30%	137
All grade levels	16%	5%	79%	1916
<u>Computation</u>				
Below 5.9	1%	2%	97%	187
6.0 - 6.9	4%	0%	96%	385
7.0 - 7.9	4%	1%	95%	620
8.0 - 8.9	4%	1%	95%	520
9.0 - 9.9	10%	1%	89%	259
10.0 -10.9	9%	0%	91%	79
11.0 -11.9	17%	0%	83%	23
12.0 -12.9	24%	59%	17%	75
All grade levels	5%	3%	92%	2148

(Continued)

Table 4-10

Percent of TABE Grade Level Gains by Entry Grade Levels

Test and Pretest Grade Level	Negative Gains	Zero Gains	Positive Gains	<u>N</u>
<u>Concepts &amp; Prob.</u>				
Below 5.9	3%	5%	92%	156
6.0 - 6.9	6%	1%	93%	249
7.0 - 7.9	7%	3%	90%	588
8.0 - 8.9	9%	3%	88%	660
9.0 - 9.9	11%	2%	87%	287
10.0 -10.9	26%	4%	70%	78
11.0 -11.9	30%	0%	70%	60
12.0 -12.9	49%	40%	11%	47
All grade levels	10%	3%	87%	2120
<u>Mathematics</u>				
Below 5.9	2%	2%	96%	123
6.0 - 6.9	5%	1%	94%	270
7.0 - 7.9	2%	1%	97%	721
8.0 - 8.9	3%	1%	96%	573
9.0 - 9.9	5%	1%	94%	228
10.0 -10.9	8%	7%	85%	75
11.0 -11.9	10%	3%	87%	30
12.0- 12.9	24%	35%	41%	37
All grade levels	4%	2%	94%	2057
<u>Mechanics &amp; Expr.</u>				
Below 5.9	2%	5%	93%	316
6.0 - 6.9	7%	0%	93%	281
7.0 - 7.9	13%	2%	85%	445
8.0 - 8.9	15%	1%	84%	453
9.0 - 9.9	29%	3%	68%	183
10.0 -10.9	44%	2%	54%	128
11.0 -11.9	50%	0%	50%	40
12.0 -12.9	54%	28%	18%	74
All grade levels	17%	3%	80%	1920
<u>Spelling</u>				
Below 5.9	8%	23%	69%	452
6.0 - 6.9	25%	1%	74%	181
7.0 - 7.9	26%	4%	70%	418
8.0 - 8.9	37%	1%	62%	302
9.0 - 9.9	43%	0%	57%	157
10.0 -10.9	51%	5%	44%	143
11.0 -11.9	42%	0%	58%	50
12.0 -12.9	38%	44%	18%	133
All grade levels	28%	10%	62%	1836

the low entry soldiers would be expected to regress upward and the high entry soldiers would be expected to regress downward.

For evaluation purposes, the sever posts were requested to use the entire TABE battery for postprogram testing whether or not the soldier had or had not received instruction in all of the areas. While this procedure was not followed by all posts, an analysis of gains was made in terms of whether or not relevant MGA modules had been completed (see Table 4-11). For every TABE subtest, the percentage of negative gains was greater for soldiers who had not received relevant instruction than for those who had.

Table 4-11

Percent of TABE Grade Level Gains With and Without MGA Instruction

TABE Subtest	Negative Gains		Zero Gains		Positive Gains		<u>N</u>
	W/O	W	W/O	W	W/O	W	
Vocabulary	36%	19%	12%	4%	52%	77%	1985
Comprehension	29%	16%	4%	1%	67%	83%	1984
Reading	24%	10%	7%	3%	69%	87%	1919
Computation	12%	5%	12%	2%	76%	93%	2151
Concepts & Problems	15%	5%	4%	2%	81%	93%	2124
Mathematics	17%	3%	7%	1%	76%	96%	2061
Mechanics & Expression	23%	10%	5%	1%	72%	89%	1922
Spelling	30%	21%	12%	7%	58%	72%	1840

Because some posts reported pretest TABE scores from tests that had been administered a considerable length of time before the BSEP II classes began, an analysis was made of the possible effects of such reporting procedures (see Table A4-18). There was no significant relationship between gains and the reported time factor.

Finally, gains were analyzed by Army post (see Table 4-12 and Table A4-19). The percentage of negative gains among posts was significantly different. However, such differences could be accounted for by factors associated with the number of participants and the manner in which the program was implemented, rather than with the quality of the staff effort.

Table 4-12

TABE Grade Level Gains

TABE Subtest	Percent			<u>N</u>
	Negative Gains	Zero Gains	Positive Gains	
Vocabulary	28%	8%	64%	1985
Comprehension	23%	3%	74%	1984
Reading	16%	5%	79%	1918
Computation	5%	3%	92%	2151
Concepts & Problems	10%	3%	87%	2124
Mathematics	4%	2%	94%	2061
Mechanics & Expression	17%	3%	80%	1922
Spelling	28%	10%	62%	1840

After a review of these analyses, we decided to use the gain scores as reported, rather than setting all negative scores to zero, as is often done. We did this not because we believe that there were actual losses in the abilities of the soldiers tested, but because the patterns of scores appeared to be consistent with the prescribed use of these tests in BSEP settings.

### Mean Grade Levels and Gains

The mean grade level pretest and posttest TABE scores are shown in Table 4-13 and Table A4-20. The mean scores for the overall sample of posttests ranged from a low of 8.6 for the Spelling subtest to a high of 10.4 for the Computation subtest. The Spelling subtest was the only one for which the overall mean postprogram level did not reach the 9.0 standard, although three posts did achieve that level. A few individual posts did not quite make the 9.0 standard for the Mechanics and Expression subtest and for the Total Battery. For the overall sample, posttest grade levels were about the same for the Reading and Mathematics areas. Posttest scores for the Total Battery, the Mechanics and Expression, and the Spelling subtests were somewhat lower.

Table 4-13

#### Mean Grade Level Scores on TABE Subtests

	Pretest			Posttest		
	<u>N</u>	Mean Grade Level	Standard Deviation	<u>N</u>	Mean Grade Level	Standard Deviation
Vocabulary	2255	9.6	2.1	1944	10.3	1.8
Comprehension	2256	9.2	1.8	1994	10.2	1.8
Reading	2249	9.3	1.7	1931	10.3	1.6
Computation	2253	7.9	1.7	2157	10.4	2.1
Concepts & Prob.	2252	8.2	1.5	2132	9.9	1.8
Mathematics	2247	8.0	1.4	2070	10.3	1.9
Mechanics & Expr.	2246	8.0	1.9	1940	9.3	1.9
Spelling	2242	8.1	2.4	1853	8.6	2.4
Total Battery	1623	8.2	1.3	1103	9.4	1.5

The mean pretest scores for the overall sample ranged from a low of 7.9 for the Computation subtest to a high of 9.6 for the Vocabulary subtest. The mean pretest grade levels for the Vocabulary, Comprehension, and Reading

subtests exceeded the 9.0 standard while the mean pretest grade levels for the other subtests were below, ranging from 7.9 to 8.2.

Greater gains were made in the Mathematics area than in the reading area which accounts for equal postprogram levels even though the preprogram levels for Mathematics were somewhat lower. Mean gains are shown in Table 4-14 and Table A4-21. Whereas there were some differences among posts, greater gains were made in the mathematics area than in the other areas at all posts. Mean gains for the overall sample according to entry grade level categories are shown in Table 4-15. Greater gains were made by the primary target group (those with entry grade levels below 8.9) than by other students. Both groups, however, made greater gains in Mathematics than the other areas.

Table 4-14  
Mean Grade Level Gains on TABE Subtests

TABE Subtest	<u>N</u>	Grade Level Gain
Vocabulary	1985	.9
Comprehension	1984	1.3
Total Reading	1918	1.1
Computation	2151	2.5
Concepts & Problems	2124	1.7
Total Mathematics	2064	2.1
Mechanics & Expression	1922	1.5
Spelling	1840	.7
Total Battery	1035	1.3

Table 4-15

Mean Gains for All Posts on TABE Subtests by Grade Level

TABE Subtest	Mean Gains for All Posts on TABE Subtests by Grade Level																			
	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	5.0-8.9	9.0-9.9	10.0-10.9	11.0-11.9	12.0-12.9	9.0-12.9										
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean						
Vocabulary	55	2.9	144	2.1	358	2.0	351	1.3	908	1.8	261	.8	305	.4	260	-.1	248	-.8	1074	.1
Comprehension	111	2.8	91	2.1	367	2.0	488	1.4	1047	1.8	361	1.0	289	.6	156	.2	129	-.6	935	.5
Total Reading	49	2.5	113	1.9	358	1.7	373	1.5	893	1.9	377	.8	371	.7	138	.5	137	-.3	1023	.6
Computation	187	2.5	385	2.7	620	2.7	520	2.8	1712	2.7	259	2.4	79	2.0	23	.7	75	-.5	436	1.7
Concepts & Problems	151	2.3	249	2.0	588	1.7	660	1.8	1648	1.8	287	1.6	78	1.0	60	.5	47	-.7	472	1.1
Total Math	123	1.9	270	2.0	721	2.1	573	2.4	1687	2.2	228	2.0	75	1.7	30	1.1	37	-.3	370	1.7
Mech. & Expr.	316	2.5	281	2.0	445	1.6	453	1.5	1495	1.8	183	.6	128	.3	40	.0	74	-.8	425	.2
Spelling	452	1.3	181	1.0	418	.9	302	.7	1353	1.0	157	.4	143	.0	50	.1	133	-.7	483	-.1
Total Battery	54	1.8	108	1.3	353	1.3	307	1.3	822	1.4	136	1.2	59	1.4	14	1.3	2	.0	211	1.3



### Meeting the GT Standard of 100

Criteria for reenlistment, and certain other personnel actions, include attainment of set standards for ASVAB composites including a minimum GT composite of 100. Because of this, improvement of ASVAB composites, particularly the GT, has become the goal of many soldiers. While the MGA curriculum was not originally designed to meet this educational objective, current expectations of the Army are that the course will facilitate attainment of this objective. Thus, while it is theoretically improper to evaluate a course against an objective for which it was not specifically designed, it may be proper, from a practical standpoint, to use this objective as an evaluation index simply because the Army does, in fact, use the course in the hopes of facilitating attainment of this objective.

The average preprogram and postprogram GT composites for the evaluation sites are shown in Table 4-16. Preprogram scores were reported for the majority of the sample. The preprogram scores are "scores of record" and do not necessarily represent scores from tests taken shortly before enrollment in the BSEP II program. The percentage of preprogram scores below 100 ranged from a low of 81 at Fort Polk to a high of 95 at Fort Ord. As indicated in Chapter 3 and Table 4-16 the vast majority of BSEP II students entered with GT composites below 100.

Table 4-16

Preprogram and Postprogram GT Scores

	Preprogram GT			Postprogram GT		
	<u>N</u>	% Below 100	% Above 100	<u>N</u>	% Below 100	% Above 100
All Posts	3530	89%	11%	932	44%	56%
Fort Bragg	573	89%	11%	457	37%	63%
Fort Campbell	741	89%	11%	115	37%	63%
Fort Carson	461	91%	8%	20	85%	15%
Fort Hood	532	88%	12%	13	7%	23%
Fort Lewis	496	92%	8%	1	100%	0%
Fort Urd	294	95%	5%	15	53%	47%
Fort Polk	433	81%	19%	311	52%	48%

The data on average postprogram GT composites indicate several things. First, the number of soldiers for whom postprogram GT composites were reported represents only about one-quarter of the overall sample. Various posts impose different procedures for retesting soldiers on the AFCT. Because of these differences, substantial samples of postprogram GT composites were reported only by three of the seven FORSCOM evaluation sites, namely Forts Bragg, Campbell, and Polk. The other four posts reported only a smattering of postprogram scores. The postprogram data represent scores from tests taken at the end of the BSEP II course or shortly thereafter. At all sites except Fort Lewis, which reported only one case, the percentage of soldiers attaining GT composites over 100 after the course was substantially higher than at the beginning of the course.

The data in Table 4-17 indicate the proportion of the sample of soldiers who entered the BSEP II course with a GT composite below 100 who were successful in reaching the goal score of 100 at the end of the program. The data in this table are restricted to those cases for which both preprogram and postprogram scores were available. The data therefore largely reflect the results of the BSEP II courses at Forts Bragg, Campbell, and Polk. Overall, slightly over half of the soldiers for whom data were available and who started with a GT composite below 100 ended with a composite over 100. Using the GT composite standard as an evaluation index, the MGA program was successful for about half the sample. If all soldiers at Forts Carson, Hood, Lewis and Ord had been retested and if the overall success rate of 53 percent were achieved, an additional 860 soldiers would have successfully achieved the GT standard so that the overall success rate would have been 51 percent. Procedures regarding AFCT testing and reporting procedures at local posts potentially deprived 860 BSEP II participants from the possibility of achieving recorded GT composites of 100. In a similar fashion, the BSEP II program was potentially denied credit for an additional 860 "successes" it might have achieved.

Table 4-17

Soldiers Meeting GT 100 Standard

Post	Soldiers for Whom Both Preprogram and Postprogram GTs Were Reported		
	Preprogram GT Below 100	Postprogram GT 100 or Above	Percent
	<u>N</u>	<u>N</u>	
All Posts	831	437	53%
Fort Bragg	411	247	60%
Fort Campbell	105	63	60%
Fort Carson	16	2	13%
Fort Hood	10	1	10%
Fort Lewis	1	0	--
Fort Ord	14	6	43%
Fort Polk	274	118	43%

CLOZE Testing Procedures

In order to provide reliable measures of reading comprehension that were more directly related to military reading tasks than are the reading passages in the TABE test, three forms of an alternate reading test were developed for use with the Fort Lewis Experimental Program (see Chapter 9). These tests were used with a sample of approximately 300 soldiers from five of the seven evaluation sites.

The type of reading tests developed utilized the CLOZE technique. In the CLOZE technique every nth word in relevant reading passages is deleted and replaced with a blank. The students read the passage and fill in the blanks.

Whereas different methods of scoring can be used, if only exact answers are accepted as correct, as they were in this case, a CLOZE test can be unambiguously scored. The CLOZE score is the number or percent of blanks filled in correctly. While there are differing interpretations of the relationship between filling in blanks in this manner and the psycholinguistic processes involved in reading, the CLOZE technique allows the reader to use the context of the passage to help understand the material and fill in the blanks. In the three forms of the CLOZE test used during the evaluation, the passages were taken from the Soldier's Manual of Common Tasks, Level 1 (FM21-2). The passages were altered so that every seventh word was omitted from the text, except for the first and last sentences, which were not altered. A total of 50 words was omitted from each form. The students had to supply the exact words as printed in FM21-2 in order to be given credit for a correct answer.

Program target objectives stated in the Contractor's Guide that accompanies the MGA instructional materials include the following statement, "Each soldier completing the program shall demonstrate an increase of twenty percent (20%) in the use of the Soldier's Manual of Common Tasks (FM21-2) as measured by a pre- and post-CLOZE test."

Since the project staff exercised no control over which test forms were administered as pre or posttests, an analysis was conducted to determine the mean scores of each of the three forms when used as either a pre or posttest (see Table A4-22). Based on attained mean scores, under the assumption that testing conditions were comparable in all cases, Form A appears to be more difficult than either Form B or Form C, whether or not it was used as a pre or posttest. Form C was slightly more difficult than Form B when used as a pretest, but it was markedly easier than either Form A or Form B when used as a

posttest. Gains in CLOZE reading test scores are shown in Table A4-23 for the various combinations of test forms used as pre and posttests. The average CLOZE gain for a total sample of 262 on which both pre and post CLOZE tests are reported was four percent. None of the gains reached the targeted 20 percent increase, so by the CLOZE criterion, the MGA program failed to meet the stated objective. Because of the demonstrated differences in test forms and the rigorous scoring criteria used, the CLOZE test results are of little practical significance.

## CHAPTER 5. FACTORS ASSOCIATED WITH THE OBTAINED RESULTS

Introduction

One of the more interesting, though tenuous, aspects of program evaluation is attempting to attribute the kind and amount of results to single variables or groups of variables associated with program implementation. This is particularly difficult with operational programs in which the evaluators have little control over the variables studied. Attribution to relevant variables is necessary, however, if program administrators are to have a basis for making decisions about program implementation and review. Some of the important variables have already been mentioned. In this chapter, we shall examine some of the objective statistical evidence and set forth hypotheses regarding causal factors for the results obtained.

Course and Student VariablesTime on Task/Target Audience

As indicated earlier, time on task is traditionally an important factor in attaining results in educational and training programs. We have also indicated that while the MGA course was designed for soldiers with TABE pretest scores below the 9.0 grade level, many participants entered with scores exceeding that level. We have also previously described differences among posts on these factors. How much do these differences account for the postprogram results attained? Table 5-1 shows pretest and posttest mean scores as well as gain scores for the TABE subtests. It presents results in four subgroups. The four subgroups are composed of primary target soldiers, those with pretests scores

Table 5-1

Grade Level Scores and Gains in Relation to Direct MGA Instruction

TABE Pretest and MGA Instructional Status	Grade Level Gain		Grade Level Score			
	N	Mean	Pretest		Posttest	
	N	Mean	N	Mean	N	Mean
<u>Vocabulary Test</u>						
Below 9.0 - No	131	1.3	148	7.6	133	9.0
Below 9.0 - Yes*	780	1.9	786	7.6	782	9.5
Above 9.0 - No	655	0.0	884	11.2	657	11.1
Above 9.0 - Yes*	419	.3	437	10.8	422	11.1
<u>Comprehension Test</u>						
Below 9.0 - No	208	1.5	237	7.6	210	9.1
Below 9.0 - Yes*	841	1.9	853	7.6	845	9.5
Above 9.0 - No	597	.4	814	10.7	598	11.1
Above 9.0 - Yes*	338	.7	352	10.4	341	11.1
<u>Reading Test</u>						
Below 9.0 - No	120	1.4	140	7.7	124	9.1
Below 9.0 - Yes*	775	1.7	820	7.7	780	9.4
Above 9.0 - No	531	.4	738	10.8	531	11.2
Above 9.0 - Yes**	492	.8	551	10.1	496	11.1
<u>Computation Test</u>						
Below 9.0 - No	26	2.2	30	6.3	26	8.4
Below 9.0 - Yes	1689	2.7	1719	7.3	1694	10.0
Above 9.0 - No	62	.6	104	10.8	63	11.5
Above 9.0 - Yes*	374	1.9	400	10.2	374	12.1
<u>Concepts &amp; Prob. Test</u>						
Below 9.0 - No	595	1.2	613	7.2	597	8.4
Below 9.0 - Yes*	1057	2.2	1065	7.8	1060	10.1
Above 9.0 - No	140	.5	209	10.3	141	10.8
Above 9.0 - Yes*	332	1.3	365	10.1	334	11.5
<u>Mathematics Test</u>						
Below 9.0 - No	23	1.8	29	6.4	23	8.0
Below 9.0 - Yes	1668	2.2	1757	7.5	1675	9.7
Above 9.0 - No	46	.5	87	10.8	46	11.3
Above 9.0 - Yes*	324	1.8	374	9.9	326	11.7



(Continued)

Table 5-1

Grade Level Scores and Gains in Relation to MGA Instruction

TABE Pretest and MGA Instructional Status	Grade Level Gain		Grade Level Score			
	N	Mean	Pretest		Posttest	
	N	Mean	N	Mean	N	Mean
<u>Mech. &amp; Expr. Test</u>						
Below 9.0 - No	586	1.1	652	7.1	595	8.2
Below 9.0 - Yes*	911	2.3	955	7.1	918	9.4
Above 9.0 - No	297	.1	479	10.6	299	10.6
Above 9.0 - Yes*	128	.5	160	10.2	128	10.7
<u>Spelling Test</u>						
Below 9.0 - No	832	.8	958	6.7	838	7.5
Below 9.0 - Yes*	525	1.4	572	6.8	530	8.1
Above 9.0 - No	397	-.1	616	11.1	398	10.9
Above 9.0 - Yes	86	.1	96	10.7	87	10.8

\* Level of significance between No and Yes groups:  $p=.01$

\*\* Level of significance between No and Yes groups:  $p=.05$

below 9.0, divided between those who received MGA module activity sheets directly relevant to the TABE subtest and those who did not, and non-primary target soldiers, those with pretest scores above 9.0 similarly divided into two subgroups. Table A5-1 shows comparable data by post.

In interpreting the data in these tables, keep in mind that assignment procedures and testing procedures varied somewhat from post to post. Posts were requested to posttest on all areas of the TABE whether or not directly relevant instruction was given. This accounts for a large segment of the no instruction groups. In other cases, the shortness of the program cycle at a particular post precluded assigning instruction for all areas in which deficiencies had been identified. Fort Lewis presents a special case in the reading and language areas because some of the soldiers there were assigned to the FLX program (see Chapter 9) for reading and language and were assigned MGA materials only in mathematics. "Yes" in these tables means that the soldiers were assigned relevant MGA module activity sheets. "No" means that the soldiers did not complete any MGA module activity sheets, although it is possible they did receive some instruction in the subject matter using non-MGA materials.

The data in Table 5-1 indicate that the MGA materials appear to have largely achieved their originally designed objective for the primary target group. For all TABE subtests except Spelling, the group who pretested below 9.0 and had relevant MGA instruction attained mean postprogram scores in excess of 9.0. For none of the subtests did this group attain mean postprogram scores meeting the secondarily imposed standard of 10.5. Thus, the materials appear to have accomplished what they were originally designed to do, but not what the Army would now like them to do. The primary target group which did not receive

relevant MGA instruction also reached the 9.0 level for the Vocabulary, Comprehension, and Reading tests, but not for any of the other tests. This finding is influenced by the inclusion of the FLX group at Fort Lewis (see Table A5-1), whom we know had considerable non-MGA instruction in the reading area, and by the use of non-MGA supplementary materials. More so than for other subject areas, the "no MGA instructional" group are likely to have had other instruction in reading. For all subtests, the primary target group who had relevant MGA instruction attained a higher mean postprogram score than the group who had not received relevant instruction. Students had learned at least some of the materials that were presented to them. For the non-primary target students, the effects of having had relevant instruction were less discernible. For the mathematics subtests, the mean postprogram scores for the group who had instruction were higher than for the group who did not. For the other subtests the means were essentially the same. It appears that the MGA materials were effective for the primary target group in all areas and for the non-target group in mathematics but not in the other areas.

A more direct measure of time-on-task is the reported number of total classroom hours devoted to the BSEP II program. As indicated earlier, the variance among posts was substantial with the longest program being over twice as long as the shortest program. Table 5-2 presents mean raw score and grade level gains for TABE subtests and for the GT composite broken out into groups according to the number of class hours. Raw scores represent the number of test items answered correctly while grade level equivalents represent the median raw score achieved by various grade levels in the TABE norm group. The class hour categories represent quartiles on the overall distribution of reported class hours without regard to the availability of complete test data. Total class hours do not have a direct influence on TABE score gains. What

Table 5-2

TABE and GT Gains in Relation to Class Hours

Test Score		Class Hours							
		0-51		52-73		74-106		107 and Above	
		N	Mean	N	Mean	N	Mean	N	Mean
<u>TABE Tests</u>									
Vocabulary	Raw	431	2.0	598	1.7	490	1.8	411	3.4
	Grade Level	440	1.0	617	1.0	495	1.1	413	1.7
Comprehension	Raw	430	5.0	600	5.1	490	5.3	411	6.5
	Grade Level	438	1.3	618	1.3	494	1.7	414	1.7
Reading	Raw	420	5.8	590	5.5	472	5.5	382	9.1
	Grade Level	429	1.1	609	1.1	476	1.1	385	1.7
Computation	Raw	504	9.4	617	9.5	524	10.3	442	12.2
	Grade Level	510	2.4	637	2.3	532	2.6	449	3.1
Concepts/Prob.	Raw	479	5.1	612	4.6	516	5.9	445	7.7
	Grade Level	490	1.6	630	1.5	526	1.9	453	2.3
Mathematics	Raw	473	13.5	602	13.6	504	15.3	420	19.3
	Grade Level	482	2.0	618	1.8	513	2.2	427	2.6
Mechanics/Expr.	Raw	422	11.5	577	12.3	476	12.9	394	17.1
	Grade Level	434	1.4	593	1.4	481	1.6	397	2.2
Spelling	Raw	408	1.6	561	1.4	456	1.7	357	2.1
	Grade Level	419	1.0	579	1.0	463	1.0	363	1.3
Total Battery	Raw	196	27.0	456	28.7	195	26.8	175	37.8
	Grade Level	194	1.3	463	1.3	196	1.3	177	1.7
<u>ASVAB Test</u>									
GT Composite		83	8.8	83	9.7	91	8.6	175	9.1

influence class hours exert appears to be largely in the upper quartile of the class hours distribution. It appears, therefore, that adding class hours will increase mean gains but only if many class hours are involved, not just a few.

The relationship between class hours and GT improvement appears to be non-linear. The greatest improvement was shown by programs in the second quartile, followed by the fourth, first and third quartiles. More class hours did not necessarily lead to greater GT improvement.

The reported number of hours spent on supplemental materials is a secondary index of time. It represents time not spent on MGA materials. Table 5-3 presents the distribution of the TABE test and GT gains according to time groupings of hours spent on supplementary materials. With few exceptions, the mean gains are highest for the fourth quartile, but there appears to be no direct relationship between gains and time spent on supplementary materials for the other three quartiles. It again appears that the effect of hours on gains is noticeable only if considerable numbers of hours are involved.

Gains in the GT were associated primarily with a large number of hours reported for supplementary materials. This is probably true because many of those supplementary hours were most likely devoted to materials specifically designed to improve GT scores. These materials appear to be doing the job they were designed to do. If GT improvement rather than TABE improvement becomes the primary objective of BSEP II, then these materials are especially relevant.

A correlational analysis was also carried out to examine the relationship between time spent on the program and TABE and GT gains. The obtained Pearson product-moment correlation coefficients are shown in Table 5-4. From a purely statistical point of view, the relationship between total class hours and TABE

Table 5-3

TABE and GT Gains in Relation to Hours Reported Spent  
on Supplementary Materials

Test Score		Supplementary Hours							
		0		1-10		11-28		29 and Above	
		N	Mean	N	Mean	N	Mean	N	Mean
<u>TABE Tests</u>									
Vocabulary	Raw	855	2.4	505	1.6	363	1.8	209	3.1
	Grade Level	870	1.2	517	1.0	366	1.0	214	1.6
Comprehension	Raw	853	5.5	508	5.1	363	5.8	208	5.5
	Grade Level	871	1.4	520	1.3	364	1.5	210	1.5
Reading	Raw	839	6.5	488	5.3	339	6.2	199	7.9
	Grade Level	857	1.3	498	1.1	342	1.2	203	1.6
Comprehension	Raw	929	10.2	539	10.2	402	10.1	217	10.7
	Grade Level	952	2.5	547	2.5	405	2.6	224	2.9
Concepts/Prob.	Raw	908	5.6	525	5.2	399	6.1	221	6.9
	Grade Level	932	1.7	537	1.7	404	1.9	227	2.2
Mathematics	Raw	901	15.0	504	14.6	384	15.7	210	16.7
	Grade Level	925	2.1	515	2.0	385	2.2	215	2.5
Mech./Expr.	Raw	821	13.1	500	13.9	353	12.5	196	13.5
	Grade Level	838	1.5	512	1.8	356	1.6	199	1.6
Spelling	Raw	808	1.6	464	1.7	324	1.8	186	2.0
	Grade Level	832	1.0	476	1.0	328	1.1	188	1.3
Total Battery	Raw	523	29.6	282	28.2	108	29.9	109	32.5
	Grade Level	526	1.4	286	1.3	108	1.4	110	1.7
<u>ASVAB Test</u>									
GT Composite		171	9.4	112	7.7	79	7.9	70	11.5

gains is significant, although only six percent of the total variance is attributable to classroom hours. This means that the relationship is most likely not a chance occurrence. There was no statistically significant relationship between total class hours and GT gains. The relationship between reported hours on supplementary materials and GT gains, however, was significant. Since some of the supplementary materials used were specifically designed for GT improvement this finding is not surprising.

Table 5-4

Correlations Between Program Hours and TABE Grade Level and GT Gains

Test	Total Classroom Hours	Hours Spent on Supplementary Materials
Vocabulary	14	09
Comprehension	13	(05)
Reading	11	06
Computation	18	07
Concepts & Problems	12	11
Mathematics	23	13
Mechanics & Expression	24	N.S.
Spelling	08	07
Total TABE Battery	21	18
GT Composite	N.S.	(11)

NOTE: Decimal points omitted. Coefficients in parenthesis are significant at the .05 level, all others at the .01 level.

We had hoped to be able to derive a rule-of-thumb guideline such as "so

many hours of instruction are likely to lead to so many units of improvement on TABE subtests or on the GT composite." Because there was no strong, linear relationship between time and gains, we were unable to do this.

### Depth of Instruction

Another variable examined was the amount of work done in the various subject areas. Our index for this variable was the number of MGA activity sheets completed. Table 5-5 presents the distribution of TABE and GT gains broken down into subgroups according to how many activity sheets were completed. The activity sheet categories were derived by assigning soldiers who did no work in an area to the first category and then dividing the remaining distribution in thirds. For TABE subtests for which there were no large number of zero entries, the activity sheet frequency distribution was divided into quartiles.

For all TABE subtests, mean gains were greater for soldiers who either completed some activity sheets or who were in the upper three categories than they were for soldiers in the lowest category. Some direct MGA module activity was obviously more effective than no such activity. For the mathematics subtests there was a linear relationship between activity sheets completed and TABE gains. The more sheets completed, the higher the gain. This was largely true for the Mechanics and Expression Test also, although there was a little reversal in the middle of the distribution. For the Reading subtests and the Spelling subtest, more did not necessarily mean better.

The effects of activity sheet completion on GT gains were not linear, that is, more sheet completion was not directly related to GT gains. For four of the subtests, and for the total battery, the greatest GT gains were associated



Table 5-5

TABE and GT Gains in Relation to Number of Activity  
Sheets Completed

TABE Subtest/ Sheets Completed	TABE Raw Score Gain		TABE Grade Level Gain		GT Gain	
	<u>N</u>	Mean	<u>N</u>	Mean	<u>N</u>	Mean
<u>Vocabulary:</u>						
0	262	.9	265	.6	55	10.5
1 - 5	82	3.2	85	1.8	17	9.7
6 - 8	79	3.2	81	1.6	16	11.3
9 and above	80	2.5	87	1.3	13	7.9
<u>Comprehension:</u>						
0	250	3.9	253	1.0	52	11.1
1 - 5	81	7.4	85	2.0	23	8.6
6 - 9	87	6.6	91	1.8	17	11.8
10 and above	85	6.2	89	1.6	9	5.8
<u>Reading:</u>						
0	206	3.5	209	.7	44	10.9
1 - 8	104	8.3	105	1.6	27	10.7
9 - 15	91	7.9	97	1.5	17	9.4
16 and above	101	7.2	107	1.4	13	7.9
<u>Computation:</u>						
0 - 9	115	7.7	120	2.1	35	13.9
10 - 18	126	9.8	130	2.5	20	6.5
19 - 26	135	11.4	138	2.9	24	10.0
27 and above	131	12.8	135	3.1	22	7.8
<u>Concepts &amp; Problems:</u>						
0	224	4.2	235	1.3	29	10.7
1 - 5	91	6.5	91	2.1	20	12.3
6 - 11	100	6.1	102	1.9	25	10.1
12 and above	92	8.6	95	2.7	27	8.1

(Continued)

Table 5-5

TABE and GT Gains in Relation to Number of Activity  
Sheets Completed

TABE Subtest/ Sheets Completed	TABE Raw Score Gain		TABE Grade Level Gain		GT Gain	
	<u>N</u>	Mean	<u>N</u>	Mean	<u>N</u>	Mean
<u>Mathematics:</u>						
0 - 14	122	11.3	128	1.8	29	14.2
15 - 22	121	14.4	124	1.9	19	7.5
23 - 32	130	16.9	134	2.3	25	9.4
33 and above	134	20.4	137	2.8	28	8.6
<u>Mechanics &amp; Expression:</u>						
0	215	8.6	221	.9	45	12.2
1 - 16	84	15.5	90	1.8	10	4.9
17 - 32	97	15.2	99	2.0	16	9.3
33 and above	93	19.0	94	2.8	30	9.4
<u>Spelling:</u>						
0	325	1.3	337	.9	60	10.5
1 - 8	42	2.3	44	1.6	9	10.4
9 - 11	39	2.2	40	1.4	16	11.9
12 and above	48	2.2	50	1.1	16	7.3
<u>Total Battery:</u>						
3 - 25	75	24.7	75	1.3	25	13.2
26 - 45	75	31.7	74	1.4	28	10.1
46 - 47	76	26.7	77	1.2	22	10.4
68 and above	41	32.8	42	1.6	26	7.2

with having completed the fewest number of sheets. This was true for Reading, Computation, Mathematics, and Mechanics and Expression, as well as for the Total Battery. This does not mean that completing fewer activity sheets caused soldiers to achieve greater GT gains.

Several factors influenced the observed relationship between activity sheet completion and GT gain. First, completion of fewer MGA activity sheets does not necessarily mean less overall instruction but merely less activity sheet mediated instruction. In accordance with recommended class management procedures, soldiers who demonstrated fewer deficiencies by scoring high on Module Reviews were assigned fewer activity sheets. Those soldiers whose TABE scores nevertheless indicated a need for remediation were assigned supplementary instructional materials that often contained content directly related to GT improvement. Because of the course design, soldiers whose repertoire of entry academic skills were lowest were assigned the greatest number of activity sheets. The general level of their entry academic skills may have influenced the observed GT gain rate. Second, the activity sheets were targeted at the academic skills measured by the TABE and not directly at those associated with the ASVAB tests that contribute to the GT composite. There is, of course, a good deal of overlap. In fact, for the Vocabulary, Comprehension, and Computation subtests, greatest gains were associated with soldiers who completed a fair number, not the highest, of activity sheets. These three subject areas are directly related to ASVAB tests included in the GT composite. These factors influenced the obtained results. At any rate, the relationship between completion of MGA activity sheets and GT gains is not a simple linear one in which completing more sheets means attaining greater GT gains. Since the course was not originally designed to do this, these results are not surprising.

A correlational analysis examining the relationships between the number of MGA activity sheets completed in a subject area and the TABE gains was accomplished. The Pearson product-moment correlation coefficients are shown in Table 5-6. In examining these data, one notes that the highest coefficients are between the number of sheets completed for a subject matter area and the TABE subtest to which they are directly related or of which they are a component part. Instructional activity in a subject area leads to TABE gains in that subject area. The instructional materials are at least partly absorbed by the students and the materials relate to the postprogram measures for which they were designed. One also notes the intercorrelations within the three reading areas and the three mathematics areas. For reasons not immediately obvious, the rate of activity sheet completion in the Mathematics area is also correlated with gains in the Mechanics and Expression and Spelling areas. The reverse, however, is not true for Spelling but it is for Mechanics and Expression. The total number of activity sheets completed is related to gains for all subtests except Vocabulary and the Total Battery. By and large, more work completed leads to greater TABE gains.

#### Current Enlistment Status

Some soldiers are enrolled in BSEP II relatively early in their enlistment periods, shortly after having completed IET and being assigned to an operational unit. Others are enrolled later, many in order to qualify for a personnel action such as MOS reclassification or reenlistment. We thought that the motivational levels of soldiers might possibly be in accordance with their enlistment status and that this might affect their progress in BSEP II. We, therefore, divided the group into early, middle, and late in regard to their current enlistment. Early was defined by 12 months or less between the

Table 5-6

## Correlations Between Number of Activity Sheets Completed by TABE Gains

	Vocabulary	Comprehension	Reading	Computation	Concepts and Problems	Mathematics	Mech./ Expr.	Spelling	Total Battery
Vocabulary	23	15	22	N.S.	N.S.	N.S.	N.S.	N.S.	(-15)
Comprehension	(10)	18	19	N.S.	N.S.	N.S.	N.S.	N.S.	(-13)
Reading	18	19	23	N.S.	N.S.	N.S.	N.S.	N.S.	-16
Computation	N.S.	N.S.	N.S.	20	16	19	(10)	(10)	N.S.
Concepts and Problems	N.S.	13	11	28	35	38	17	12	26
Mathematics	N.S.	N.S.	N.S.	28	27	31	15	13	(12)
Mechanics & Expression	N.S.	N.S.	N.S.	13	12	13	42	17	N.S.
Spelling	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.	(10)	12	N.S.
Total Battery	N.S.	(9)	(9)	22	21	23	37	19	N.S.

NOTE: Decimal points have been omitted. Coefficients in parentheses are significant at the .05 level, all others are at the .01 level

reported active duty date and the first day of class. Late was defined by six months or less between the beginning of class and the reported ETS date. Middle was defined as all who fell between these two definitions.

Mean TABE and GT gains for the three groups are shown in Table 5-7. These data indicate that there were no apparent differences in TABE gains between the three groups. The highest GT gains were demonstrated by the middle group, followed by the late group, with least gains registered by the early group for whom the fewest number of postprogram GT scores were available. If there were motivational or other differences associated with enlistment status, they did not affect program outcomes in any systematic manner.

Table 5-7

TABE Grade Level and GT Gains in Relation to  
Current Enlistment Status

	Early in Enlistment		Middle		Late in Enlistment	
	<u>N</u>	Mean	<u>N</u>	Mean	<u>N</u>	Mean
<b>TABE Tests</b>						
Vocabulary	290	.8	1268	.9	344	.9
Comprehension	289	1.0	1269	1.3	342	1.2
Reading	284	.7	1220	1.2	331	1.2
Computation	307	2.4	1378	2.6	378	2.4
Concepts & Prob.	303	1.6	1361	1.7	373	1.6
Mathematics	296	2.0	1323	2.1	357	2.0
Mechanics & Expr.	286	1.5	1231	1.5	324	1.3
Spelling	268	.6	1179	.8	316	.7
Total Battery	142	1.1	665	1.4	181	1.4
<b>ASVAT Test</b>						
GT Composite	41	7.0	288	8.7	94	7.8

TABE Pretest Date

Even though the evaluation sites were requested to pretest all BSEP II soldiers on the TABE unless TABE scores of record were no older than six months, some posts did not pretest all soldiers and instead reported older pretest scores. In order to determine whether the age of the pretest scores affected demonstrated gains, the sample was divided into two groups: those whose pretest scores were six months or less from the beginning class date; and

those whose pretest scores were older than six months. These data are shown in Table 5-8. With the exception of the Mathematics subtest, the differences were relatively small but consistent, but the gains for soldiers with the older pretest scores were somewhat higher. The incidental learning that took place between the pretest and the beginning of BSEP II more than offset what might have been forgotten.

The GT composite was the only index of general ability that was available for soldiers in BSEP II. The relationships of this variable to program results are shown in Table 5-9. The relationship between entry GT and TABE gains was weak and mixed. In no case did it account for as much as two percent of the variance. Lower entry GT scores were associated with higher gains in Vocabulary, but the reverse was true for gains in Computation, Total Mathematics, Mechanics & Expression, and for the Total Battery score. In any case, the associations were not strong. Lower entry GT scores were also associated with greater gains in the GT composite.



Table 5-8

TABE and GT Gains in Relation to Time Between TABE  
Pretesting and Class

TABE Test and Time	TABE Raw Score Gain		TABE Grade Level Gain	
	<u>N</u>	Mean	<u>N</u>	Mean
<b>Vocabulary</b>				
Six months or less	1516	.3	1514	.8
More than six months	251	1.0	263	1.2
<b>Comprehension</b>				
Six months or less	1520	4.9	1535	1.2
More than six months	249	5.4	263	1.3
<b>Reading</b>				
Six months or less	1488	5.0	1508	1.1
More than six months	228	5.6	241	1.2
<b>Computation</b>				
Six months or less	1624	10.0	1646	2.5
More than six months	288	10.1	303	2.4
<b>Concepts &amp; Problems</b>				
Six months or less	1610	5.0	1635	1.6
More than six months	274	5.7	288	1.9
<b>Mathematics</b>				
Six months or less	1590	14.8	1611	2.1
More than six months	248	14.7	262	2.0
<b>Mechanics &amp; Expression</b>				
Six months or less	1459	12.2	1478	1.4
More than six months	261	15.1	274	1.8
<b>Spelling</b>				
Six months or less	1404	-.3	1427	.6
More than six months	235	1.1	251	1.1
<b>Total Battery</b>				
Six months or less	866	29.3	872	1.4
More than six months	105	25.0	106	1.2
<b>GT Composite</b>				
Six months or less	277	8.4		
More than six months	106	8.3		

Table 5-9

Correlations Between Entry GT Scores and Test Gains

Test	Preprogram GT
Vocabulary	-14
Comprehension	N.S.
Reading	N.S.
Computation	12
Concepts & Problems	N.S.
Mathematics	12
Mechanics & Expression	09
Spelling	N.S.
Total Battery	12
GT Composite	-23

NOTE: Decimal points omitted. Coefficients are significant at the .01 level.

Combinations of Variables

The previous sections have described the relationships found between single variables and program results. In order to examine the effects of these variables in combination with one another, we ran a set of multiple regression analyses. One set of analyses used a pool of 23 variables. The pool included 11 demographic variables, the total number of activity sheets completed and those completed for each of the eight separate subject areas, time spent in terms of total hours and hours spent on supplementary materials, and the entry GT composite. Using this pool of variables, our task was to demonstrate the extent to which these variables, in combination, accounted for obtained grade

level gains in each TABE subtest area. A SAS step-wise multiple regression program was used to produce the results presented in Table 5-10. This program first selects the single variable with the highest correlation coefficient with the criterion variable, which in this case was TABE gain. In step-wise iterations the program then selects the variable which, when used with the previously selected variable or set of variables, will maximize the increase in  $R^2$ , which represents the amount of explained variance. In our analyses, we asked the program to complete step-wise iterations until the obtained difference of  $R^2$  was not significantly different at the .05 level. The second set of analyses used the same 23 variables plus one additional variable. That variable was the pretest score for the TABE subtest for which the gain was being explained. For example, the Vocabulary pretest score was added to the analysis to explain gains in the Vocabulary area.

Results for the first set of analyses are presented on the left side of Table 5-10. When the preprogram level of proficiency in a given subject matter is not considered, the total number of class hours and some measure of activity sheets completed are of primary importance in accounting for TABE gains. Time spent and an index of the amount of work accomplished were the first two variables that entered the regression equations for six of the nine TABE scores. Either a time or amount of work variable was the first variable to enter the regression equation of the other three scores. The one variable that represented a preprogram level of ability was entry GT which is often used as an index of general ability. This variable demonstrated its primary effect in the Mathematics area. It entered the regression equation as the second variable for the total Mathematics area and as the third variable for the Computation and Concepts and Problems areas. The other noticeable result is that demographic variables seldom entered the multiple regression formula at

Table 5-10

Results of Step-Wise Multiple Regression Analyses on TABE Gains

Criterion	S T E P		Without TABE Pretest Variable		S T E P		With TABE Pretest Variable		R <sup>2</sup>
	Variable Entered	R <sup>2</sup>	Variable Entered	R <sup>2</sup>	Variable Entered	R <sup>2</sup>			
Vocabulary	1	Class hours	06	1	Vocabulary pretest	25			
	2	# Mechanics/Expr. activity sheets	09	2	Class hours	28			
	3	# Vocabulary activity sheets	11	3	# Total activity sheets	30			
	4	Native language - Spanish	12	4	Entry GT	32			
	5	# Total activity sheets	13	5	# Mathematics activity sheets	32			
Comprehension	1	Class hours	13	1	Comprehension pretest	28			
	2	# Mechanics/Expr. activity sheets	14	2	Class hours	35			
	3	# Comprehension activity sheets	15	3	Entry GT	38			
Reading	1	Class hours	14	1	Reading pretest	24			
	2	# Mechanics/Expr. activity sheets	18	2	Class hours	32			
	3	Native language - Spanish	19	3	# Total activity sheets	35			
	4	# Reading activity sheets	21	4	Entry GT	37			
Computation	1	# Mathematics activity sheets	08	1	Native language - Spanish	38			
	2	Class hours	11	2	# Mathematics activity sheets	08			
	3	Entry GT	14	3	Computation pretest	13			
Concepts & Problems	1	# Concepts/Problems activity sheets	15	1	# Mathematics activity sheets	15			
	2	Class hours	20	2	Computation pretest	21			
	3	Entry GT	21	3	# Computation activity sheets	25			
				4	Entry GT	28			

Table 5-10

(Continued)

Results of Step-Wise Multiple Regression Analyses on TABE Gains

Criterion	S T E P		S T E P		R <sup>2</sup>	Variable Entered	R <sup>2</sup>	Variable Entered	R <sup>2</sup>
	Without TABE Pretest Variable	With TABE Pretest Variable	Without TABE Pretest Variable	With TABE Pretest Variable					
Mathematics	1	# Concepts/Problems activity sheets	13	1	13	# Concepts/Problems activity sheets	13	1	13
	2	Entry GT	17	2	17	Entry GT	17	2	17
	3	Class hours	21	3	21	Class hours	21	3	21
Mechanics/Expr.	1	# Mechanics/Expr. activity sheets	20	1	20	# Mechanics/Expr. activity sheets	20	1	20
	2	Class hours	23	2	23	Mechanics/Expr. pretest	23	2	32
	3			3		Entry GT		3	34
	4			4		Class hours		4	36
	5			5		# Vocabulary activity sheets		5	37
Spelling	1	Class hours	07	1	07	Class hours	07	1	07
	2	Male sex	09	2	09	Spelling pretest	09	2	11
	3	Native language - Other	11	3	11	Native language - Other	11	3	14
	1	# Concepts/Problems activity sheets	05	1	05	# Concepts/Problems activity sheets	05	1	06
	2	Entry GT	10	2	10	Entry GT	10	2	10
	3	Race - Other	13	3	13	Race - Other	13	3	13
Total Battery	1	Class hours	16	1	16	Class hours	16	1	16
	2	# Concepts/Problems activity sheets		2		Total Battery pretest		2	18
	3	Entry GT		3				3	
	4	Race - Other		4				4	
	5	Class hours		5				5	

all and when they did they accounted for only miniscule increases in the amount of variance accounted for.

Results of the second set of analyses which did take into consideration the level of preprogram proficiency in a given subject matter are presented on the right side of Table 5-10. One result of including preprogram levels in the regression equations is that the amount of variance accounted for increased for all TABE scores. The pretest score was the first variable to enter the regression equation for the Vocabulary, Comprehension and the total Reading tests and the amount of explained variance essentially doubled. The pretest scores for four other subtests entered the equations as the second variable. The pretest scores for the other two subtests entered the equations as the fourth and fifth variables. Since all of the TABE pretest scores were negatively correlated with TABE gains, it appears that soldiers with a smaller beginning repertoire of skills in a given subject matter benefited more from the program than did soldiers with a larger repertoire of beginning skills. This is consistent with previously presented results which showed that the program worked better for primary target soldiers than it did for soldiers with somewhat higher grade level scores.

Whereas entry GT entered the regression equations in the first set only in the Mathematics area and the Total Battery score, it entered the equations for all areas except Spelling in the second set. While GT entered the equations as a secondary rather than a primary variable, it accounted for between an additional two to four percent of the variance when entered.

Class hours and number of activity sheets completed variables entered into all of the regression equations for the second set. Demographic variables, on

the other hand, accounted for only small amounts of variance of no practical significance.

### Summary

What can we conclude about the efficacy of the MGA curriculum as a result of these analyses? First, the materials did teach, since soldiers receiving instruction made greater gains than those who did not. Second, the materials were more effective for soldiers in the primary target group than for those with somewhat higher entry skills. Third, on the average, the materials achieved the original goal for target soldiers of reaching grade level 9.0 on the TABE but not the present goals of 10.5 on the TABE or a GT composite of 100 or greater.

There appears to be a non-chance relationship between the amount of time spent on BSEP and TABE gains, but the relationship is not a simple straight line effect. Unless a large number of hours is added to an existing program, the effect of the increased program time may or may not yield higher TABE gains. The effects of completing more MGA activity sheets is confounded by the effects of the assignment process. Those soldiers with the greatest deficiencies will be assigned the most number of sheets to be completed while other soldiers may be assigned supplemental materials. Assuming that the program is long enough for all soldiers to complete the materials that should be assigned in accordance with the class management plan, more activity sheet completion should lead to greater gains. When time constraints preclude a soldier from completing all materials to which the soldier should be assigned, the relationship between completing activity sheets and making gains is obscured. Since soldiers completing the most activity sheets did not make the

greatest gains, course improvement does not seem to be in the area of presenting more activity sheets of the same type as are currently included in the curriculum. What appear to be needed are changes in content and/or method rather than simply the amount of materials.

Program results are not significantly influenced by demographic factors. While a few statistical relationships were, in fact, found, they accounted for such a small amount of explained variance that for practical purposes they are of no significance.

The entry level of soldiers, the degree to which they work on relevant MGA materials, and the amount of time spent in the BSEP program appear to be largely responsible for the results obtained.



## CHAPTER 6. ANALYSES OF GT AND TABE SCORES FOR SET OF MIDTERMERS

A subject of continuing interest to the Army has been the ability of BSEP II to sufficiently upgrade the basic skills of midtermers to enable them to meet reenlistment qualifications. Therefore, even though the MGA curriculum was not specifically designed with this objective in mind, we did examine the degree to which it achieved this objective. In response to a request from the Education Division of DSCPER (DAPE-MPE), AIR prepared a memorandum dated 11 January 1985 that summarized the results of an analysis of GT and TABE scores for midtermers who had attended BSEP II classes between June and September 1984. This Chapter presents the results of analyses of data collected on midtermers during the formal evaluation period.

### Data Sources

Midtermers were defined by the following criteria:

- they had a date of entry to active duty between 1975 and 1979
- they had ETS dates of 1984 and later
- the period between their date of entry to active duty and their ETS date was less than 10 years

A sample of 729 soldiers from the database of 3,713 met these criteria. Of these, 203 soldiers had been retested on the GT portion of the AFCT following their enrollment in BSEP II and their postprogram GT composites were reported to AIR.

This sample of 203 midtermers should be considered a biased sample and not representative of the entire population of BSEP II students. Teachers usually recommend soldiers to retest on the AFCT after completing BSEP II only when they have performed well in class and on the posttest of the TABE. Therefore, this group of soldiers, who were all posttested on the AFCT, probably performed better on the TABE and GT than would the entire population of BSEP II students.

### Findings

Three types of analyses were conducted on the sample of 203 midtermers:

- ETS Dates
- GT Scores
- Relationship of post TABE scores to post GT scores

#### ETS Dates

For those soldiers who exited BSEP II with GT scores of 100 or above, very few had ETS dates in 1984, three-quarters had ETS dates in 1985, about a seventh had ETS dates in 1986, and less than a tenth had ETS dates in 1987 and later (see Table 6-1).

Table 6-1

Percent of Midtermers with Post GT Scores  
of 100 or Above with ETS Dates in  
1984, 1985, 1986, and 1987+

ETS Year	Percent with Post GT Scores of 100 and above	<u>N</u>
1984	2.6%	3
1985	75.0%	88
1986	13.7%	16
1987+	8.5%	10
Total	100.0%	117

Table 6-2 shows the same group of successful midtermers as a percent of the total sample of 203 midtermers. Overall, midtermers who were successful on the GT represented over half of all midtermers. The successful group represented three-out-of-four midtermers with ETS dates in 1984, almost two-thirds of those with ETS dates in 1985, and almost one half of those with ETS dates in 1986 and in 1987 or later.

Table 6-2

Midtermers Who Achieved 100 or Above on Post GT  
as Percent of Total Sample of Midtermers by ETS Years

ETS Year	Midtermers With Post GT Score of 100 or Above		All Midtermers
	Percent of Total Sample	Percent of Same ETS Year	Percent of Total Sample
1984 (n)	1.5% (3)	75.0%	2.0% (4)
1985 (n)	42.9% (87)	62.1%	69.0% (140)
1986 (n)	7.4% (15)	41.7%	17.7% (36)
1987+ (n)	4.9% (10)	43.5%	11.3% (23)
Total N	56.7% (115)	57.6%	100.0% (203)

GT Scores

The distribution of entry and exit GT scores for the total sample of 203 midtermers was reported as were the scores for soldiers who successfully completed BSEP II, (i.e., achieved exit GT scores of 100 or above). For the total sample:

- 83% of all midtermers had entry GT scores of 99 or below (see Table 6-3)
- 17% of all midtermers had entry GT scores of 100 or above (see Table 6-3)
- 42% of all midtermers entered and exited BSEP II with GT scores of 99 or below (see Table 6-3)

- 41% of all midtermers entered BSEP with GT scores of 99 or below and exited BSEP with GT scores of 100 or above (see Table 6-3)
- 15% of all midtermers entered BSEP with GT scores of 100 and above and exited BSEP with GT scores of 100 or above (see Table 6-3)
- 50% of the midtermers with entry GT scores of 99 and below exited BSEP with GT scores of 100 and above (see Table 6-4)

Table 6-3

Pre- and Post-BSEP GT Scores for Midtermers

Pre- BSEP GT Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 100	41.9% (85)	41.4% (84)	83.3% (169)
>=100	1.5% (3)	15.3% (31)	16.8% (34)
<u>Total N</u>	43.4% (88)	56.7% (115)	100% (203)

Considering only those midtermers who entered BSEP II with GT scores of 99 or below and who achieved exit GT scores of 100 and above (n = 84):

- 85% had entry GT scores in the 90 - 99 range (see Table 6-4)
- 79% achieved exit GT scores in the 100 - 109 range (see Table 6-4)

Table 6-4

Pre- and Post-BSEP GT Scores for Midtermers Who Entered BSEP  
Below 100 and Exited BSEP Above 100 \*

Pre-BSEP GT Score	Post-BSEP GT Score					Total
	100-104	105-109	110-114	115-119	120-124	
65-69 (n)	1.2% (1)	--	--	--	--	1.2% (1)
70-74 (n)	1.2% (1)	--	--	--	--	1.2% (1)
80-84 (n)	1.2% (1)	6% (5)	1.2% (1)	--	--	8.3% (7)
85-89 (n)	2.4% (2)	1.2% (1)	--	--	1.2% (1)	4.8% (4)
90-94 (n)	13.1% (11)	7.1% (6)	7.1% (6)	2.4% (2)	--	29.8% (25)
94-99 (n)	23.8% (20)	21.4% (18)	4.8% (4)	3.6% (3)	1.2% (1)	54.8% (46)
Total N	42.9% (36)	35.7% (30)	13.1% (11)	6.0% (5)	2.4% (2)	100% (84)

\* 169 midtermers entered BSEP with GT scores of 99 or below.

Relationship of Post TABE Scores to Post GT Scores

Several analyses were conducted of TABE scores. These analyses looked at the relationship of post TABE scores to success on the GT. Currently, success in BSEP II is defined in Army Regulation 621-5 (15 July 1983) as follows:

To complete successfully BSEP II, service members must achieve a ninth grade level or above on alternate forms of the TABE . . . . The ASVAB will be readministered when needed and authorized.

An October 1984 message from FORSCOM states:

Experience indicates that a GT score of 100 correlates with a score of at least 10.5 on the vocabulary, reading comprehension, and total mathematics portion of the TABE. Accordingly, the 10.5 TABE score may be used as an indicator of readiness for AFCT retesting.

During the evaluation window period, the installations involved in the evaluation were concerned about establishing a minimum TABE score that would be predictive of success on the GT.

TABE grade level score of 9.0 as a predictor of success on the GT. The analyses of each of the TABE subtests shown on Tables A6-1 through A6-9 in Appendix A suggest that a grade level (GL) score of 9.0 on the TABE subtests is a fair indicator of success on the GT for midtermers attending BSEP II during the evaluation window period. For midtermers whose scores were analyzed for the previous report, the TABE GL score of 9.0 was not a good indicator of success on the GT. During the previous reporting period, students attaining TABE subtest scores of 9.0 had about a 50 percent chance of achieving a score of 100 or above on the post GT. For the evaluation window period, midtermers with TABE subtest scores of GL 9.0 or above had about a 60 percent chance of succeeding on the GT. Those midtermers who scored below 9.0 on TABE subtests had about a 30 percent chance of achieving post GT scores of 100 or better.

TABE subtest scores predicting scores of 100 or above on the GT. According to the analyses reported on Table 6-5, the TABE subtest scores predicting a post GT score of 100 or above range between 9.7 (Spelling) and 12.1 (Math Computation) for the six subtest areas (the Total Math and Total Reading scores are composites of the math and reading subtests).

Table 6-5

TABE Subtest Scores Predicting Scores of  
of 100 or Above on the Post GT

TABE Subtest	Predictive TABE Grade Level Score	95% Confidence Interval Around GT Score of 100*	Correlation Coefficients of TABE Subtest with Post GT Scores
Vocabulary ( <u>n</u> = 180)	11.3	81 - 119	.49
Comprehension ( <u>n</u> = 184)	11.0	81 - 119	.44
Reading ( <u>n</u> = 166)	10.9	83 - 117	.57
Computation ( <u>n</u> = 195)	12.1	80 - 120	.33
Concepts & Problems ( <u>n</u> = 193)	10.8	82 - 118	.52
Total Math ( <u>n</u> = 183)	11.2	81 - 119	.46
Mechanics & Expression ( <u>n</u> = 182)	11.0	80 - 120	.24
Spelling ( <u>n</u> = 166)	9.7	80 - 120	.30
Total Battery ( <u>n</u> = 131)	10.0	82 - 118	.56

\* Regression Formula:

$$\text{Post GT } 100 = y = mx + b$$

y = post GT

m = slope of TABE subtest

b = intercept of TABE subtest

x = TABE subtest score



Although the predictive TABE subtest grade level scores are higher than those suggested by either the AR 621-5 or the FORSCOM message, an important point about the predictive scores should be considered. The report of the confidence interval for each TABE subtest reported on Table 6-5 indicates that a soldier who scored 11.3 grade level on the vocabulary subtest, for example, would have a 95 percent chance of scoring anywhere between 81 and 119 on the retest of the GT. The confidence intervals around a GT score of 100 for each of the predictive scores on the other TABE subtests are equally wide. The number, although small, of midtermers with post TABE scores below 9.0 who do succeed on the GT, and the wide range of post GT scores possible for the post TABE grade level scores suggest that setting a minimum post TABE subtest score at any point might prevent students who would have succeeded on the GT from taking the test.

Table 6-6 is designed to indicate the relationship between post TABE scores at different levels and the probability of attaining a score of 100 or more on the GT portion of the AFCT. Table 6-6 shows the percentage of students who achieve a post GT score above and below 100 when TABE grade level scores of 9.0 and 10.5 are used as cut-off points. Comparing the analyses conducted for the first midtermers report and the analyses of midtermers during the evaluation window period, some changes exist in the data. For the earlier report, depending on the particular TABE subtest, between 46 percent and 58 percent of the students with TABE subtest scores of 9.0 and above achieved post GT scores of 100 or above. And between 44 percent and 76 percent of the midtermers with post TABE subtest scores of 10.5 and above achieved post GT scores of 100 or above.

Table 6-6

Relationship of Post TABE Scores With Post GT Scores Above and Below 100

TABE Test Score	Post TABE GL Standard 9.0				Percent of Midtermers BSEP II Sample Between Post TABE GL 9.0-10.4	Post TABE GL Standard 10.5			
	Post TABE Score Below GL 9.0		Post TABE Score GL 9.0 or Above			Post TABE Score Below GL 10.5		Post TABE Score GL 10.5 or Above	
	Post GT Below 100	Post GT 100 or Above	Post GT Below 100	Post GT 100 or Above		Post GT Below 100	Post GT 100 or Above	Post GT Below 100	Post GT 100 or Above
	84%	16%	40%	60%		67%	33%	24%	76%
Vocabulary	84%	16%	40%	60%	34%	33%	24%	76%	
Comprehension	75%	25%	40%	60%	33%	41%	28%	72%	
Total Reading	93%	7%	36%	64%	33%	38%	26%	74%	
Computation	86%	14%	36%	64%	26%	38%	32%	68%	
Concepts & Problems	76%	24%	36%	64%	35%	38%	20%	80%	
Total Mathematics	82%	18%	35%	65%	28%	38%	30%	70%	
Mechanics & Expression	54%	46%	39%	61%	25%	50%	34%	66%	
Spelling	49%	51%	37%	63%	17%	52%	27%	73%	
Total TABE	81%	19%	25%	74%	34%	47%	12%	88%	

During the evaluation window period, depending on the TABE subtest, between 60 percent and 64 percent of the students with TABE subtest scores of 9.0 and above achieved post GT scores of 100 or above. And between 66 percent and 80 percent of the midtermers with post TABE subtest scores of 10.5 and above achieved post GT scores of 100 or above.

If the sample of 203 midtermers is representative of midtermers throughout the Army, soldiers who attain a score of GL 9.0 or above on any TABE subtest have about a 60 percent chance of attaining a GT score of 100 or above. If soldiers attain a GL score of 9.0 or above on the TABE Total Battery score, they have about a 75 percent chance of attaining a GT of 100 or above.

If the TABE GL standard is raised to 10.5 and above on all TABE subtests, soldiers would have about a 70 percent chance of attaining a GT score of 100. If the 10.5 standard is applied to the TABE Total Battery score, soldiers would have about a 90 percent chance of scoring 100 or more on the GT portion of the AFCT.

The gain in probability of attaining a GT score of 100 or more by raising the TABE standard from GL 9.0 to 10.5 is at the cost of soldiers scoring between the two standards who would have attained a GT score of 100 if given the opportunity to take the AFCT. The percentage of the midterms sample attaining TABE scores between 9.0 and 10.4 is shown in the middle column of Table 6-6. The percentage of the sample who would not have been given an opportunity to retest on the GT, who might have attained a GT score of 100 or more had they been allowed to retest, can be determined by multiplying the entry in the middle column of Table 6-6 by the entry in the column to its immediate left.

Entries in other columns of Table 6-6 indicate that some soldiers attaining substantially lower TABE scores than either of the above standards can and do attain 100 or more on the GT portion of the AFCT if allowed to take the test. The error of measurement of the tests plus the error of estimate in predicting one score from the other is substantial.

Correlation of post TABE subtest scores with post GT scores. As shown on Table 6-5, an analysis of all reported TABE subtest scores, excluding Spelling, for all midtermers in the sample, indicates that the post TABE subtests correlate fairly well with post GT scores. The correlations ranged from .33 for Computation to .57 for the Total Reading score. The Total Battery score had a correlation of .56 with the post GT score.

## CHAPTER 7. PERCEPTIONS OF PROGRAM PARTICIPANTS: TEACHERS

### Site Visit Activities

This chapter presents the perceptions of the teachers of the MGA BSEP II curriculum. These perceptions were obtained from questionnaires administered by AIR and from informal interviews conducted during site visits to each of the posts. At all of the posts, the program participants were extremely cooperative and willingly answered all our questions concerning the MGA curriculum. Also, at their own initiative, they wrote letters and made phone calls to AIR to communicate their opinions about the program.

We administered questionnaires to teachers at all of the posts. We asked them about their educational experience, their backgrounds, and their experience with the MGA curriculum and Class Management System. Some teachers declined to complete the questionnaires because they were new to the program. Table 7-1 shows the number of teachers at each post who completed questionnaires.

Table 7-1

Teachers Completing Questionnaires by Army Post

	Fort Bragg	Fort Campbell	Fort Carson	Fort Hood	Fort Lewis	Fort Ord	Fort Polk	Total
Teachers Completing Questionnaires	21	6	11	19	19	4	23	103
Mean Number of Teachers During Window Period	21	16	11	30	27	7	25	137

Teacher Questionnaire

Teachers' Backgrounds

Teaching experience. Teachers in the BSEP II programs across the posts had varied teaching experience (see Tables 7-2 and 7-3). Three-quarters of the teachers had been teaching the MGA curriculum for six months or less. Almost half the teachers in the MGA program had not taught in other BSEP programs, and over three-quarters had not taught in other military programs. Almost half had not taught outside the military. Over half had taught in civilian schools before working for the Army.

Table 7-2

Teachers' Experience Teaching the MGA Curriculum

	0 wks	3 wks- 3 mo	3 mo- 6 mo	6 mo- 1 yr	1- 2 yrs	2- 3 yrs	N
Teaching MGA BSEP II	2%	47%	28%	22%	0	1%	98

Table 7-3

Teachers' Experience Teaching in Other Programs

	0 yrs	up to 1 yr	>1 - 2 yrs	>2 - 3 yrs	>3 - 5 yrs	>5 - 10 yrs	10+ yrs	N
Teaching non- MGA BSEP	46%	20%	8%	10%	9%	6%	--	96
Teaching other military programs	79%	4%	5%	6%	--	2%	3%	96
Civilian Schools	43%	14%	8%	7%	15%	8%	5%	96

On the whole, the BSEP II teachers were relatively new to teaching. Over half had less than a year of teaching experience in each of the settings. Of those who had prior teaching experience, almost a half had more than one year's experience teaching in civilian schools. Judging from our observations, the composition of teachers tends to be divided between those who probably graduated from college and then began their first teaching experience in BSEP programs, and those with a year or more of teaching experience. The generally limited teaching experience of the BSEP staff across posts can partly be explained by the low salaries paid to BSEP teachers and by the insecure status they hold. Teachers at Army installations usually have short-term contracts with no benefits.

Teachers' credentials. About three-quarters of the teachers had current state teacher certification. Over four-fifths had Bachelor's degrees and one-third had Master's degrees (see Table 7-4).

Table 7-4

Credentials of BSEP II Teachers (N=103)

	Yes	No
Current Teacher Certification	74%	26%
Bachelor's Degree	85%	15%
Master's Degree	34%	66%

Most BSEP contracts require that teachers be certified to teach in elementary or high school. Most of the posts, except Forts Bragg and Polk, hired only certified teachers (see Table 7-5).

Table 7-5

Certification of Teachers by Army Post

	Fort Bragg	Fort Campbell	Fort Carson	Fort Hood	Fort Lewis	Fort Ord	Fort Polk	<u>N</u>
Certified	8	6	11	18	19	4	11	77
Not Certified	13	0	0	1	0	0	12	26

Organization of BSEP II Program

The program organization varied among the posts. Table 7-6 shows that all teachers at Forts Campbell, Hood, and Polk, and almost three-quarters of the teachers at Fort Lewis reported teaching the curriculum as it was designed by the developers and stipulated in the FORSCOM Course Management Plan. Teachers



at these posts taught all three subjects together in the same classroom. While one student worked in the Math course, another could be working in the Reading or Language course. All students could work in one subject and then move to another subject, at the teachers' or students' discretion. All teachers at Forts Carson and Ord, and less than a quarter of the teachers at Fort Lewis taught all three subjects but taught them in separate blocks of time. Students could work in Math during the first two hours of class and then in Reading and Language during the second two hours, for example. At Fort Bragg, teachers were specialized and taught either Mathematics or a combined Reading and Language class.

Table 7-6

MGA Program Organization

	Fort Bragg	Fort Campbell	Fort Carson	Fort Hood	Fort Lewis	Fort Ord	Fort Polk
Teachers teach subjects simultaneously	1	6	--	19	13	--	22
Teachers teach all subjects in separate blocks of time	--	--	10	--	4	4	--
Teachers teach only one subject	19	--	--	--	6	--	--

Teachers' reports of the number of students in each class showed little variation among the posts (see Table 7-7). Most classes averaged about 14 or 15 students. Only Fort Bragg's current enrollment averaged around 11 students per class. In interviews with the teachers, they expressed opinions that 12

was a manageable number to allow teachers time to correct Previews and Reviews and to give students individual attention.

Table 7-7

Average Number of Students Per Class

	Fort Bragg	Fort Campbell	Fort Carson	Fort Hood	Fort Lewis	Fort Ord	Fort Polk
Current enrollment	11	14	13	15	15	15	14
Past enrollment	13	16	13	15	14	13	14

Teacher Supervision

In our observations of the BSEP programs, we noticed distinct styles of program administration. BSEP coordinators varied in the amount of direct contact they had with the day to day operations of the BSEP II programs and in their relationships with the contractors who were administering the MGA curriculum. For example, the BSEP coordinator at Fort Hood visited all MGA classrooms each week and had daily meetings with the contractor. At Fort Campbell, the contractor's BSEP administrator visited each class several times a day and then reported to the BSEP coordinator. We asked the teachers how frequently their classes were observed by a supervisor, either the BSEP coordinator or the contractor's administrator. As shown on Table 7-8, Fort Campbell teachers reported that they were observed an average of eight times per month. At Fort Lewis, where the classrooms were spread out at four sites on the post, teachers reported they were observed once a month.

Table 7-8

Average Number of Supervisor Observations Per Month

	Fort Bragg	Fort Campbell	Fort Carson	Fort Hood	Fort Lewis	Fort Ord	Fort Polk
Times per month observed by supervisor	2.8	7.7	1.8	1.8	1.0	3.5	2.88
Teachers responding to question	18	6	10	16	15	2	19

Teacher Training

During FY84, FORSCOM carried on an extensive and carefully monitored implementation at FORSCOM installations. In addition to a thorough orientation for ACES staff, FORSCOM conducted two- to three-day teacher-training sessions for the BSEP II teachers. These teacher-training sessions were conducted over a one-year period.

FORSCOM teacher-training sessions were conducted at all posts, except for Forts Hood and Carson where the BSEP coordinator conducted the training. Table 7-9 shows that a little over one-third of the teachers teaching during the evaluation period had attended the training sessions conducted by FORSCOM. Because of high teacher turnover at most of the posts, the percentage of teachers completing questionnaires during the evaluation period, who had attended the FORSCOM training, was quite low.

Table 7-9

Training Received by 101 BSEP II Teachers for MGA

	Yes	No
Attended FORSCOM Teacher Training Session	36%	64%
Attended Training by BSEP Coordinator	44%	56%
Training Consisted of Observing Other Teachers	49%	51%
Received No Specific Training to Teach MGA	11%	89%

Table 7-10 shows that of the teachers who completed questionnaires, only at Fort Polk and Fort Urd had one half or more participated in the FORSCOM teacher-training sessions. Forts Hood and Campbell teachers had received training from their BSEP coordinator. Teachers at Forts Carson, Hood, Lewis, and Ord had observed other MGA teachers as part of their training. Few teachers reported that they had received no training to teach the MGA curriculum.

Table 7-10

Different Kinds of Training Received by Teachers to Teach the MGA Curriculum \*

	Fort Bragg N=20	Fort Campbell N=6	Fort Carson N=19	Fort Hood N=11	Fort Lewis N=18	Fort Ord N=4	Fort Polk N=23
Received FORSCOM MGA training	9	1	0	0	4	2	19
Trained by BSEP Coordinator	4	3	7	16	4	1	9
Observed other BSEP teachers	6	2	6	9	14	3	9
Received no specific training	6	2	0	3	0	0	0

\* Teachers could respond to more than one category

Overall, teachers felt that the FORSCOM teacher training was adequate preparation for them to teach the MGA curriculum (see Table 7-11).

Table 7-11

Teachers' Opinions of the Benefit of FORSCOM Teacher Training

	Yes	No	Didn't Attend	<u>N</u>
Training was Adequate Preparation to Teach Program	37%	19%	44%	96

## MGA Class Management Plan

Teachers were asked their opinions about several components of the Course Management Plan: the activity sheets, the module Previews and Reviews, the class leader, the incentive system, and the wall charts. They were also asked if the components were beneficial to learning, if they were motivating, and if they were pedagogically sound. Table 7-12 shows that teachers felt more positively about the activity sheets and module Previews and Reviews than they did about the class leader, incentive system, and wall charts. Over a half to more than 90 percent reported that the activity sheets were beneficial for learning, were motivating, and were pedagogically sound.

Regarding the class leader, incentive system, and wall charts, only the class leader was viewed by the teachers as beneficial to learning. Over half of the teachers said the class leader was beneficial. However, between one-half and four-fifths of the teachers said the incentive system, wall charts, and class leader were neither motivating nor pedagogically sound. In our conversations with teachers during site visits, teachers were almost unanimous in their objections to using the incentive system. They said students were motivated without using incentives: the students' desire to reenlist was a much more powerful incentive than was candy or a stamp. Teachers questioned the use of the wall charts and said students were embarrassed by having their work records displayed in front of others. Students were working independently and wanted their records to be handled on an independent basis.

Table 7-12

Teachers' Ratings of the Class Management System

	Beneficial for Learning			Motivating			Pedagogically Sound		
	Yes	No	<u>N</u>	Yes	No	<u>N</u>	Yes	No	<u>N</u>
<b>Activity Sheets:</b>									
Math	94%	6%	90	79%	21%	86	71%	29%	79
Reading	79%	21%	85	56%	44%	82	62%	38%	74
Language	81%	19%	85	60%	40%	80	64%	36%	75
<b>Module Previews &amp; Reviews</b>	88%	12%	95	77%	23%	91	86%	14%	90
<b>Class Leader</b>	59%	41%	85	49%	51%	82	50%	50%	82
<b>Incentive System</b>	41%	59%	75	46%	54%	74	47%	53%	72
<b>Wall Charts</b>	17%	83%	86	20%	80%	84	22%	78%	79

On the whole, teachers tended to judge the activity sheets as providing adequate instruction, but as being unable to stand alone as instructional tools (see Table 7-13). Both on the questionnaires and in informal interviews, teachers expressed the view that the instruction portions on each activity sheet, designed to explain the concept taught on the activity sheet without requiring any explanations by the teacher, were insufficient without additional instruction by the teacher. A little over one-half of the teachers said the activity sheets give insufficient instruction. Two-thirds did not agree with the statement, "The activity sheets give adequate instruction and require

little explanation by me." Four-fifths felt the sheets give adequate instruction but that students still need more instruction by the teacher.

Teachers did tend to view the activity sheets system as being an efficient one. Also, they supported the use of class leaders as a practical program component (see Table 7-13). Approximately four-fifths of the teachers reported that they were not bogged down with correcting papers and about three-quarters said they made use of the class leaders to do the correcting. By using class leaders, they had additional time to work with individual students. Over half of the teachers reported that the activity sheet system did not, however, allow them to group students together for instruction. Although it may be desirable, when students are working on different activity sheets, it is not practical to group them together for instruction in areas where several might need help.



Table 7-13

Teachers' Ratings of Activity Sheets as Instructional Tools

	Yes	No	<u>N</u>
In general, there is insufficient instruction on the activity sheets	56%	44%	89
Activity sheets give adequate instruction and require little explanation by teacher	30%	70%	94
Activity sheets give adequate instruction but students still need more assistance	82%	18%	93
Impractical to group students because students working on different activity sheets	57%	43%	100
Frequent backlog of activity sheets for class leader to grade	36%	64%	92
Too much paperwork to be able to give students individual attention	20%	80%	94
Class leader takes care of grading so teacher has time to help individual students	77%	23%	93

Teachers felt that the Student Record Sheets (SRS) and Module Record Sheets (MRS) were worthwhile record-keeping tools. Although the forms took a lot of the teachers' time to complete, more than three-quarters of the teachers agreed that the forms allowed them to keep good records and four-fifths reported that the forms gave a good picture of a student's progress throughout the course. About four-fifths of the teachers did not agree with the statement, "The SRS and MRS take a lot of time and are not worth the effort because they duplicate the information recorded on other forms."

Table 7-14

Teachers' Ratings of Student Record Sheets and  
Module Record Sheets

	Agree	Disagree	<u>N</u>
The SRS and MRS take a lot of time but are worth the effort because they keep good records	84%	16%	90
The SRS and MRS take a lot of time but are worth the effort because they show students' progress	91%	9%	97
The SRS and MRS take a lot of time and are not worth the effort because they duplicate information recorded on other forms	20%	80%	85

Overall, teachers felt that the Module Previews and Reviews were good diagnostic measures. Over half said the Previews and Reviews diagnosed students' deficiencies with 75 percent accuracy (see Table 7-14).

Table 7-15

Teachers' Ratings of Accuracy of Module Previews and Reviews

	Percent Accuracy				<u>N</u>
	25%	50%	75%	100%	
Teachers Responding	7%	21%	62%	10%	101

Table 7-17

Teachers' Preferences of Instructional Methods

Instructional Methods	Percent (N=96)
Self-paced instruction using activity sheets	34%
Individual instruction by the class leader	1%
Individual instruction by the teacher	47%
Group instruction by the teacher	18%
Total	100%

We asked teachers how many times each day they met individually with students to give them remedial attention. Most teachers reported that they met between three and seven times each day with individual students (see Table 7-18). Teachers at Forts Hood, Lewis, and Polk reported that they met with students about twice as often each day as did teachers at Forts Bragg and Ord.

## Instruction

Teachers were asked if the MGA curriculum taught students the reading, math, and language skills they needed to solve problems on the job. Over half felt that soldiers were learning relevant job skills, whereas only one-quarter disagreed (see Table 7-16).

Table 7-16

### Teachers' Opinions of Skills Taught by MGA Curriculum

	Yes	No	<u>N</u>
MGA Teaches math, reading, and language skills needed to solve problems on the job	72%	28%	85

Teachers were asked to evaluate several instructional methods: self-paced instruction using activity sheets, individual instruction with a class leader, individual instruction taught by a teacher, and group instruction by a teacher. Almost half of the teachers favored individual instruction presented by a teacher and a little over one-third chose self-paced instruction using activity sheets (see Table 7-17). Clearly, teachers preferred the approach of MGA rather than the traditional self-contained classroom. In our interviews with teachers, they stated that they liked having a curriculum that was prepared for them and required no evening preparation. They also liked having the time to work with individual students. MGA seemed to accommodate their preferences.

Table 7-18

Mean Times Per Day Teachers Meet with Individual Students to Give Instruction

	Fort Bragg	Fort Campbell	Fort Carson	Fort Hood	Fort Lewis	Fort Ord	Fort Polk
Mean times per day	3.6	5.7	5.9	7.2	6.7	3.3	6.2
Teachers' responses	15	3	8	14	14	3	20

We asked teachers how often they performed certain of the practices outlined in the Course Management Plan (CMP) (see Table 7-19). The CMP stipulates that if a student makes more than one error on the A activity sheet, his work is to be reviewed and he is either to be assigned the corresponding B sheet or receive instruction from the teacher. Over four-fifths of the teachers said that they assigned B sheets to students between 25 percent and 50 percent of the time, whereas three-quarters of the teachers said they gave instruction to students 75 percent to 100 percent of the time when students committed errors on the A sheets. Almost four-fifths of the teachers said that students rarely made errors on the B sheets which required them to receive additional instruction.

Teachers were asked how often the instructional portion of the activity sheets was inadequate and required them to give additional explanations to the students. Most teachers responded that they had to give additional explanations to students approximately 50 percent of the time.

The CMP suggests that supplementary materials be used if students require additional instruction. Three-quarters of the teachers responded that they assigned supplementary materials to students between 25 percent and 50 percent of the time. The CMP also encourages teachers to group students together whenever it is convenient to give instruction to the class as a whole. About half of the teachers reported that they gave instruction to the class as a whole approximately one-quarter of the time.

Table 7-19

Practices of Teachers in MGA Programs

Practices	Percent of the Time				
	100%	75%	50%	25%	00%
How often do students make enough errors on A sheets to require work on B sheets?	1%	12%	16%	67%	4%
How often do teachers give instruction when students commit errors on A sheets?	29%	43%	16%	11%	1%
How often do students make errors on B sheets and require further instruction?	1%	4%	7%	67%	21%
How often is instruction on A or B sheets inadequate so that students require additional help?	2%	23%	38%	35%	2%
How often do teachers give students supplementary materials?	8%	14%	25%	51%	2%
How often do teachers give instruction to the class as a whole?	3%	4%	21%	52%	20%

Military materials. Some of the material for the MGA activity sheets is taken from the Soldier's Manual of Common Tasks and much of the text uses military terminology. Teachers are encouraged to use the Soldier's Manuals, Army publications, or other military materials as supplementary materials. As shown on Table 7-20, teachers said that they used military materials only 18 percent of the time. In our observations of MGA classrooms during site visits, we did not observe one instance in which teachers or students used military materials.

Table 7-20

Teachers' Use of Military Materials

	Yes	No	<u>N</u>
Do teachers use military materials as teaching aids?	17%	83%	102

The majority of the teachers reported that they had received no training by the Education Center to use military materials in the MGA classes (see Table 7-21). However, a small percentage of the teachers did have some background related to the military. A few had been in the military and some had received other kinds of military training.

Table 7-21

Teachers' Training to Use Military Materials

	Yes	No	<u>N</u>
Did teachers receive in-service training by the Education Center on the use of military equipment and materials?	3%	97%	99
Did teachers teach MOS classes?	0%	100%	99
Were teachers ever in the military?	8%	92%	99
Did teachers receive other kinds of military training?	15%	85%	99
Did teachers receive no military training?	80%	20%	100

Teachers were asked if they had difficulty using military materials (see Table 7-22). On the whole, teachers responses showed that using military materials in class posed little problem for them. Two-thirds responded that they never or rarely found it difficult to use military materials.

Table 7-22

Difficulty Teachers Have Using Military Materials

	All the Time	Sometimes	Rarely	Never	<u>N</u>
Do teachers have difficulty using military materials?	7%	28%	29%	36%	69



Supplementary materials. We asked teachers which were more effective, the MGA activity sheets or their supplementary materials. More than half of the teachers felt that the MGA materials were more effective and a little less than half of the teachers favored using supplementary materials (see Table 7-23).

Table 7-23

Teachers' Opinions of Effectiveness of Materials

	More Effective	<u>N</u>
MGA Activity Sheets	57%	54
Supplementary Materials	43%	40

Learning center or lab. We asked the teachers whether their students used the learning center or lab on a regular basis as part of the BSEP II program. Only at Forts Campbell and Hood did teachers not use the language lab at all (see Table 7-24). Almost half of the teachers at Fort Lewis used the language lab between once a week and three times a week. About one-sixth of the teachers at Forts Bragg and Polk used the language lab once a week or less. Only one teacher at Fort Carson used the language lab once a week or less.

Table 7-24

Teachers's Use of Learning Center as Part of BSEP II Program

	Fort Bragg N=20	Fort Campbell N=6	Fort. Carson N=9	Fort Hood N=19	Fort Lewis N=17	Fort Ord N=4	Fort Polk n=21
1 hour per day	--	--	--	--	--	1	--
2-3 times per week	--	--	--	--	4	--	--
once a week or less	3	--	1	--	5	--	3
not at all	17	6	8	19	9	3	18

Instruction for GT Improvement

During the window period, there was a strong focus in BSEP on improving soldiers' GT scores. FORSCOM had made available some GT improvement materials known as "BSEP Review" materials. These materials were adaptable to the individual BSEP programs. They could be integrated into the MGA curriculum or could be taught as a unit during the last week of BSEP classes. We asked teachers on the questionnaire if students received instruction for GT improvement (see Table 7-25). Only at Fort Campbell did teachers report that all students received GT improvement instruction. Between 80 percent and 91 percent of the teachers at Forts Bragg, Carson, Lewis, and Polk reported that students received GT improvement instruction. At Fort Hood, about half of the teachers reported that students received instruction for GT improvement. At Fort Ord, where all BSEP students attend GT improvement after attending BSEP, one-third of the teachers reported that students received GT instruction.

Table 7-25

Percentage of Teachers Reporting They Give Instruction for GT Improvement

	Fort Bragg	Fort Campbell	Fort Carson	Fort Hood	Fort Lewis	Fort Ord	Fort Polk
Teachers Give GT Instruction	18	6	7	7	17	1	21
Teachers give no GT Instruction	2	0	3	9	2	2	2

According to the teachers, most instruction for GT improvement was integrated into the course materials and taught to students throughout the BSEP II cycle (see Table 7-26). Only at Fort Ord did most students go to a GT improvement class after completing BSEP II. At Fort Hood, students exiting BSEP II with high TABE posttest scores were recommended for a GT tutoring class. About one-third of the teachers at Forts Campbell and Polk reported that students received a full week of GT improvement instruction during the last week of BSEP II classes.

Table 7-26

Type of GT Instruction Received by BSEP II Students

	Fort Bragg N=20	Fort Campbell N=7	Fort Carson N=7	Fort Hood N=9	Fort Lewis N=20	Fort Ord N=4	Fort Polk n=25
Presented to all students during last week of class as separate unit	1	2	0	0	2	0	6
Integrated into course and taught throughout cycle	18	5	7	7	15	2	9
Presented only to students preparing to retake ASVAB	1	0	0	2	0	0	9
No GT instruction in BSEP classes. Students go to GT classes after completing BSEP	0	0	0	0	3	2	1

Summary

Overall, teachers at the seven evaluation sites expressed generally favorable opinions about the MGA curriculum and class management system. They felt the curriculum taught soldiers relevant job skills. Of all the elements in the MGA class management system, teachers gave highest ratings to the activity sheets and module Previews and Reviews. However, their responses indicated that the instructional content on the activity sheets needed some improvement. They gave the lowest ratings to the wall charts and the incentive system. They also preferred individual instruction by the teacher rather than the self-paced approach used in the MGA curriculum.

Teachers in the BSEP II programs at the seven evaluation sites had relatively limited teaching experience outside the military. Over half the teachers had taught less than a year in military or civilian settings prior to their experience teaching the MGA curriculum.

The majority of the teachers reported that they taught all three MGA subjects in the same classroom. Only at one post were teachers assigned to teach only one subject area.

Teachers reported variation in the type of supervision they received: some posts reported that a supervisor observed their classes only once each month and other posts reported as many as eight observations per month.

Almost 90 percent of the teachers said they received some type of training to teach the MGA curriculum. However, only about a third of the teachers teaching during the evaluation period had attended the teacher training sessions conducted by FORSCOM.

Three-quarters of the teachers indicated that they used supplementary materials between 25 percent and 50 percent of the time. Asked whether the MGA materials or the supplementary materials were more effective, a little over half the teachers responded that the MGA activity sheets were more effective. Most teachers reported that they used GT improvement materials and integrated these into their regular instruction.

## CHAPTER 8. PERCEPTIONS OF PROGRAM PARTICIPANTS: SOLDIERS

### Site Visit Activities

During the AIR site visits to the FORSCOM installations where the MGA curriculum was implemented, we were particularly interested in observing the way that students responded to the MGA curriculum and class management system. We looked at such classroom characteristics as the organization within the classroom, the amount of attention given to individual students by the teacher, the pace at which students worked, and the level of interest in the materials and attention displayed by students. In addition to the observations of classroom activities, we talked to students as they performed their work and asked them questions about their process of analyzing the text material. We also talked with them informally after classes to learn about their opinions of the MGA curriculum. In addition, we administered questionnaires to BSEP soldiers during the evaluation window period. This chapter presents the soldiers' responses to the questionnaires.

### Soldier Questionnaires

We received a total of 1110 questionnaires from the seven evaluation sites. Table 8-1 shows the number of questionnaires received from each installation.

PREVIOUS PAGE  
IS BLANK

Table 8-1

Questionnaires Completed by Soldiers

	Number Completed
Fort Bragg	98
Fort Campbell	116
Fort Carson	186
Fort Hood	264
Fort Lewis	227
Fort Ord	46
Fort Polk	173
	-----
Total	1,110

At the time that the soldiers completed the questionnaires, most had been attending BSEP II classes for about three or four weeks (see Table 8-2). The mean length of class attendance at the time they completed the questionnaires ranged from a high at Fort Hood of approximately five and a half weeks to a low at Forts Campbell and Carson of a little less than three weeks.

Table 8-2

Mean Number of Weeks Attending BSEP II  
When Soldiers Completed Questionnaires

---

	Week of Enrollment
Fort Bragg	4.0
Fort Campbell	2.9
Fort Carson	2.9
Fort Hood	5.4
Fort Lewis	4.2
Fort Ord	3.7
Fort Polk	4.4

---

Highest Educational Levels

Two-thirds of the soldiers attending BSEP II classes said they were high-school graduates (see Table 8-3). Almost one-fifth reported that they had attended some college. Less than one tenth had received GED certificates.



Table 8-3

Highest Educational Level  
Attained by BSEP II Students

Educational Level	Percent Attaining Educational Level	<u>N</u>
Completed Elementary School	3.8%	41
GED Certificate	8.4%	92
High School Graduate	68.0%	743
Some College, no degree	17.8%	195
Associate Degree	1.7%	19
Bachelor's Degree	.4%	4

Mean Hours Absent from Class

As shown in Table 8-4, students reported they missed relatively few class hours. Students at Fort Hood said they missed an average of about three hours of class and students at Fort Ord said they missed a little less than two hours of class. These students' reports conflict with statements made by teachers during interviews and with our observations of class attendance during site visits that students' absenteeism was a problem in the BSEP II programs.

Table 8-4

Mean Class Hours Absent from BSEP II Class

	Mean Hours Absent	<u>N</u>
Fort Bragg	2.2	97
Fort Campbell	2.3	115
Fort Carson	2.1	175
Fort Hood	3.2	251
Fort Lewis	2.8	217
Fort Ord	1.8	43
Fort Polk	2.6	166

Students' Expectations from BSEP Enrollment

On the questionnaire, we asked students how important it was for them to accomplish certain tasks as a result of taking BSEP II. Over two-thirds of the students said that it was both very important for them to complete BSEP so that they could pass the TABE with high enough scores to be able to retake the GT and to improve their GT scores to meet reenlistment standards (see Table 8-5). More than half said that it was very important for them to improve their GT scores so that they could be reclassified. A third said that it was very important for them to pass the SQT in order to qualify for reenlistment. Students said it was least important for them to complete BSEP so that they could prepare for the GED or to take the BNCOC screening test. Over two-thirds said that qualifying for junior college, vocational, or college courses, and

preparing them to perform their regular job better as a consequence of taking BSEP was of some importance or very important to them.

Table 8-5

Students' Ratings of Outcomes Desired  
From Completing BSEP II

How important is it to you that completing BSEP will . . . .	Very Important	Some Importance	Not Very Important	Does Not Apply	<u>N</u>
improve GT score enough so that you meet reenlistment standards?	69%	18%	6%	7%	1085
prepare you to pass the TABE high enough to retake the test from which the GT score is calculated?	68%	19%	5%	8%	1055
improve your GT score enough so that you can be reclassified to a different MOS?	51%	22%	12%	15%	1063
qualify you to take junior college, vocational, or college courses?	44%	27%	7%	22%	1050
prepare you to do your regular job better?	41%	27%	12%	19%	1030
prepare you to pass your SQT high enough to qualify for reenlistment?	33%	26%	12%	29%	1044
prepare you to pass the BNCOC screening test?	20%	19%	10%	51%	1037
prepare you to take and pass the GED examination?	14%	6%	6%	73%	1031

Students were asked about the likelihood of their being able to perform certain tasks after completing BSEP. As shown on Table 8-6, students expressed

the greatest confidence in being able to improve their GT scores enough to meet reenlistment standards. Two-thirds said they expected to be able to increase their TABE scores enough to be able to retake the GT test. Over two-thirds said they expected to improve their scores enough to be able to reenlist. A little over half said they expected that by completing BSEP, they would be able to perform their regular jobs better. A little less than half reported that after taking BSEP, they expected to be able to pass the SQT high enough to be able to qualify for reenlistment and to qualify to take junior college, vocational, or college courses.

In our interviews during visits to the posts, we found a high degree of confidence expressed by most students in their ability to perform well after taking BSEP. They looked upon BSEP as a good review of the skills they had learned in high school.

Table 8-6

Students' Ratings of Their Likelihood of Being Able to Perform Specific Tasks After Completing BSEP

After you complete BSEP, how likely is it that you will be able to . . . .	I expect to do it	I might do it	I do not expect to do it	Does Not Apply	<u>N</u>
improve your GT scores enough so that you meet reenlistment standards?	70%	17%	5%	8%	1081
prepare you to pass the TABE high enough to retake the test from which the GT score is calculated?	67%	18%	4%	11%	1058
prepare you to do your regular job better?	51%	20%	6%	23%	1018
improve your GT score enough so that you can be reclassified to a different MOS?	47%	25%	10%	18%	1067
qualify you to take junior college, vocational, or college courses?	45%	25%	6%	24%	1048
prepare you to pass your SQT high enough to qualify for reenlistment?	43%	20%	7%	31%	1038
prepare you to pass the BNCOC screening test?	22%	17%	8%	54%	1038
prepare you to take and pass the GED examination?	14%	7%	4%	76%	1027

Students' Assessment of Classroom Practices

Teachers' practices. We asked students about the activities in their classrooms. In particular, we were interested in the procedures followed in classes for assisting students who had difficulty performing all the work on

the activity sheets. According to the Course Management Plan, when students missed one or more items on an activity sheet, they were to see the teacher for remedial attention. It was then up to the discretion of the teacher whether or not the students were assigned a B activity sheet or whether the teacher assigned other materials. Almost three-quarters of the students said they usually were assigned to rework the items they missed on the A sheet (see Table 8-7). Over two-thirds said the teacher usually explained what they had done wrong on the item and assigned them to work the B activity sheets. Over two-thirds said they received remedial help from the teacher and then were usually assigned work in supplementary materials. A little over half of the students said they were assigned the B sheets without receiving instruction from the teacher, and a little over one-tenth said they were never assigned the B activity sheets.

Table 8-7

Students' Report of Teachers' Practices

When you make errors on the activity sheets and need to see the teacher, how often does the teacher . . .	Usually	Sometimes	Never	<u>N</u>
tell you to rework the problems you missed on the A sheets?	70%	23%	7%	1070
explain what you did wrong and then assign the B activity sheets?	69%	22%	9%	1047
explain what you did wrong and then give you work to do out of books or worksheets?	67%	23%	10%	1053
assign the B activity sheets?	52%	35%	13%	1048

Classroom use of MGA materials. The questionnaire asked students to indicate how often they used A and B activity sheets, supplementary materials, military materials, or GT improvement materials in their BSEP II classes. Four-fifths agreed that they used the A activity sheets almost every day. Only seven percent said they used the sheets once in a while or never (see Table 8-8). On the other hand, almost three-quarters said they never used the Soldier's Manuals or other military materials. Students were fairly evenly divided regarding the use of the B activity sheets and GT improvement materials. Two-fifths said they used B sheets once in a while and about one-quarter said they used the sheets almost every day or several times a week. Students responses about their use of GT improvement materials were evenly divided in each category: almost every day, several times a week, once in a while, and never.

Table 8-8

Frequency of Use of Materials in Class

How often do you use each of the following in your class?	Almost Every Day	Several Times a Week	Once in a While	Never	<u>N</u>
A activity sheets	81%	13%	6%	1%	1080
B activity sheets	26%	23%	40%	11%	1055
Books and worksheets other than the A and B sheets	30%	22%	24%	24%	1061
GT improvement materials (timed tests, vocabulary drills, extra story problems)	28%	23%	24%	24%	1063
Soldier's Manual or other military materials	5%	6%	16%	72%	1048

Table 6-6

Relationship of Post TABE Scores With Post GT Scores Above and Below 100

TABE Test Score	Post TABE GL Standard 9.0				Percent of Midtermers BSEP II Sample Between Post TABE GL 9.0-10.4	Post TABE GL Standard 10.5			
	Post TABE Score Below GL 9.0		Post TABE Score GL 9.0 or Above			Post TABE Score Below GL 10.5		Post TABE Score GL 10.5 or Above	
	Post GT Below 100	Post GT 100 or Above	Post GT Below 100	Post GT 100 or Above		Post GT Below 100	Post GT 100 or Above	Post GT Below 100	Post GT 100 or Above
Vocabulary	84%	16%	40%	60%	34%	67%	33%	24%	76%
Comprehension	75%	25%	40%	60%	33%	59%	41%	28%	72%
Total Reading	93%	7%	36%	64%	33%	62%	38%	26%	74%
Computation	86%	14%	36%	64%	26%	62%	38%	32%	68%
Concepts & Problems	76%	24%	36%	64%	35%	62%	38%	20%	80%
Total Mathematics	82%	18%	35%	65%	28%	62%	38%	30%	70%
Mechanics & Expression	54%	46%	39%	61%	25%	50%	50%	34%	66%
Spelling	49%	51%	37%	63%	17%	48%	52%	27%	73%
Total TABE	81%	19%	25%	74%	34%	53%	47%	12%	88%



## Students' Evaluations of MGA Curriculum Components

Students were asked to evaluate the various components of the MGA curriculum: the activity sheets, the Previews and Reviews, class leaders, the wall charts, incentive system, the self-paced approach, and the interest level of the subject matter.

Students' assessment of MGA teaching materials. In general, most students rated the MGA activity sheets and module Previews and Reviews as of some help or very helpful to their learning. Three-quarters of the students rated the module Previews and Reviews and the A activity sheets as very helpful (see Table 8-9). More than half rated the supplementary materials, the B activity sheets, and the GT improvement materials as very helpful. A small percentage rated military manuals and materials as of some help or very helpful. However, more than half said that military materials were not used in their classes.

Table 8-9

Soldiers' Ratings of Helpfulness of MGA materials

How helpful are these materials to learning?	Very Helpful	Some Help	Little or no Help	Not Used In Class	<u>N</u>
the module Preview and Review tests	77%	19%	3%	1%	1080
the A activity sheets	75%	21%	3%	1%	1076
the other materials the teacher gave you (books, worksheets, etc.)	62%	23%	3%	12%	1072
the B activity sheets	61%	29%	4%	6%	1055
the GT improvement materials	51%	22%	5%	22%	1062
the military manuals and materials	16%	16%	11%	57%	1052

Students' assessment of MGA teaching methods. When asked to rate the teaching methods used in the MGA curriculum, students' responses indicated they approved of the MGA approach. Almost three-quarters of the students rated the self-paced approach as very helpful (see Table 8-10). A little less than half said the instruction of the teacher to the entire class was very helpful to their learning, and a third said that it was very helpful when the teacher grouped students together for instruction. Students' responses indicated relatively favorable opinions about the help they received from other students in the class or that they received in the learning center. Approximately half said they did not use the learning center or lab.

Table 8-10

Teaching Methods Rated as Most Helpful to Learning

Which teaching methods help you most to learn?	Very Helpful	Some Help	Little or no Help	Does Not Apply	<u>N</u>
the self-paced approach used in this program	73%	21%	5%	1%	1087
the instruction of the teacher to the entire class	44%	29%	9%	18%	1061
when the teacher groups students together for instruction	33%	34%	10%	23%	1061
help you get from other students in the class	21%	40%	20%	19%	1056
working in the learning center or lab	18%	19%	8%	55%	1051

Students were asked on the questionnaire about the subject matter on the activity sheets, about the presentation of the skills, and about the Previews. Almost three-quarters of the students said the subject matter was usually presented in a logical order on the activity sheets (see Table 8-11). Almost two-thirds said the practice drills and problems were usually presented clearly on the activity sheets. More than half said the Previews usually seemed to identify correctly the problems they were having. More than half also said the drills on the activity sheets usually gave them enough practice on the skills they were learning and that there was review of the skills they learned on other sheets. Students' appraisal of the interest and motivation created by the subject matter was less enthusiastic. More than half said that the subject matter was interesting or motivating to them sometimes or hardly ever. The students were evenly divided between those who said the subject matter usually

related to their job needs and those who said it sometimes or hardly ever related to their job needs.

Table 8-11

Students' Evaluation of MGA Materials and Methods

Materials and Methods	Usually	Sometimes	Hardly Ever	<u>N</u>
Is the subject matter presented in a logical order on the activity sheets?	71%	26%	3%	1078
Are the practice drills and problems presented clearly on the activity sheets?	63%	33%	4%	1091
Do the drills give you enough practice on the particular skill you are learning?	58%	37%	6%	1085
Is there review of the skills you have learned on other sheets?	54%	35%	11%	1085
Does the subject matter relate to the reading, writing, or language skills you need on the job?	50%	34%	16%	1075
Is the subject matter interesting to you?	35%	50%	14%	1077
Is the subject matter motivating to you?	35%	50%	14%	1067
Do the Previews seem to identify correctly the problems you are having?	58%	39%	3%	1085

Students were asked if certain of the MGA course components were good for learning or motivating. Almost all the students rated the activity sheets and module Previews and Reviews as "good for learning" (see Table 8-12). More than two-thirds of the students said the activity sheets and Previews and Reviews were motivating. Although almost one-fifth responded that class leaders were

not used in their classes, over half said that use of the class leader was good for learning and motivating. More than one-third said that wall charts and incentives were not used in their classes. However, more students than not said the wall charts and incentives were good for learning and motivating.

Table 8-12

Students' Rating of MGA Course Components

Course Components	Good for Learning			Motivating			Not Used	N
	Yes	No	<u>N</u>	Yes	No	<u>N</u>	<u>N</u>	
Activity sheets	95%	4%	1033	70%	29%	722	1%	7
Module Previews and Reviews	95%	5%	1028	77%	23%	727	.5%	3
Class leader	57%	26%	787	50%	32%	682	17%	158
Wall charts	42%	19%	593	35%	22%	492	33%	368
Incentives or awards	37%	20%	547	36%	18%	485	44%	423

Students' assessment of class leader. Responding to a question dealing specifically with class leaders, about two-thirds said the class leader helped the class run smoothly, and four-fifths disagreed with the statement that the class leader made too many errors correcting other students' work (see Table 8-13). More than half said the class would run as well or better without a class leader. More than half of the students said that being class leader took up too much of their work time. Almost two-thirds said they did not like being class leader.

Table 8-13

Students' Evaluation of Class Leader

	Yes	No	<u>N</u>
The class leader helps the class run smoothly	63%	37%	1005
The class would run as well or better without a class leader	54%	46%	1010
Being class leader takes up too much of my work time	52%	48%	995
I like being class leader	39%	61%	978
The class leader makes too many errors correcting students' work	19%	81%	967

When asked to assess which classroom practices would help them to learn better, students' responses indicated they would like fewer paper and pencil activities and more active involvement and practice in using the skills they are taught in BSEP II. Two-thirds of the students said it would be very helpful to practice the skills in actual situations where they are needed (see Table 8-14). More than half said they would like demonstrations by the teacher. More than half also responded that it would be very helpful to have more activity sheets on particular subjects. Less than half the students said that it would be very helpful to have more individual attention by the teacher. Students felt less favorably about grouping of students for instruction. Less than half said it would be of some help, and almost a third said it would be of little or no help.

Table 8-14

Students' Ratings of Practices to Help Them Learn Better

How much would each of the following help you to learn better	Would be Very Helpful	Would be of Some Help	Would be of Little or No Help	<u>N</u>
opportunities to practice the skills in actual situations where they are needed	66%	27%	8%	1059
demonstrations by the teacher	57%	35%	8%	1056
more activity sheets on particular subjects	54%	37%	10%	1071
more individual attention by the teacher	44%	45%	11%	1056
more grouping of students for instruction	26%	45%	29%	1042

Relevance of curriculum to job needs. Students were asked how much the MGA curriculum helped them to improve the reading, writing, and language skills needed to perform their jobs. As shown on Table 8-15, more than half the students said that the curriculum helped them a lot and one-third said the curriculum gave them some help.

Table 8-15

Students' Assessment of Ability of  
MGA Curriculum to Improve Reading, Writing  
and Language Skills Needed on the Job

A Lot	Some	Not Much	<u>N</u>
57%	34%	9%	1079

Level of difficulty of materials. Students responded to a question regarding the level of difficulty of the MGA materials. Almost four-fifths said the curriculum was just right (see Table 8-16). A small percentage felt the curriculum was either too difficult or too easy.

Table 8-16

Difficulty Level of MGA Curriculum

Too Difficult	Too Easy	Just Right	<u>N</u>
4%	11%	85%	1051

Length of course. The length of the BSEP II course varied from post to post. Fort Polk had an open-entry/open-exit program in which students were able to continue their enrollment until they achieved a 9.0 grade level score on each of the TABE subtests. At Fort Bragg, students usually studied eight hours a day for a six-week period for a total of 240 hours. At Fort Ord, however, students enrolled in BSEP for 80 hours per cycle. As shown on Table 8-17, over half the students at all the posts, except Fort Polk, regardless of the length of their BSEP II cycle, felt the BSEP program was too short. Only at Fort Polk did half the students consider the program length to be adequate.



Approximately two-fifths of the students at Forts Carson and Lewis rated the course length as being just right for their needs.

Table 8-17

Students' Evaluation of Length of BSEP II Course

	Fort Bragg N=97	Fort Campbell N=115	Fort Carson N=259	Fort Hood N=184	Fort Lewis N=220	Fort Ord N=43	Fort Polk N=16
Too long	6.2%	5.2%	4.6%	7.1%	4.6%	11.6%	7.4%
Too short	63.9%	63.5%	65.3%	53.8%	55.5%	53.5%	42.0%
The right number of weeks	29.9%	31.3%	30.1%	39.1%	40.0%	34.9%	50.6%

Summary

In general, soldiers expressed favorable opinions about the MGA curriculum and Class Management System. They expected that the materials would help them to achieve their goals. They reported that the materials helped them learn the skills they needed to learn and they liked the self-paced approach used in the MGA curriculum.

Although they felt the materials were teaching them what they needed to know, students' responses showed that the subject matter could be made more interesting and motivating. Also, soldiers gave relatively low ratings to the use of class leaders and incentives in the BSEP II classes.

Probably most telling were students' reports of the practices that would help them learn better. They suggested being given more opportunities to practice the skills they were learning in class in actual situations. They also showed interest in having demonstrations by the teacher. Both of these suggestions show the need by soldiers to use the information they were being taught in the context of real-life situations. These suggestions are particularly important because of the way the MGA curriculum is written. Each skill is taught separately and students are given few application problems. For example, students are taught math skills in the separate Math modules but do not use the skills in an integrated fashion until they reach the final math Story Problems module. Soldiers perform reading comprehension and vocabulary exercises but the curriculum does not give them practice reading the materials they use on the job.

Soldiers also suggested having more activity sheets on particular subjects. Although they did not elaborate on the questionnaires, during interviews the soldiers reported that they needed more work on such skills as understanding ratio, proportion, and fractions. These suggestions by the soldiers, of the practices that would help them learn better, should be considered by the FORSCOM team revising the MGA curriculum.

## CHAPTER 9. THE FORT LEWIS EXPERIMENTAL PROGRAM

This chapter reports on an experimental BSEP II curriculum that was conducted at Fort Lewis during the same period that the MGA curriculum was being developed and implemented. Since both programs used the same mathematics curriculum and since data from both programs were available for the same time period, it was decided to include a comparative analysis as part of the MGA evaluation report.

### Background Information

At the same time that the MGA BSEP II curriculum was being developed and adopted in FORSCOM as an interim program, Fort Lewis was conducting an evaluation of its BSEP II program. The Education Services Officer, responding to reports of high attrition in the NCO academies, and to claims that BSEP II was not job related, called in a team of evaluators to study BSEP II at Fort Lewis. Between 6 July and 3 September 1982, a team from National Learning Systems, directed by Dr. Larry Banner, interviewed soldiers and supervisors, talked with NCO trainers, and observed BSEP II classes. In their final report, the evaluators made specific recommendations about a suitable curriculum and methods for teaching the basic skills needed on the job and for NCO training.

Fort Lewis then contracted National Learning Systems to develop a curriculum and methodology based on their recommendations. Fort Lewis conducted a pilot program during the summer of 1983. Based on the positive results from the pilot program, it was decided to replace the existing BSEP II

program with the newly developed program called the Fort Lewis Experiment (FLX).

At the same time, the MGA curriculum was selected as the interim program for BSEP II, and Dr. Larry Banner was contracted by Headquarters FORSCOM to conduct training sessions for ACES and contract personnel at FORSCOM installations and to monitor the MGA implementation. Fort Lewis was selected as the first site for the teacher training. With the concurrence of Headquarters FORSCOM, Fort Lewis undertook a year-long experiment in which half of the BSEP II students were to study the FLX curriculum and half were to study the MGA curriculum. Teachers were to alternate teaching each of the programs during BSEP cycles. Dr. Banner trained all of the teachers to teach both curricula in a week-long session in October 1983.

The FLX curriculum was implemented in half the classes in November 1983. The MGA curriculum was not implemented until 7 January 1984. Half the students were enrolled in the FLX Reading and Language courses. The other half were enrolled in the MGA Reading and Language courses. For administrative and logistic convenience, units from one area of the post were assigned to the FLX program while units from another area were assigned to MGA. All students who needed mathematics instruction were enrolled in the MGA Math course.

#### Major Differences Between FLX and MGA Programs

The FLX is intended to represent the "process" approach to education whereas the MGA curriculum is an example of the "product" approach. In product education, the emphasis is on learning the skills required to perform well on a specific end product. In the case of the MGA curriculum, the objective is to improve students' scores on the TABE. In process education, the emphasis is on

the process of learning to perform certain skills. End product scores do not serve as the criterion of success. Rather, success is determined by a demonstration of competence in the skill.

The objectives of the MGA curriculum are to improve soldiers' skills in Reading, Language, and Mathematics, as measured by the TABE. The objectives of the FLX are also to improve soldiers' competencies in Reading, Language, and Mathematics. However, students are not "taught the test," they are taught the reading and language skills considered important in their unit, whether or not they are tested on the TABE.

The two programs use different teaching methods. The MGA curriculum is a self-paced, individualized approach. Students work individually on a series of materials. The teacher acts as a monitor, except when students need assistance with problems. In the FLX curriculum, students work in small groups. The teacher presents problems to the students. The students resolve the problems by arriving at a consensus in their individual groups.

The MGA curriculum materials are a series of activity sheets that students complete individually. Each sheet deals with a specific skill. Students are assigned sheets based on their TABE pretest scores in the subtest areas. The FLX curriculum does not use a set of curriculum materials. Teachers are given the course objectives and may use any materials they choose to achieve the course objectives. There is an FLX manual which includes suggestions of activities and types of materials teachers can develop and use.

## Description of the Fort Lewis Experiment

When the research team at Fort Lewis interviewed personnel in the units as part of the BSEP II evaluation study, they determined that the most critical need in Reading was for soldiers to be able to read their manuals. The soldiers' major writing needs were: to be able to write short descriptive passages, to fill in forms, and to be able to take notes. They learned that the math requirements were minimal. Based on this assessment of critical needs in the unit, the objectives for the FLX program were developed. The choice of materials and methods to meet those objectives was based on several theories about reading and learning.

The FLX approach asserts that most reading programs teach soldiers to read materials that are not related to their jobs. According to studies cited by Banner, there is little evidence to support the notion that there is a transfer of skills in reading general literacy materials to the ability to read technical materials. Therefore, the FLX reading activities were usually derived from the Soldier's Manual of Common Tasks, or other materials relevant to soldiers' jobs.

The FLX approach also suggests that the type of reading required on the job is not the same type required for leisure reading. In the FLX curriculum, soldiers are taught to scan what they read and to look for key words. The emphasis in the FLX reading program is on comprehension, not on analysis. Instead of focusing on identifying such elements as diphthongs, digraphs, and schwas, the FLX curriculum focuses on identifying problems and key words. To support the key word approach, the FLX developers identified 543 key words used in the Soldier's Manual of Common Tasks. These are taught to the soldiers. It

is believed that if soldiers know the key words, they will be able to read the manuals for meaning. They may not be able to read and understand all words in the manuals, but they will understand the major concepts. According to the FLX developers, the BSEP II soldiers already know how to read (if they can read at the 4th grade level, then they are considered readers). However, what they need to learn is how to read more complex materials for understanding. This is not learned from analysis of structural elements, but from focusing on the main ideas.

Based on their determination of unit needs, the writing objectives for the FLX are for soldiers to compose short descriptive passages, to fill out Army forms, and to take notes.

The major materials for the course are the Soldiers' Manual of Common Tasks, pads of paper, and pencils. The FLX manual gives the objectives, the rationale, a discussion of the theories on which the methodology was based, and appendices with sample materials. The teachers are encouraged to copy these pages, to develop their own, or to have the students develop their own. The appendices are mainly examples for the teachers of the kinds of materials they can develop.

The appendices include some of the following articles or activities: an article on how to survey a textbook, two pages with activities using verbs, a sample index, an article on skim-type reading with questions, and other articles on study reading, on sequence in reading, spatial cues, and context cues. There is a section of articles on notetaking activities. There is a section containing various Army forms, instructions for conducting CLOZE testing, and suggested lesson plans for the teachers.

In the FLX program, the TABE is used as the diagnostic tool for entrance into the course. However, the FLX does not use other normed tests. For Reading, students are given CLOZE passages, before and after instruction. The CLOZE provides an accurate diagnosis of a soldier's ability to read the manual. A minimum of 20 percent improvement on the CLOZE passage is acceptable. The CLOZE passage is taken from the Soldier's Manual of Common Tasks, Skill Level 1. The passage is altered so that every seventh word is omitted from the text, except for the first and last sentences, which are not altered. A total of 50 words are omitted. The student is asked to read the passage and to supply the missing words. The student must supply the exact words as printed in the Soldier's Manual; no synonyms are accepted. Besides the CLOZE test, soldiers are also given a test on vocabulary. They must score a minimum of 80 percent on a test of 50 randomly selected words from their vocabulary lists.

For the writing objectives, students take a test on Army forms. They are given 15 minutes to complete a form making no more than three errors. They are also given a test on note-taking.

The teachers are given a list of teaching methods and techniques. They are asked to arrange the class in groups and to conduct all activities in these small groups. Each activity is to last approximately 20 minutes. The teacher is to monitor the work of the individual groups. Groups are encouraged to develop their own activities to meet each objective, to devise games, or to challenge other groups. They are told to encourage students to engage in a maximum amount of interaction, problem solving, recording, reporting, and responding. The FLX program advocates considerable discussion within each group until a problem is resolved. It is believed that by working together,



students learn from one another. In addition, those who understand a concept can assist other students to learn the information.

A description of the MGA curriculum was included in Chapter I.

### Classroom Observations

During the early period of the implementation of the FLX and MGA curriculums, the programs appeared to be monitored fairly closely. The ACES staff was concerned that the programs not be allowed to contaminate each other. MGA teachers were restricted to teaching MGA materials and methods, and FLX teachers could use no MGA materials or methods. Students in the MGA classrooms were working independently on their activity sheets. There was no group work in the MGA classrooms and little use of supplementary materials. In the FLX classrooms, students did all their activities in groups. The teachers assigned students to perform such tasks as writing paragraphs, taking notes on information they dictated, filling out forms, or analyzing grammar. The activities in the FLX and MGA classrooms appeared to be distinct.

Over the months, as new teachers were hired and not trained in the same painstaking way that the original teachers had been trained, the clear distinction between the two programs faded somewhat. We observed some FLX teachers giving their students MGA activity sheets as supplementary materials. The newer FLX teachers did not have a clear idea of the approach that they were teaching nor of the clearly defined methodology of the FLX program. They used some traditional approaches and tended to give little emphasis to the group approach developed for FLX. The MGA teachers also varied their approaches. They limited their use of the class leader, began teaching some group lessons,

and used supplementary materials extensively. During our last visit, we could see very little difference between the MGA and FLX classrooms.

### Supervisors' Ratings of FLX and MGA Students

AIR developed a rating form for supervisors at Fort Lewis to assess the reading, writing, and mathematics skills of BSEP graduates once they returned to the unit (see Appendix B). We identified all of the reading, writing, and mathematics tasks in the Soldier's Manual of Common Tasks, Skill Level Two. Supervisors were asked to rate each soldier on specific tasks compared with all other soldiers whom they supervised. They could choose whether soldiers performed "better than most soldiers," "as well as most soldiers," "not as well as most soldiers but gets by," "performs inadequately," and "not observed."

The Fort Lewis Education Center distributed 135 questionnaires to supervisors of FLX graduates and 135 questionnaires to supervisors of MGA graduates. These supervisors were not informed that their students had participated in an experimental program and were not told that their students had studied in either the FLX or MGA programs. AIR received 105 responses all together, 43 from FLX supervisors and 62 from the MGA supervisors. Although the manner of distribution and collection of the questionnaires precluded positive identification of the supervisors who made the ratings, there is every reason to believe that most supervisors rated only one or two soldiers and that there was no difference between supervisors of FLX and MGA graduates in that respect. According to the BSEP Coordinator at Fort Lewis, the command support for BSEP in the area where units were assigned to the FLX program was weaker than in the area where units were assigned to the MGA program. This could influence supervisors' attitudes toward and subsequent rating of BSEP graduates.

## Findings

Whereas in all cases except two, the rating responses do not show statistically significant differences between the two groups, they do show tendencies of raters to favor the MGA students over the FLX students. Proportionally, more supervisors of MGA graduates responded to the survey than did supervisors of FLX graduates. The percentages reported in the following description of questionnaire responses indicate the percent of MGA or FLX raters who responded to each category.

It is somewhat surprising that in the areas specifically addressed by the FLX curriculum, and not taught in the MGA curriculum (e.g., takes notes, writes short descriptive paragraphs, completes forms), MGA supervisors more often rated their graduates as performing better than did the FLX supervisors.

### Results of Supervisors' Ratings

Reading skills. Supervisors were asked to rate FLX and MGA graduates' reading skills on the job. They rated their ability to read authorizations, identify and permit entries for Guard Duty; to read manuals and SOP and demonstrate comprehension by performing required tasks; to interpret diagrams, charts, schematics, tables, graphs, and maps; to locate information in tables, indexes, and manuals; to read markers for NBC; and to send radio messages using radio procedures, prowords, and phonetic alphabet and numbers. They were also asked to give soldiers an overall rating on their ability to perform all reading tasks required for duty performance.

As shown in Table 9-1, there were about three ratings for MGA graduates for every two ratings for FLX graduates. In their overall rating of soldiers' ability to perform the required reading tasks for their duty performance, a

Table 9-1

## Supervisors' Ratings of MGA and FLX Graduates' Use of Reading Skills on the Job

	Better Than Most Soldiers		As Well as Most Soldiers		Not as Well as Most Soldiers But Gets By		Performs Inadequately		Total Sample Sizes		Total N
	FLX	MGA	FLX	MGA	FLX	MGA	FLX	MGA	FLX	MGA	
• reads authorization, identifies, and permits entry (Guard Duty) (n)	28.6% (10)	23.6% (13)	60% (21)	74.6% (41)	11.4% (4)	1.8% (1)	-	-	38.9% (35)	61.1% (55)	90
• reads manuals and SOP and demonstrates comprehension by performing required tasks (n)	19.1% (8)	18.8% (12)	61.9% (26)	76.6% (49)	16.7% (7)	4.7% (3)	2.4% (1)	-	39.6% (42)	60.4% (64)	106
• interprets diagrams, charts, schematics, tables, graphs, and maps (n)	29.7% (11)	16.4% (10)	51.4% (19)	73.8% (45)	18.9% (7)	9.8% (6)	-	-	37.8% (37)	62.2% (61)	98
• locates information in tables, indexes, and manuals (n)	25.6% (10)	20.6% (13)	59% (23)	71.4% (45)	12.8% (5)	7.9% (5)	2.6% (1)	-	38.2% (39)	61.8% (63)	102
• reads markers (NBC) (n)	19.4% (7)	24.2% (15)	77.8% (28)	72.6% (45)	2.8% (1)	3.2% (2)	-	-	36.7% (36)	63.3% (62)	98
• sends radio messages using radio procedures, prowords, and phonetic alphabet and numbers (n)	25% (8)	14.6% (7)	56.3% (18)	72.9% (35)	18.8% (6)	12.5% (6)	-	-	40% (32)	60% (48)	80
• OVERALL, performs all reading tasks required for duty performance (n)	21.4% (9)	23.4% (15)	59.5% (25)	70.3% (45)	19.1% (8)	6.3% (4)	-	-	39.6% (42)	60.4% (64)	106

slightly higher percentage of MGA supervisors rated MGA graduates as "better than most" and as performing "as well as most soldiers." A higher percentage of FLX than MGA supervisors rated soldiers as performing "not as well as most soldiers but gets by."

In all of the reading sub-areas, a higher percentage of FLX supervisors gave ratings of "better than most soldiers." However, a higher percentage of MGA supervisors gave ratings of "as well as most soldiers" than did FLX supervisors. A higher percentage of FLX supervisors gave ratings of "not as well as most soldiers but gets by" than did MGA supervisors. No MGA supervisors rated soldiers as "performs inadequately" and only two supervisors rated FLX soldiers in that category.

Writing skills. FLX and MGA supervisors rated soldiers on their ability to take notes when needed; write short descriptive paragraphs; complete forms; mark equipment; name terrain features, determine location; write dose rates in rad/hour; and label markers with type of agent. They also were asked to give them an overall rating on their ability to perform all writing tasks required for duty performance.

The rating pattern for writing skills mirrored that previously described for reading skills. On the overall rating of soldiers' ability to perform all writing tasks required for duty performance, MGA soldiers appeared to perform better (see Table 9-2). Relatively more MGA than FLX supervisors rated soldiers as performing "better than most" and as performing "as well as most soldiers" and a higher percentage of FLX than MGA supervisors rated soldiers as performing "not as well as most soldiers but gets by."

Table 9-2

Supervisors' Ratings of FLX and MGA Graduates' Use of Writing Skills on the Job

	Better Than Most Soldiers		As Well as Most Soldiers		Not as Well as Most Soldiers But Gets By		Performs Inadequately		Total Sample Sizes		Total N
	FLX	MGA	FLX	MGA	FLX	MGA	FLX	MGA	FLX	MGA	
• takes notes when needed (n)	28.2% (11)	21.9% (14)	43.6% (17)	67.2% (43)	23.1% (9)	9.4% (6)	5.1% (2)	1.6% (1)	37.9% (39)	62.1% (64)	103
• writes short descriptive paragraphs* (n)	7.4% (2)	15.8% (9)	48.2% (13)	75.4% (43)	44.4% (12)	8.8% (5)	-	-	32.1% (27)	67.9% (57)	84
• completes forms (n)	24.4% (10)	21.9% (14)	65.9% (27)	76.6% (49)	7.3% (3)	1.6% (1)	2.4% (1)	-	39.1% (41)	61.0% (64)	105
• marks equipment (n)	24.3% (9)	20.6% (13)	70.3% (26)	74.6% (47)	2.7% (1)	3.2% (2)	2.7% (1)	1.6% (1)	37.0% (37)	63.0% (63)	100
• names terrain features, determines location (n)	32.4% (12)	29.3% (17)	54.1% (20)	62.1% (36)	10.8% (4)	8.6% (5)	2.7% (1)	-	39.0% (37)	61.1% (58)	95
• writes dose rate in rad/hr. and labels markers with type of agent* (n)	35.0% (7)	9.5% (4)	35.0% (7)	79.6% (33)	25.0% (5)	11.9% (5)	5.0% (1)	-	32.3% (20)	67.7% (42)	62
• OVERALL, performs all writing tasks required for duty performance* (n)	15.0% (6)	23.8% (15)	65.0% (26)	74.6% (47)	20.0% (8)	1.6% (1)	-	-	38.8% (40)	61.2% (63)	103

\* significant at the .001 level

On their ratings of all of the writing sub-areas, with the exception of writing short paragraphs, a slightly higher percentage of FLX supervisors rated FLX graduates as performing "better than most soldiers" slightly more often than did MGA supervisors. In all cases in the writing sub-areas, a higher percentage of MGA supervisors rated MGA graduates as performing "as well as most soldiers" than did FLX supervisors. On the other hand, for all sub-areas, a higher percentage of FLX supervisors rated FLX graduates as performing "not as well as most soldiers but gets by" than did MGA supervisors.

Mathematics skills. Supervisors rated soldiers on their use of mathematics skills on the job. They rated their ability to estimate range using the binocular reticle/mil-relation method, to determine the grid coordinates of a point on a military map, and to determine magnetic azimuth using a compass. They also gave them an overall rating of their ability to perform all mathematics tasks required for duty performance.

Although the MGA and FLX students took the same MGA math course, a higher percentage of MGA supervisors rated MGA graduates as "better than most soldiers" and "as well as most soldiers" than did FLX supervisors (see Table 9-3). A higher percentage of FLX supervisors than MGA supervisors rated their graduates as performing "not as well as most soldiers but gets by." In two out of the three mathematics sub-areas, a higher percentage of FLX supervisors rated their soldiers as "better than most" and "not as well as most soldiers but gets by" than did supervisors of MGA graduates. In all areas, a higher percentage of MGA than FLX supervisors rated their graduates as performing "as well as most soldiers."

Table 9-3  
Supervisors' Ratings of FLX and MGA Graduates' Use of Mathematics Skills on the Job

	Better Than Most Soldiers		As Well as Most Soldiers		Not as Well as Most Soldiers But Gets By		Performs Inadequately		Total Sample Sizes		Total N
	FLX	MGA	FLX	MGA	FLX	MGA	FLX	MGA	FLX	MGA	
• estimates range using the binocular reticle/mil-relation method* (n)	-	16.7% (7)	61.5% (8)	71.4% (30)	38.5% (5)	11.9% (5)	-	-	23.6% (13)	76.4% (42)	55
• determines the grid coordinates of a point on a military map (n)	29.7% (11)	27.6% (16)	59.5% (22)	69.0% (40)	2.7% (1)	3.5% (2)	8.1% (3)		39.0% (37)	61.1% (58)	95
• determines magnetic azimuth using a compass (n)	36.4% (12)	27.6% (16)	51.5% (17)	67.2% (39)	6.1% (2)	5.2% (3)	6.1% (2)		36.3% (33)	63.7% (58)	91
• OVERALL, performs all mathematics tasks required for duty performance (n)	20.5% (8)	21.0% (13)	59.0% (23)	72.6% (45)	15.4% (6)	6.5% (4)	5.1% (2)		38.6% (39)	61.4% (62)	101

\* significant at the .05 level



General performance. Supervisors rated soldiers on the improvement they showed in their attitude and motivation, and ability to perform their jobs after taking BSEP II. They were asked whether soldiers "noticeably improved," "slightly improved," or whether there was "no observed change." As shown in Table 9-4, FLX supervisors more often rated their graduates as being "noticeably improved" after BSEP II. FLX supervisors more often rated their graduates as showing "no observed change." A higher percentage of MGA supervisors than FLX supervisors said their graduates were "slightly improved" in their attitude and motivation, but a greater percentage of FLX supervisors than MGA supervisors said their graduates were "slightly improved" in their ability to perform their jobs since taking BSEP II.

#### TABE Gains

TABE gains were analyzed for the FLX and MGA students over a six month period. Overall, the MGA soldiers tended to make slightly higher gains on the TABE than did the FLX students. However, it should be kept in mind that the MGA curriculum was designed to increase scores on the TABE, whereas the FLX curriculum was designed to increase literacy skills required on the job. All MGA students studied the reading, math, and language modules in the MGA curriculum. The FLX students studied FLX reading and language but studied the MGA math curriculum.

As shown in Table 9-5, the mean gains for MGA students tended to be slightly higher.

Table 9-4

Supervisors' Ratings of FLX and MGA Graduates' General Performance

	Noticeably Improved		Slightly Improved		No. Observed Change		Total Sample Sizes		Total N
	FLX	MGA	FLX	MGA	FLX	MGA	FLX	MGA	
● Compared with his or her performance before taking BSEP, how do you rate this soldier's <u>attitude and motivation since taking BSEP?</u> (n)	34.1% (15)	44.4% (28)	34.1% (15)	38.1% (24)	31.8% (14)	17.5% (11)	41.1% (44)	58.9% (63)	107
● Compared with his or her performance before taking BSEP, how do you rate this soldier's <u>ability to perform his or her job since taking BSEP?</u> (n)	27.3% (12)	48.4% (30)	43.2% (19)	37.1% (23)	29.6% (13)	14.5% (9)	41.5% (44)	58.5% (62)	106

\* significant at the .05 level

Table 9-5

Mean Grade Level Gains on TABE Subtests for FLX and MGA Students

TABE Subtest	FLX	<u>N</u>	MGA	<u>N</u>
Vocabulary	.2	158	.3	191
Comprehension	1.0	158	1.1	191
Reading	.8	158	.8	191
Computation	2.4	169	2.5	188
Concepts & Problems	1.7	170	1.8	188
Math	2.1	169	2.1	188
Mechanics & Expression	1.0	152	1.3	185
Spelling	.6	151	1.0	185

Summary

This chapter reports the results of an experimental program conducted at Fort Lewis between November 1983 and December 1984. The Fort Lewis Experimental Program (FLX) was taught in half the classes and the MGA curriculum in the other half. The two curricula used different teaching methods and materials and had different objectives. The MGA curriculum used the self-paced approach in which students were assigned to work individually on a prescribed set of materials. The FLX curriculum used direct teacher instruction. Students worked in small groups and used materials developed by the teacher.

To assess the impact of the two curricula on soldiers' performance in the units, AIR developed a Supervisor's Rating form. Supervisors were asked to

rate soldiers on their use of the reading, writing, and mathematics skills needed to perform the tasks identified in the Soldier's Manual of Common Tasks.

Overall, supervisors gave somewhat higher ratings to the graduates of the MGA program than to the graduates of the FLX program in their use of reading, writing, and mathematics skills. MGA graduates received slightly higher ratings in their general performance than did the FLX students. On the TABE posttests, MGA graduates tended to make slightly higher gains on the TABE than did the FLX graduates.

## REFERENCES

- Funk, S., Johnson, C., Batzer, E., Cambell, T., and Vandecavege, G. Training detractors in FORSCOM divisions and how they are handled. Technical Report 1278. Alexandria, Va.: U.S. Army Research Institute, May 1980.
- Stoddart, Susan C. & Hahn, Clifford P. Preliminary report of formal evaluation of the McFann, Gray & Associates' BSEP II curriculum. Interim Report. Washington, D.C.: American Institutes for Research, February 1985.
- Stoddart, Susan C. & Hahn, Clifford P. Characteristics of group of midtermers with ETS dates of 1984, 1985, 1986, and 1987+. Informal Report. Washington, D.C.: American Institutes for Research, January 1985.
- Stoddart, Susan C. & Hahn, Clifford P. Preliminary report of initial implementation of the McFann, Gray & Associates' BSEP II curriculum. Interim Report. Washington, D.C.: American Institutes for Research, October 1984.

APPENDIX A

## APPENDIX A - LIST OF TABLES

- Table A3-1 Rank of BSEP II Students
- Table A3-2 Career Fields of BSEP II Participants
- Table A3-3 Native Language of BSEP II Students
- Table A3-4 Age in Years of BSEP II Students
- Table A3-5 Racial Designation of BSEP II Students
- Table A3-6 Sex of BSEP II Students
- Table A3-7 Educational Credentials of BSEP II Students
- Table A3-8 Educational Credentials of BSEP II Students by Post
- Table A3-9 Months in Service of BSEP II Students
- Table A3-10 Months of Remaining Service of BSEP II Students
- Table A3-11 Reasons for Enrolling in BSEP II
- Table A3-12 Reported Prior Course Enrollments
- 
- Table A4-1 Assignment to MGA Instructional Modules in Accordance with TABE Grade Level 9.0 Criterion
- Table A4-2 Percent of Soldiers Enrolled in Specific Courses and Modules
- Table A4-3 Time Spent in BSEP II During Evaluation Period
- Table A4-4 Number of Activity Sheets Completed
- Table A4-5 Correlation Coefficients Between Number of Activity Sheets Completed and Time Spent
- Table A4-6 Module Achievement--Percent Correct
- Table A4-7 Percent of Students Reporting Reasons for Leaving BSEP II Courses
- Table A4-8 Extent to Which Grade Level Standards Were Met for the TABE Vocabulary Test

LIST OF TABLES (continued)

- Table A4-9 Extent to Which Grade Level Standards Were Met for the TABE Comprehension Test
- Table A4-10 Extent to Which Grade Level Standards Were Met for the TABE Reading Test
- Table A4-11 Extent to Which Grade Level Standards Were Met for the TABE Computation Test
- Table A4-12 Extent to Which Grade Level Standards Were Met for the TABE Concepts and Problems Test
- Table A4-13 Extent to Which Grade Level Standards Were Met for the TABE Mathematics Test
- Table A4-14 Extent to Which Grade Level Standards Were Met for the TABE Language Mechanics and Expression Test
- Table A4-15 Extent to Which Grade Level Standards Were Met for the TABE Spelling Test
- Table A4-16 Extent to Which Grade Level Standards Were Met for the TABE Total Battery
- Table A4-17 Percent of Primary Target Students Achieving TABE Posttest Scores of 9.0 or Above
- Table A4-18 Percent of TABE Grade Level Gains in Relation to Time Between TABE Pretests and Class
- Table A4-19 Percent of TABE Grade Level Gains by Post
- Table A4-20 Mean Grade Level Scores on TABE Tests
- Table A4-21 Mean Grade Level Gains on TABE Tests
- Table A4-22 Equivalence of Cloze Test Forms
- Table A4-23 Percent Correct Gains on Cloze Reading Tests
- 
- Table A5-1 Mean Grade Level Gains by Post in Relation to Direct MGA Instruction



LIST OF TABLES (continued)

- Table A6-1 Post-BSEP TABE Vocabulary Subtest Scores by  
Post-BSEP GT Scores
- Table A6-2 Post-BSEP TABE Comprehension Subtest Scores by  
Post-BSEP GT Scores
- Table A6-3 Post-BSEP TABE Total Reading Subtest Scores by  
Post-BSEP GT Scores
- Table A6-4 Post-BSEP TABE Computation Subtest Scores by  
Post-BSEP GT Scores
- Table A6-5 Post-BSEP TABE Concepts & Problems Subtest Scores by  
Post-BSEP GT Scores
- Table A6-6 Post-BSEP TABE Total Math Subtest Scores by  
Post-BSEP GT Scores
- Table A6-7 Post-BSEP TABE Mechanics & Expression Subtest Scores  
by Post-BSEP GT Scores
- Table A6-8 Post-BSEP TABE Spelling Subtest Scores by  
Post-BSEP GT Scores
- Table A6-9 Post-BSEP TABE Total Battery Subtest Scores by  
Post-BSEP GT Scores

Table A3-1

Rank of BSEP II Students

Post	Percent by Rank Level							Total	
	E-1	E-2	E-3	E-4	E-5	E-6	E-7/8	<u>N</u>	%
All Posts	2%	9%	18%	40%	24%	7%	<1%	3688	100%
Fort Bragg	1%	3%	19%	42%	28%	7%	<1%	572	16%
Fort Campbell	4%	7%	15%	46%	22%	5%	1%	747	20%
Fort Carson	4%	12%	15%	38%	23%	8%	<1%	484	13%
Fort Hood	3%	13%	15%	38%	24%	8%	1%	579	16%
Fort Lewis	2%	12%	21%	39%	20%	5%	<1%	569	15%
Fort Ord	<1%	8%	26%	40%	20%	5%	1%	303	8%
Fort Polk	2%	8%	18%	35%	28%	9%	0%	434	12%
<u>N</u>	84	324	662	1491	868	244	15		

Table A3-2

Career Fields of BSEP II Participants

---

Career Field	<u>N</u>
11 Infantry	882
12 Combat Engineering	150
13 Field Artillery	276
16 Air Defense Artillery	112
18 Special Operations	4
19 Armor	202
27 Land Combat/Air Defense Systems Intermediate Maintenance	12
28 Aviation Communications Electronics Systems Maintenance	8
29 Communications Electronics System Maintenance	9
31 Communications Electronics Operations	337
33 EW/Intercept Systems Maintenance	1
51 General Engineering	64
54 Chemical	34
55 Ammunition	29
63 Mechanical Maintenance	395
64 Transportation	158
67 Aircraft Maintenance	102
71 Administration	129
74 Automatic Data Processing	5
76 Supply and Service	339
81 Topographic Engineering	15
84 Public Affairs and Audio-Visual	2
91 Medical	94
92 Petroleum	69
93 Aviation Operator	1
94 Food Service	138
95 Law Enforcement	27
96 Military Intelligence	7
97 Band	1
98 Electronic Warfare/Cryptologic Operations	2
Unknown	109

---

Table A3-3

Native Language of BSEP II Students

Post	Percent by Native Language			Total	
	English	Spanish	Other	<u>N</u>	%
All Posts	89%	8%	3%	3672	100%
Fort Bragg	91%	8%	1%	569	16%
Fort Campbell	89%	8%	3%	749	20%
Fort Carson	87%	9%	3%	475	13%
Fort Hood	87%	10%	2%	575	16%
Fort Lewis	86%	9%	5%	565	15%
Fort Ord	89%	6%	5%	306	8%
Fort Polk	90%	7%	3%	433	12%
<u>N</u>	3255	116	301		

Table A3-4

Age in Years of BSEP II Students

Post	Percent by Age Groups							Total	
	18 19	20 21	22 23	24 25	26 27	28 +	<u>N</u>	%	
All Posts	5%	26%	23%	17%	12%	18%	3629	100%	
Fort Bragg	3%	25%	23%	19%	13%	16%	571	16%	
Fort Campbell	5%	27%	25%	14%	10%	18%	749	21%	
Fort Carson	3%	25%	21%	20%	11%	19%	465	13%	
Fort Hood	4%	27%	20%	17%	12%	21%	547	15%	
Fort Lewis	5%	29%	23%	15%	12%	15%	561	15%	
Fort Ord	5%	25%	22%	17%	13%	18%	307	8%	
Fort Polk	6%	24%	23%	15%	12%	20%	429	12%	
<u>N</u>	168	949	824	607	425	656			

Table A3-5

Racial Designation of BSEP II Students

Post	Percent by Racial Designation			Total	
	Black	White	Other	<u>N</u>	%
All Posts	51%	45%	4%	3627	100%
Fort Bragg	53%	45%	2%	570	16%
Fort Campbell	48%	49%	3%	738	20%
Fort Carson	48%	49%	4%	479	13%
Fort Hood	53%	43%	4%	568	16%
Fort Lewis	50%	43%	7%	549	15%
Fort Ord	60%	34%	6%	300	8%
Fort Polk	48%	46%	5%	423	12%
<u>N</u>	1842	1637	148		

Table A3-6

Sex of BSEP II Students

Post	Percent by Sex		Total	
	Female	Male	<u>N</u>	%
All Posts	6%	94%	3510	100%
Fort Bragg	5%	95%	575	16%
Fort Campbell	7%	93%	737	21%
Fort Carson	4%	96%	483	14%
Fort Hood	8%	92%	575	16%
Fort Lewis	3%	97%	544	16%
Fort Ord	5%	95%	311	9%
Fort Polk	6%	94%	285	8%
<u>N</u>	193	3317		

Table A3-7

Educational Credentials of BSEP II Students

---

Percent With or Without Credentials  
(N=2669)

---

No High School Diploma		Have High School Diploma	
18%		82%	
No GED	Have GED	Have GED	No GED
9%	9%	3%	79%

---



Table A3-8

Educational Credentials of BSEP II Students by Post

Post	Percent by Credential Group				Total	
	No HSD No GED	No HSD Have GED	HSD Have GED	HSD No GED	<u>N</u>	%
All Posts	9%	9%	3%	79%	2669	100%
Fort Bragg	5%	11%	3%	81%	423	16%
Fort Campbell	7%	6%	3%	85%	743	28%
Fort Carson	6%	8%	2%	84%	411	15%
Fort Hood	11%	10%	3%	76%	326	12%
Fort Lewis	12%	11%	5%	71%	274	10%
Fort Ord	10%	13%	3%	74%	179	7%
Fort Polk	16%	11%	4%	70%	313	12%
<u>N</u>	233	242	81	2113		

Table A3-9

Months in Service of BSEP II Students

---

Post	<u>N</u>	Average Months
All Posts	3598	45
Fort Bragg	561	47
Fort Campbell	739	45
Fort Carson	462	49
Fort Hood	565	47
Fort Lewis	556	40
Fort Ord	289	44
Fort Polk	426	47

---

Table A3-10

Months of Remaining Service of BSEP II Students

Post	<u>N</u>	Average Months
All Posts	3614	19
Fort Bragg	565	18
Fort Campbell	732	16
Fort Carson	471	21
Fort Hood	560	19
Fort Lewis	562	20
Fort Ord	302	20
Fort Polk	422	19

Table A3-11

Reasons for Enrolling in BSEP II

Post	Reported Reasons							
	GT Below 100		Qualify for SQT		Command Referral		Low BNOC	
	<u>N</u>	%	<u>N</u>	%	<u>N</u>	%	<u>N</u>	%
All Posts	3042	82%	193	5%	187	5%	95	3%
Fort Bragg	346	60%	51	9%	43	7%	27	5%
Fort Campbell	706	94%	2	<1%	2	<1%	0	0
Fort Carson	384	79%	86	18%	57	12%	37	8%
Fort Hood	493	85%	5	1%	28	5%	4	1%
Fort Lewis	525	92%	23	4%	19	3%	11	2%
Fort Ord	267	86%	20	6%	26	8%	8	3%
Fort Polk	321	74%	6	1%	12	3%	8	2%

Table A3-12

Reported Prior Course Enrollments

Post	Percent by Type of Course Enrollment										Total N	%
	BSEP Courses					Communication	GT Improvement	ESL				
	Any	Reading	Language	Math								
All Posts	30	20	13	24	3	8	9	3713	100			
Fort Bragg	14	11	7	10	2	6	30	577	16			
Fort Campbell	31	25	20	27	1	13	1	751	20			
Fort Carson	30	20	11	25	2	1	28	485	13			
Fort Hood	27	17	6	21	3	4	1	581	16			
Fort Lewis	42	24	16	31	4	14	3	573	15			
Fort Ord	30	21	14	25	5	8	2	311	8			
Fort Polk	39	21	17	25	5	4	1	435	12			
N	1122	746	483	876	100	284	346					

Table A4-1

Assignment to MGA Instructional Modules in Accordance  
with TABE Grade Level 9.0 Criterion

TABE Test and Post	N	Percent of Sample		
		Correctly Assigned	Pretest Below 9.0 Didn't Get Instruction	Pretest Above 9.0 Got Instruction
<u>Vocabulary Test</u>				
All Posts	2261	74	7	19
Fort Bragg	44	45	0	55
Fort Campbell	542	71	1	27
Fort Carson	320	73	8	18
Fort Hood	379	78	5	17
Fort Lewis	367	61	18	22
Fort Ord	247	82	5	13
Fort Polk	362	86	5	9
<u>Comprehension Test</u>				
All Posts	2261	74	11	16
Fort Bragg	44	55	16	30
Fort Campbell	542	74	3	23
Fort Carson	320	74	12	14
Fort Hood	379	80	10	10
Fort Lewis	367	52	29	19
Fort Ord	247	81	6	13
Fort Polk	362	86	6	8
<u>Reading Test</u>				
All Posts	2261	69	6	24
Fort Bragg	44	50	0	50
Fort Campbell	542	61	1	38
Fort Carson	320	73	6	21
Fort Hood	379	80	5	14
Fort Lewis	367	57	20	23
Fort Ord	247	76	4	21
Fort Polk	362	78	4	18
<u>Computation Test</u>				
All Posts	2261	81	1	18
Fort Bragg	44	72	0	27
Fort Campbell	542	72	<1	28
Fort Carson	320	89	<1	10
Fort Hood	379	88	1	12
Fort Lewis	367	76	<1	24
Fort Ord	247	87	7	6
Fort Polk	362	83	2	15

(Continued)

Table A4-1

Assignment to MGA Instructional Modules in Accordance  
with TABE Grade Level 9.0 Criterion

TABE Test and Post	N	Percent of Sample		
		Correctly Assigned	Pretest Below 9.0 Didn't Get Instruction	Pretest Above 9.0 Got Instruction
<u>Concepts &amp; Prob. Test</u>				
All Posts	2261	57	27	16
Fort Bragg	44	75	9	16
Fort Campbell	542	39	36	25
Fort Carson	320	40	49	11
Fort Hood	379	74	15	11
Fort Lewis	367	62	16	22
Fort Ord	247	46	49	5
Fort Polk	362	79	6	15
<u>Mathematics Test</u>				
All Posts	2261	82	1	17
Fort Bragg	44	84	0	16
Fort Campbell	542	73	<1	27
Fort Carson	320	87	1	12
Fort Hood	379	93	<1	7
Fort Lewis	367	78	<1	21
Fort Ord	247	89	7	4
Fort Polk	362	80	2	18
<u>Mech./Expr. Test</u>				
All Posts	2261	64	29	7
Fort Bragg	44	80	2	18
Fort Campbell	542	42	53	5
Fort Carson	320	63	28	9
Fort Hood	379	75	22	3
Fort Lewis	367	46	40	15
Fort Ord	247	78	17	5
Fort Polk	362	92	4	4
<u>Spelling Test</u>				
All Posts	2261	53	43	4
Fort Bragg	44	80	5	16
Fort Campbell	542	35	65	0
Fort Carson	320	64	29	7
Fort Hood	379	50	46	4
Fort Lewis	367	50	40	10
Fort Ord	247	30	66	3
Fort Polk	362	88	11	1

Table A4-2

Percent of Soldiers Enrolled in Specific Courses and Modules

Course or Module	Fort Bragg N=577	Fort Campbell N=751	Fort Carson N=485	Fort Hood N=581	Fort Lewis N=573	Fort Ord N=311	Fort Polk N=435	All Posts N=3713
<u>Mathematics Course</u>	80	97	90	96	97	90	87	91
Concepts	53	38	25	71	65	18	65	50
Story Problems	51	52	26	71	54	41	64	52
Decimals	72	54	65	84	87	73	74	72
Fractions	78	48	81	92	89	86	79	77
Measures	52	56	37	75	65	41	69	58
Percents	60	77	49	76	74	54	75	68
Whole Numbers	79	38	88	93	93	88	78	77
<u>Language Course</u>	57	18	69	58	44	68	72	52
Capitalization	54	17	55	51	41	67	62	46
Grammar	45	1	26	33	25	33	55	29
Punctuation	50	14	47	43	36	55	59	41
Spelling	55	1	54	29	34	10	47	32
<u>Reading Course</u>	55	66	61	59	43	64	51	57
Locator & Visuals	30	45	47	44	31	51	37	40
Text	48	55	54	54	36	59	41	50
Vocabulary	54	58	58	55	41	54	38	52



Table A4-3

Time Spent on BSEP II During Evaluation Period

	Total Hours Spent on BSEP II		Hours Spent on non-MGA Material		% of Total Hours
	<u>N</u>	Hours	<u>N</u>	Hours	
All Posts	3655	83.1	3662	15.2	18
Fort Bragg	573	136.9	573	48.0	35
Fort Campbell	743	63.5	744	14.2	22
Fort Carson	475	65.2	475	2.5	4
Fort Hood	568	96.1	568	7.2	7
Fort Lewis	569	60.9	573	12.8	21
Fort Ord	310	63.2	310	3.1	5
Fort Polk	417	91.6	419	9.6	10

Table A4-4

Number of Activity Sheets Completed

Course or Module	Fort Bragg		Fort Campbell		Fort Carson		Fort Hood		Fort Lewis		Fort Ord		Fort Polk		All Posts	
	N*	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
<u>Mathematics Course</u>	77	23.7	96	16.9	96	21.7	78	39.0	98	25.3	90	27.4	72	29.8	607	25.8
Concepts	43	6.7	42	4.1	24	5.7	63	5.9	54	5.3	19	5.8	56	5.5	301	5.6
Story Problems	31	7.0	56	4.9	14	6.7	48	10.1	31	6.4	30	6.1	41	8.2	251	7.1
Decimals	53	3.5	47	6.1	51	4.3	64	5.8	77	5.1	76	5.7	48	4.4	416	5.0
Fractions	54	9.0	31	13.9	86	10.0	73	11.8	73	10.8	81	11.3	60	10.5	458	10.9
Measures	39	3.9	57	4.1	24	3.6	24	3.6	55	4.6	40	4.8	57	4.2	326	4.2
Percents	42	3.1	66	3.0	30	3.3	49	4.2	53	3.9	43	3.5	44	3.7	327	3.5
Whole Numbers	58	6.3	9	3.0	86	6.8	66	7.5	71	5.7	77	6.2	50	5.1	417	6.3
<u>Language Course</u>	55	20.9	8	16.5	66	27.7	53	33.7	42	30.2	80	24.2	64	37.5	368	28.5
Capitalization	43	4.6	8	6.0	49	4.9	47	4.9	35	4.6	76	6.3	54	4.6	312	5.1
Grammar	25	13.1	3	11.0	32	19.4	35	26.5	23	20.7	38	18.4	51	26.1	282	9.4
Punctuation	32	7.2	5	10.2	48	8.8	46	11.1	35	8.9	63	10.4	53	8.6	207	21.3
Spelling	45	8.6	0	0	48	11.3	11	10.5	36	8.9	10	10.6	38	9.7	188	9.8
<u>Reading Course</u>	48	10.2	64	5.4	54	12.9	60	15.0	41	11.7	68	18.5	49	13.2	384	12.5
Locators & Visuals	17	3.4	41	2.7	30	3.3	35	4.1	21	3.0	54	4.1	21	3.8	219	3.6
Text	35	4.7	42	2.4	39	6.5	50	6.9	35	5.8	63	8.8	40	5.7	304	6.1
Vocabulary	40	6.7	51	2.7	46	7.5	49	8.4	33	6.4	53	9.8	44	7.8	316	7.0
All Courses/Modules	100	34.6	100	21.0	99	46.5	80	71.6	100	42.3	100	56.6	84	61.8	663	46.7

\*N = Number of soldiers who completed any relevant activity sheets.

Table A4-5

Correlation Coefficients Between Number of Activity Sheets Completed and Time Spent

	Total Class Hours	Supplementary Materials Hours	Net Hours
<u>All Modules</u>			
All Posts	39	-17	51
Fort Bragg	50	N.S.	56
Fort Campbell	N.S.	N.S.	N.S.
Fort Carson	34	N.S.	36
Fort Hood	(23)	N.S.	N.S.
Fort Lewis	69	N.S.	62
Fort Ord	48	N.S.	51
Fort Polk	64	N.S.	65
<u>Mathematics Course</u>			
All Posts	25	-15	35
Fort Bragg	N.S.	-44	30
Fort Campbell	N.S.	N.S.	N.S.
Fort Carson	N.S.	N.S.	N.S.
Fort Hood	N.S.	N.S.	N.S.
Fort Lewis	34	N.S.	29
Fort Ord	N.S.	N.S.	N.S.
Fort Polk	52	N.S.	52
<u>Language Course</u>			
All Posts	(12)	N.S.	N.S.
Fort Bragg	N.S.	N.S.	N.S.
Fort Campbell	N.S.	N.S.	N.S.
Fort Carson	N.S.	N.S.	(25)
Fort Hood	N.S.	N.S.	N.S.
Fort Lewis	N.S.	N.S.	N.S.
Fort Ord	N.S.	N.S.	N.S.
Fort Polk	N.S.	N.S.	N.S.

(Continued)

Table A4-5

Correlation Coefficients Between Number of Activity Sheets  
Completed and Time Spent

---

	Total Class Hours	Supplementary Materials Hours	Net Hours
<u>Reading Course</u>			
All Posts	N.S.	N.S.	(11)
Fort Bragg	N.S.	N.S.	N.S.
Fort Campbell	N.S.	N.S.	N.S.
Fort Carson	N.S.	N.S.	N.S.
Fort Hood	N.S.	N.S.	N.S.
Fort Lewis	N.S.	N.S.	N.S.
Fort Ord	N.S.	N.S.	N.S.
Fort Polk	N.S.	N.S.	(30)

---

NOTE: Decimal points omitted. Coefficients in parentheses are significant at the .05 level, all others at the .01 level.

---

Table A4-6

Module Achievement--Percent Correct

<u>Module/Test</u>	<u>Fort Bragg</u>	<u>Fort Campbell</u>	<u>Fort Carson</u>	<u>Fort Hood</u>	<u>Fort Lewis</u>	<u>Fort Ord</u>	<u>Fort Polk</u>	<u>All Posts</u>
<u>Concepts</u>								
Preview	71.1	74.2	75.5	63.0	72.0	73.4	70.9	70.3
Review	90.1	88.0	91.3	89.7	94.1	90.7	91.7	90.9
Follow-up	99.2	91.4	83.9	87.9	48.3	91.9	86.2	89.3
<u>Story Problems</u>								
Preview	86.9	83.3	90.3	73.7	85.3	82.0	84.1	82.6
Review	90.7	82.3	89.6	82.4	92.0	84.7	81.4	85.4
Follow-up	97.4	87.7	100.0	90.3	62.3	94.8	87.9	89.5
<u>Decimals</u>								
Preview	76.4	66.6	74.9	61.9	71.6	67.2	73.9	70.1
Review	94.0	87.4	92.5	90.6	94.6	89.6	90.8	91.5
Follow-up	100.0	83.4	94.0	88.1	85.0	90.0	93.7	89.5
<u>Fractions</u>								
Preview	68.5	52.5	59.0	44.5	61.7	56.0	63.8	57.6
Review	93.9	87.1	92.2	91.1	95.8	91.0	92.6	92.1
Follow-up	95.0	83.2	93.7	88.3	85.0	88.7	95.8	89.4
<u>Measures</u>								
Preview	67.3	59.4	66.9	45.5	61.7	57.3	61.6	58.8
Review	90.5	85.9	89.1	86.5	94.1	86.2	90.0	88.9
Follow-up	97.0	84.8	92.3	87.5	70.3	85.9	93.0	87.8
<u>Percents</u>								
Preview	77.6	67.1	79.9	54.4	73.6	72.1	74.2	69.7
Review	93.9	89.1	93.2	90.5	96.6	94.6	93.7	92.8
Follow-up	96.0	90.5	94.9	88.5	15.0	96.5	91.4	90.3
<u>Whole Numbers</u>								
Preview	88.5	86.6	87.9	81.9	87.2	90.6	87.3	86.8
Review	96.1	95.8	96.8	94.7	96.2	97.6	95.5	96.0
Follow-up	99.9	98.0	93.8	95.3	98.0	93.0	99.2	96.0
<u>Capitalization</u>								
Preview	62.5	58.5	63.9	54.0	64.1	54.2	63.1	60.3
Review	88.2	83.9	85.1	84.4	91.8	82.1	85.0	86.1
Follow-up	91.0	89.0	88.3	79.1	76.1	84.1	87.7	84.8
<u>Grammar</u>								
Preview	12.3	49.0	67.1	61.0	66.2	67.4	65.4	65.2
Review	12.8	85.0	84.3	74.8	83.2	78.5	75.6	78.3
Follow-up	9.2	- -	85.5	76.8	76.0	74.3	82.5	80.6

Table A4-6

(Continued)

Module Achievement--Percent Correct

<u>Module/Test</u>	<u>Fort Bragg</u>	<u>Fort Campbell</u>	<u>Fort Carson</u>	<u>Fort Hood</u>	<u>Fort Lewis</u>	<u>Fort Ord</u>	<u>Fort Polk</u>	<u>All Posts</u>
<u>Punctuation</u>								
Preview	55.4	47.7	46.7	37.5	52.2	50.3	48.8	48.4
Review	86.2	81.1	84.1	81.4	92.0	83.2	84.1	85.3
Follow-up	85.0	75.0	83.2	78.0	73.6	76.8	82.9	79.6
<u>Spelling</u>								
Preview	73.7	58.5	64.3	64.0	73.7	73.8	68.9	69.3
Review	87.3	76.5	83.9	83.4	89.7	78.9	84.3	85.9
Follow-up	88.2	- -	84.6	84.9	79.3	92.7	85.2	85.0
<u>Locators &amp; Visuals</u>								
Preview	84.5	83.9	85.7	79.2	88.5	85.7	87.6	84.6
Review	88.5	88.9	89.9	89.4	92.4	88.6	90.2	89.6
Follow-up	85.0	90.0	96.7	90.8	95.0	92.0	96.4	93.2
<u>Text</u>								
Preview	70.4	66.0	61.8	61.3	68.3	62.3	65.7	65.1
Review	87.6	78.5	85.0	83.7	90.9	80.6	88.1	85.8
Follow-up	94.3	- -	81.3	89.8	82.0	80.8	87.4	85.3
<u>Vocabulary</u>								
Preview	80.2	78.5	73.7	72.5	79.8	74.5	76.5	76.7
Review	91.4	89.5	91.5	89.6	93.9	91.3	90.6	91.0
Follow-up	98.5	81.6	95.0	89.6	82.0	91.0	84.2	90.3

Table A4-7

## Percent of Students Reporting Reasons for Leaving BSEP II Courses

Course/Reason	Fort Bragg N=577	Fort Campbell N=751	Fort Carson N=485	Fort Hood N=581	Fort Lewis N=573	Fort Ord N=311	Fort Polk N=435	All Posts N=3713
<u>Mathematics Course</u>								
Completed	36	5	39	41	39	9	59	32
Administrative	1	1	0	3	0	3	1	1
Recalled by Unit	2	1	48	3	1	1	6	8
Maximum Hours	37	29	2	22	32	72	0	26
Combinations	1	1	0	1	1	3	0	1
None Reported	23	65	10	30	28	13	35	32
<u>Language Course</u>								
Completed	19	1	25	18	18	5	52	18
Administrative	1	0	1	2	1	1	1	1
Recalled by Unit	1	1	43	2	0	1	6	7
Maximum Hours	34	25	2	24	8	63	0	21
Combinations	0	1	1	1	0	1	0	1
None Reported	45	74	29	53	74	31	42	53
<u>Reading Course</u>								
Completed	29	6	34	29	29	47	35	27
Administrative	1	0	0	2	1	2	1	1
Recalled by Unit	1	1	33	2	0	1	4	6
Maximum Hours	21	24	1	14	4	13	0	12
Combinations	1	- -	1	1	0	1	0	1
None Reported	47	69	31	52	67	37	60	54

Table A4-8

Extent to Which Grade Level Standards Were Met for the TABE Vocabulary Test

Primary Target Soldiers				
Post	<u>N</u>	Percent Attaining 10.5 or Above Grade Level	Percent Attaining 9.0-10.4 Grade Level	Percent Attaining 9.0 or Above Grade Level
All Posts	910	20	40	60
Fort Bragg	17	6	53	59
M-3/D-4	276	35	41	76
Fort Campbell	191	49	27	76
Fort Carson	150	5	41	46
Fort Hood	185	21	36	57
Fort Lewis	136	4	47	51
Fort Ord	116	6	30	36
Fort Polk	115	26	67	93



Table A4-9

Extent to Which Grade Level Standards Were Met for the TABE  
Comprehension Test

Post	Primary Target Soldiers			
	<u>N</u>	Percent Attaining 10.5 or Above Grade Level	Percent Attaining 9.0-10.4 Grade Level	Percent Attaining 9.0 or Above Grade Level
All Posts	1051	26	38	64
Fort Bragg	26	35	42	77
M-3/D-4	198	31	38	69
Fort Campbell	211	31	35	66
Fort Carson	164	16	33	49
Fort Hood	225	26	36	62
Fort Lewis	163	23	40	63
Fort Ord	137	13	37	50
Fort Polk	125	47	51	98

Table A4-10

Extent to Which Grade Level Standards Were Met for the TABE Reading Test

Post	N	Primary Target Soldiers		
		Percent Attaining 10.5 or Above Grade Level	Percent Attaining 9.0-10.4 Grade Level	Percent Attaining 9.0 or Above Grade Level
All Posts	897	22	41	63
Fort Bragg	19	16	53	69
M-3/D-4	261	32	47	79
Fort Campbell	180	40	37	77
Fort Carson	147	7	43	50
Fort Hood	213	25	38	63
Fort Lewis	144	10	48	58
Fort Ord	118	5	33	38
Fort Polk	76	46	47	93

Table A4-11

Extent to Which Grade Level Standards Were Met for the TABE  
Computation Test

Post	N	Primary Target Soldiers		
		Percent Attaining 10.5 or Above Grade Level	Percent Attaining 9.0-10.4 Grade Level	Percent Attaining 9.0 or Above Grade Level
All Posts	1713	36	30	66
Fort Bragg	30	40	30	70
M-3/D-4	416	58	22	80
Fort Campbell	374	26	32	58
Fort Carson	267	26	25	51
Fort Hood	314	41	28	69
Fort Lewis	263	38	29	67
Fort Ord	223	23	28	51
Fort Polk	242	66	33	99

Table A4-12

Extent to Which Grade Level Standards Were Met for the TABE  
Concepts and Problems Test

Post	<u>N</u>	Primary Target Soldiers		
		Percent Attaining 10.5 or Above Grade Level	Percent Attaining 9.0-10.4 Grade Level	Percent Attaining 9.0 or Above Grade Level
All Posts	1648	24	40	64
Fort Bragg	35	34	46	80
M-3/D-4	409	33	40	73
Fort Campbell	370	19	39	58
Fort Carson	237	9	38	47
Fort Hood	317	26	41	67
Fort Lewis	254	31	39	70
Fort Ord	227	5	40	45
Fort Polk	208	56	44	100

Table A4-13

Extent to Which Grade Level Standards Were Met for the TABE  
Mathematics Test

Post	Primary Target Soldiers			
	<u>N</u>	Percent Attaining 10.5 or Above Grade Level	Percent Attaining 9.0-10.4 Grade Level	Percent Attaining 9.0 or Above Grade Level
All Posts	1691	29	34	63
Fort Bragg	35	43	37	80
M-3/D-4	435	49	28	77
Fort Campbell	387	21	37	58
Fort Carson	264	16	35	51
Fort Hood	338	37	31	68
Fort Lewis	272	35	34	69
Fort Ord	228	11	35	46
Fort Polk	167	65	34	99

Table A4-14

Extent to Which Grade Level Standards Were Met for the TABE  
Language Mechanics and Expression Test

Post	Primary Target Soldiers			
	<u>N</u>	Percent Attaining 10.5 or Above Grade Level	Percent Attaining 9.0-10.4 Grade Level	Percent Attaining 9.0 or Above Grade Level
All Posts	1503	18	30	48
Fort Bragg	34	21	38	59
M-3/D-4	373	18	29	47
Fort Campbell	333	8	25	33
Fort Carson	248	10	24	34
Fort Hood	239	18	27	45
Fort Lewis	230	17	29	46
Fort Ord	205	8	29	37
Fort Polk	214	53	46	99

Table A4-15

Extent to Which Grade Level Standards Were Met for the TABE  
Spelling Test

Post	<u>N</u>	Primary Target Soldiers		
		Percent Attaining 10.5 or Above Grade Level	Percent Attaining 9.0-10.4 Grade Level	Percent Attaining 9.0 or Above Grade Level
All Posts	1357	8	18	26
Fort Bragg	35	6	20	26
M-3/D-4	314	15	17	32
Fort Campbell	323	7	15	22
Fort Carson	238	3	14	17
Fort Hood	197	7	11	18
Fort Lewis	218	10	14	24
Fort Ord	180	4	14	18
Fort Polk	166	20	47	67

Table A4-16

Extent to Which Grade Level Standards Were Met for the TABE  
Total Battery

Post	N	Primary Target Soldiers		
		Percent Attaining 10.5 or Above Grade Level	Percent Attaining 9.0-10.4 Grade Level	Percent Attaining 9.0 or Above Grade Level
All Posts	823	8	42	50
Fort Bragg	36	19	56	75
M-3/D-4	401	28	42	70
Fort Campbell	297	11	46	57
Fort Carson	226	5	39	44
Fort Hood	47	4	38	42
Fort Lewis	Data not reported			
Fort Ord	212	6	38	44
Fort Polk	5	60	40	100



Table A4-17

Percent of Primary Target Students Achieving TABE  
Posttest Scores of 9.0 or Above

Percent of Posttest Scores at or Above 9.0 Grade Level								
Entry Scores Below 9.0	Vocab. N=910	Compre. N=1051	Read. N=897	Comput. N=1713	Con./ Prob. N=1648	Total Math N=1691	Mech. Expr. N=1503	Spell. N=1357
5.0 - 5.9	2	4	1	3	2	1	5	3
6.0 - 6.9	7	3	5	11	6	6	7	2
7.0 - 7.9	22	22	22	25	22	27	14	10
8.0 - 8.9	29	35	34	27	33	30	21	11
5.0 - 8.9	60	64	62	66	64	64	48	26

Table A4-18

Percent of TABE Grade Level Gains in Relation  
to Time Between TABE Pretests and Class

TABE Test and Time	Negative Gains	Zero Gains	Positive Gains	<u>N</u>
<b>Vocabulary</b>				
Immediate	30	9	61	649
1-6 months	27	9	64	941
7 months and over	23	6	71	248
<b>Comprehension</b>				
Immediate	23	3	74	649
1-6 months	24	2	74	942
7 months and over	23	1	76	248
<b>Reading</b>				
Immediate	16	5	79	639
1-6 months	17	5	78	923
7 months and over	16	4	80	227
<b>Computation</b>				
Immediate	6	3	91	685
1-6 months	5	3	92	1023
7 months and over	8	2	90	285
<b>Concepts &amp; Prob.</b>				
Immediate	12	3	85	681
1-6 months	9	3	88	1016
7 months and over	10	3	87	270
<b>Mathematics</b>				
Immediate	5	2	93	672
1-6 months	3	2	95	1000
7 months and over	8	2	90	245
<b>Mechanics &amp; Expr.</b>				
Immediate	18	3	79	640
1-6 months	17	3	80	895
7 months and over	13	4	83	259
<b>Spelling</b>				
Immediate	28	11	61	623
1-6 months	30	10	60	859
7 months and over	22	11	67	236

Table A4-19

Percent of TABE Grade Level Gains by Post

<u>TABE Test and Post</u>	<u>Negative Gains</u>	<u>Zero Gains</u>	<u>Positive Gains</u>	<u>N</u>
<u>Vocabulary</u>				
All Posts	28	8	64	1985
Bragg	39	2	59	44
Campbell	18	12	70	515
Carson	39	9	52	313
Hood	22	5	73	305
Lewis	41	7	52	349
Ord	37	7	56	246
Polk	12	8	80	213
<u>Comprehension</u>				
All Posts	23	3	74	1984
Bragg	9	0	91	44
Campbell	18	5	77	512
Carson	37	2	61	315
Hood	20	0	80	305
Lewis	23	4	73	349
Ord	33	1	66	246
Polk	10	3	87	213
<u>Reading</u>				
All Posts	16	5	79	1918
Bragg	9	0	91	44
Campbell	8	5	87	509
Carson	26	6	68	316
Hood	11	3	86	307
Lewis	21	5	74	349
Ord	24	5	71	245
Polk	11	7	82	148
<u>Computation</u>				
All Posts	5	3	92	2151
Bragg	2	0	98	44
Campbell	6	5	89	536
Carson	10	1	89	319
Hood	6	1	93	362
Lewis	5	4	91	357
Ord	4	1	95	247
Polk	1	2	97	286

(Continued)

Table A4-19

Percent of TABE Grade Level Gains by Post

<u>TABE Test and Post</u>	<u>Negative Gains</u>	<u>Zero Gains</u>	<u>Positive Gains</u>	<u>N</u>
<u>Concepts &amp; Problems</u>				
All Posts	10	3	87	2124
Bragg	9	0	91	44
Campbell	12	4	84	537
Carson	19	4	77	317
Hood	8	1	91	362
Lewis	9	4	87	358
Ord	8	5	87	247
Polk	2	1	97	259
<u>Mathematics</u>				
All Posts	4	2	94	2061
Bragg	0	0	100	44
Campbell	3	3	94	532
Carson	8	2	90	320
Hood	4	1	95	363
Lewis	4	2	94	357
Ord	3	2	95	246
Polk	0	1	99	199
<u>Mechanics &amp; Expression</u>				
All Posts	17	3	80	1922
Bragg	11	0	89	44
Campbell	23	4	73	466
Carson	18	2	80	311
Hood	14	5	81	266
Lewis	21	4	75	337
Ord	15	3	82	244
Polk	2	2	96	254
<u>Spelling</u>				
All Posts	28	10	62	1840
Bragg	30	4	66	44
Campbell	28	12	60	455
Carson	26	14	60	314
Hood	35	12	53	266
Lewis	29	7	64	336
Ord	37	11	52	244
Polk	8	5	87	181

Table A4-20

Mean Grade Level Scores on TABE Tests

Post and Test	Pretest			Posttest		
	N	Mean Grade Level	Standard Deviation	N	Mean Grade Level	Standard Deviation
<u>Vocabulary Test</u>						
All Posts	2255	9.6	2.1	1944	10.3	1.8
Fort Bragg	42	9.5	2.2	44	10.0	1.3
Fort Bragg M-3/D-4	468	8.5	1.3	468	10.6	1.7
Fort Campbell	541	9.9	2.1	515	11.4	1.7
Fort Carson	319	9.5	2.0	318	9.8	1.8
Fort Hood	378	9.2	2.0	309	9.9	1.7
Fort Lewis	367	9.7	1.9	349	9.9	1.6
Fort Ord	247	9.3	2.1	246	9.6	1.7
Fort Polk	361	9.9	2.1	213	10.8	1.4
<u>Comprehension Test</u>						
All Posts	2256	9.2	1.8	1994	10.2	1.8
Fort Bragg	42	8.5	1.7	44	10.6	1.4
Fort Bragg M-3/D-4	468	8.8	1.3	468	10.5	1.6
Fort Campbell	542	9.4	1.9	515	10.7	1.7
Fort Carson	319	9.1	1.8	318	9.7	1.9
Fort Hood	377	8.7	1.7	309	9.8	1.8
Fort Lewis	367	9.2	1.8	349	10.2	1.8
Fort Ord	247	8.9	1.7	246	9.6	1.7
Fort Polk	362	9.5	1.9	213	10.8	1.2
<u>Reading Test</u>						
All Posts	2249	9.3	1.7	1931	10.3	1.6
Fort Bragg	42	8.9	1.7	44	10.3	1.2
Fort Bragg M-3/D-4	468	8.6	1.2	468	10.6	1.4
Fort Campbell	540	9.6	1.7	514	11.1	1.5
Fort Carson	319	9.2	1.7	318	9.8	1.6
Fort Hood	378	8.9	1.7	309	9.9	1.5
Fort Lewis	367	9.4	1.7	349	10.1	1.5
Fort Ord	246	9.0	1.6	246	9.6	1.5
Fort Polk	357	9.7	1.8	151	10.9	1.2

Table A3-7

Educational Credentials of BSEP II Students

---

Percent With or Without Credentials  
(N=2669)

---

No High School Diploma		Have High School Diploma	
18%		82%	
No GED	Have GED	Have GED	No GED
9%	9%	3%	79%

---

Table A3-8

Educational Credentials of BSEP II Students by Post

Post	Percent by Credential Group				Total	
	No HSD No GED	No HSD Have GED	HSD Have GED	HSD No GED	<u>N</u>	%
All Posts	9%	9%	3%	79%	2669	100%
Fort Bragg	5%	11%	3%	81%	423	16%
Fort Campbell	7%	6%	3%	85%	743	28%
Fort Carson	6%	8%	2%	84%	411	15%
Fort Hood	11%	10%	3%	76%	326	12%
Fort Lewis	12%	11%	5%	71%	274	10%
Fort Ord	10%	13%	3%	74%	179	7%
Fort Polk	16%	11%	4%	70%	313	12%
<u>N</u>	233	242	81	2113		

Table A4-20

(Continued)

Mean Grade Level Scores on TABE Tests

Post and Test	Pretest			Posttest		
	N	Mean Grade Level	Standard Deviation	N	Mean Grade Level	Standard Deviation
<u>Computation Test</u>						
All Posts	2253	7.9	1.7	2157	10.4	2.1
Fort Bragg	42	7.8	1.2	44	11.2	1.9
Fort Bragg M-3/D-4	469	7.5	1.1	467	11.1	2.0
Fort Campbell	542	8.3	1.8	537	10.4	2.1
Fort Carson	320	7.7	1.6	320	9.7	2.2
Fort Hood	377	7.6	1.4	363	10.3	2.2
Fort Lewis	366	8.1	1.8	358	10.6	2.1
Fort Ord	247	7.2	1.3	247	9.6	1.9
Fort Polk	359	8.3	1.7	288	11.6	1.5
<u>Concepts &amp; Prob. Test</u>						
All Posts	2252	8.2	1.5	2132	9.9	1.8
Fort Bragg	42	8.1	1.4	44	10.4	1.5
Fort Bragg M-3/D-4	468	7.8	1.2	468	10.1	1.8
Fort Campbell	542	8.5	1.6	539	9.9	1.9
Fort Carson	318	8.2	1.6	320	9.2	1.8
Fort Hood	376	7.8	1.3	364	9.8	1.9
Fort Lewis	366	8.4	1.6	358	10.2	1.7
Fort Ord	247	7.5	1.1	247	8.8	1.5
Fort Polk	361	8.6	1.6	260	11.1	1.3
<u>Mathematics Test</u>						
All Posts	2247	8.0	1.4	2070	10.3	1.9
Fort Bragg	42	7.9	1.0	44	10.9	1.7
Fort Bragg M-3/D-4	469	7.5	1.0	467	10.5	1.9
Fort Campbell	540	8.3	1.5	538	10.1	1.9
Fort Carson	320	7.8	1.3	320	9.4	1.8
Fort Hood	378	7.7	1.9	364	10.0	2.0
Fort Lewis	366	8.2	1.5	358	10.3	1.8
Fort Ord	246	7.4	1.0	247	9.1	1.4
Fort Polk	355	8.4	1.4	199	11.3	1.2



(Continued)

Table A4-20

Mean Grade Level Scores on TABE Tests

Post and Test	Pretest			Posttest		
	N	Mean Grade Level	Standard Deviation	N	Mean Grade Level	Standard Deviation
<u>Mech./Expr. Test</u>						
All Posts	2246	8.0	1.9	1940	9.3	1.9
Fort Bragg	42	7.7	1.9	44	9.9	1.8
Fort Bragg M-3/D-4	467	7.3	1.7	467	9.5	1.9
Fort Campbell	538	8.3	2.0	471	9.1	1.8
Fort Carson	317	7.7	1.8	318	8.8	1.9
Fort Hood	377	7.7	2.0	270	8.9	2.0
Fort Lewis	363	8.3	1.9	339	9.4	1.9
Fort Ord	247	7.5	1.5	244	8.8	1.6
Fort Polk	362	8.5	2.1	254	10.8	1.3
<u>Spelling Test</u>						
All Posts	2242	8.1	2.4	1853	8.6	2.4
Fort Bragg	42	7.4	2.1	44	8.3	2.1
Fort Bragg M-3/D-4	465	7.9	2.0	468	9.1	2.4
Fort Campbell	537	8.3	2.5	459	8.6	2.5
Fort Carson	318	7.6	2.2	318	8.2	2.3
Fort Hood	376	7.9	2.4	267	8.1	2.3
Fort Lewis	362	8.3	2.3	339	9.1	2.4
Fort Ord	247	7.9	2.2	244	8.3	2.3
Fort Polk	360	8.6	2.4	182	9.3	2.0
<u>Total Battery</u>						
All Posts	1623	8.2	1.3	1103	9.4	1.5
Fort Bragg	42	7.9	1.1	44	9.8	1.6
Fort Bragg M-3/D-4	459	7.6	1.1	467	10.0	1.5
Fort Campbell	529	8.5	1.4	436	9.8	1.5
Fort Carson	279	8.0	1.2	317	9.1	1.4
Fort Hood	216	7.8	1.0	51	8.7	1.2
Fort Lewis	Not reported					
Fort Ord	231	7.7	.9	243	8.9	1.1
Fort Polk	326	8.6	1.3	12	11.0	1.1

Table A4-21

## Mean Grade Level Gains on TABE Tests

TABE Subtest	Fort Bragg M-3/D-4		Fort Bragg		Fort Campbell		Fort Carson		Fort Hood		Fort Lewis		Fort Ord		Fort Polk		All Posts	
	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain
Vocabulary	464	2.1	44	.6	515	1.5	313	.3	305	1.1	349	.3	246	.3	213	1.7	1985	.9
Comprehension	463	1.7	44	2.1	512	1.3	315	.7	305	1.4	349	1.1	246	.8	213	1.9	1984	1.2
Total Reading	465	2.0	44	1.5	509	1.6	316	.4	307	1.4	349	.8	245	.6	148	1.8	1918	1.1
Computation	466	3.7	44	3.4	536	2.1	319	2.0	362	2.9	357	2.5	247	2.3	286	3.6	2151	2.5
Concepts & Problems	463	2.2	44	1.0	531	1.4	317	1.1	362	2.0	358	1.7	247	1.3	259	2.9	2124	1.7
Total Mathematics	465	3.0	44	3.0	532	1.8	320	1.6	363	2.4	357	2.1	246	1.7	199	3.2	2064	2.1
Mech. & Expression	446	1.9	44	2.2	466	.9	311	1.1	266	1.7	337	1.1	244	1.3	254	3.1	1922	1.5
Spelling	446	1.2	44	.9	455	.6	314	.6	266	.5	336	.8	244	.4	181	2.0	1840	.7
Total Battery	457	2.4	44	1.9	429	1.5	275	1.2	48	1.4	Not Reported	227	1.2	12	2.0	1035	1.3	

Table A4-22

Equivalence of CLOZE Test Forms

Form	Used As A Pretest				Used As A Posttest			
	<u>N</u>		Percent Correct		<u>N</u>		Percent Correct	
	MGA	FLX	MGA	FLX	MGA	FLX	MGA	FLX
Form A	108	1	22	66	61	0	21	0
Form B	104	11	38	40	96	0	28	0
Form C	89	0	33	0	107	14	52	49
Total	301	12	31	42	264	14	36	14

Table A4-23

Percent Correct Gains on CLOZE Reading Tests

Pretest Form		Posttest					
		Form					
		A		B		C	
	<u>N</u>	<u>N</u>	Mean Gain	<u>N</u>	Mean Gain	<u>N</u>	Mean Gain
A	87	19	5.4	46	8.3	22	14.9
B	94	11	-6.0	18	6.2	65	7.4
C	81	30	-6.4	32	-4.4	19	1.8

Table A5-1

## Mean Grade Level Gains by Post in Relation to Direct MGA Instruction

TABE Subtest and MGA Instructional Status	Fort Bragg M-3/D-4		Fort Bragg		Fort Campbell		Fort Carson		Fort Hood		Fort Lewis		Fort Ord		Fort Polk		All Posts	
	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain
<b>Vocabulary Test</b>																		
Below 9.0 - No	180	2.5	-	-	2	3.4	26	.8	18	1.0	62	1.4	13	1.4	10	2.5	131	1.3
Below 9.0 - Yes	196	2.4	19	1.9	190	2.9	124	1.0	165	2.0	74	1.0	103	.9	105	2.5	780	1.9
Above 9.0 - No	150	1.7	1	1.1	175	.6	108	-.3	63	-.2	135	-.3	99	-.4	74	.5	655	.0
Above 9.0 - Yes	138	1.1	24	-.5	148	.9	55	-.2	59	.2	78	-.3	31	-.2	24	1.2	419	.3
<b>Comprehensive Test</b>																		
Below 9.0 - No	49	2.2	7	1.1	7	1.9	37	.6	33	1.2	99	1.8	15	1.6	10	2.4	208	1.5
Below 9.0 - Yes	148	2.2	21	2.9	203	2.1	127	1.3	189	1.8	64	1.9	122	1.2	115	3.0	841	1.9
Above 9.0 - No	190	1.4	3	1.8	176	.9	108	.0	51	.4	117	.3	78	.2	64	.4	597	.4
Above 9.0 - Yes	76	1.3	13	1.9	126	.8	43	.4	32	1.0	69	.6	31	.2	24	.8	338	.7
<b>Reading Test</b>																		
Below 9.0 - No	33	2.1	-	-	1	1.3	19	.7	19	1.1	68	1.5	9	1.6	4	2.8	120	1.4
Below 9.0 - Yes	229	2.2	21	2.2	178	2.4	128	1.0	192	1.8	76	1.2	109	1.0	71	3.0	775	1.7
Above 9.0 - No	188	1.7	1	.8	127	1.0	104	.0	51	.2	121	.3	76	.1	51	.3	531	.4
Above 9.0 - Yes	15	1.8	22	.8	203	1.3	65	-.5	45	1.0	84	.5	51	.4	22	1.2	492	.8
<b>Computation Test</b>																		
Below 9.0 - No	78	3.2	-	-	-	-	1	-3.2	2	1.1	1	1.8	17	2.2	5	3.5	26	2.2
Below 9.0 - Yes	337	3.9	32	3.4	373	2.2	266	2.2	313	3.0	262	2.7	206	2.5	237	3.9	1689	2.7
Above 9.0 - No	27	2.8	-	-	11	1.0	19	-.8	3	.2	8	-.4	8	.4	13	.7	62	.6
Above 9.0 - Yes	24	2.5	12	3.2	152	1.7	33	1.9	44	2.4	86	1.8	16	1.5	31	2.2	374	1.9
<b>Concepts &amp; Prob. Test</b>																		
Below 9.0 - No	150	2.0	4	1.3	194	1.1	156	1.0	54	1.0	57	1.7	120	1.1	10	2.6	595	1.2
Below 9.0 - Yes	256	2.5	33	.9	176	2.0	81	1.6	264	2.3	198	2.1	107	1.5	198	3.3	1057	2.2
Above 9.0 - No	20	2.1	-	-	35	.7	45	.1	6	1.3	25	.4	7	.8	22	.8	140	.5
Above 9.0 - Yes	37	1.9	7	1.4	132	1.3	35	1.1	38	1.7	78	1.2	13	1.8	29	1.8	332	1.3

(Continued)

Table A5-1

Mean Grade Level Gains by Post in Relation to Direct MGA Instruction

TABE Subtest and MGA Instructional Status	Fort Bragg		Fort M-3/D-4		Fort Bragg		Fort Campbell		Fort Carson		Fort Hood		Fort Lewis		Fort Ord		Fort Polk		All Posts		
	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	N	Gain	
<b>Mathematics Test</b>																					
Below 9.0 - No	82	2.7	-	-	2	.4	-	-	2	.4	1	-.8	1	2.4	17	1.9	2	2.6	23	1.8	
Below 9.0 - Yes	351	3.1	37	3.0	385	1.8	385	1.6	262	1.6	337	2.5	271	2.3	211	1.7	165	3.5	1668	2.2	
Above 9.0 - No	22	2.7	-	-	3	.0	3	.9	16	.9	1	-.9	8	-.8	7	.9	11	.8	46	.5	
Above 9.0 - Yes	10	2.7	7	3.1	144	1.7	144	2.0	40	2.0	24	2.4	77	1.5	11	2.1	21	2.1	324	1.8	
<b>Mech. &amp; Expr. Test</b>																					
Below 9.0 - No	156	2.1	1	.5	260	1.1	260	.9	87	.9	57	1.0	132	1.3	42	.9	7	1.7	586	1.1	
Below 9.0 - Yes	199	2.4	35	2.5	72	1.5	72	1.7	158	1.7	178	2.2	98	1.9	163	1.7	207	3.5	911	2.3	
Above 9.0 - No	60	-	-	-	119	.1	119	.4	37	.4	25	.1	54	.1	27	-.1	35	.7	297	.1	
Above 9.0 - Yes	31	1.7	8	.9	15	.5	15	.5	29	.5	6	.2	53	.4	12	.6	5	1.6	128	.5	
<b>Spelling Test</b>																					
Below 9.0 - No	135	1.4	2	-.6	316	.8	316	.6	90	.6	112	.8	130	1.1	162	.5	20	2.1	832	.8	
Below 9.0 - Yes	163	1.1	35	1.1	6	.6	6	.9	147	.9	85	1.0	88	1.4	18	1.1	146	2.1	525	1.4	
Above 9.0 - No	78	1.2	-	-	133	.0	133	.0	54	.0	58	-.7	81	.1	56	-.2	15	.6	397	-.1	
Above 9.0 - Yes	70	.8	7	.2	-	-	-	.5	23	.5	11	-1.4	37	.3	8	.4	-	-	86	.1	

Table A6-1

Post-BSEP TABE Vocabulary Subtest Scores  
by Post-BSEP GT Scores

Post-BSEP TABE Grade Level Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 9.0	8.9% (16)	1.7% (3)	10.6% (19)
>=9.0	35.6% (64)	53.9% (97)	89.4% (161)
Total	44.4% (80)	55.6% (100)	100% (180)

Table A6-2

Post-BSEP TABE Comprehension Subtest Scores  
by Post-BSEP GT Scores

Post-BSEP TABE Grade Level Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 9.0	8.2% (15)	2.7% (5)	10.9% (20)
>=9.0	35.9% (66)	53.3% (98)	89.1% (164)
Total	44.0% (81)	56.0% (103)	100% (184)

Table A6-3

Post-BSEP TABE Total Reading Subtest Scores  
by Post-BSEP GT Scores

Post-BSEP TABE Grade Level Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 9.0	8.4% (14)	.6% (1)	9.0% (15)
>=9.0	33.1% (55)	57.8% (96)	91.0% (151)
Total	41.6% (69)	58.4% (97)	100% (166)

Table A6-4

Post-BSEP TABE Computation Subtest Scores  
by Post-BSEP GT Scores

Post-BSEP TABE Grade Level Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 9.0	9.2% (18)	1.5% (3)	10.8% (21)
>=9.0	32.3% (63)	56.9% (111)	89.2% (174)
Total	41.5% (81)	58.5% (114)	100% (195)



Table A6-5

Post-BSEP TABE Concepts and Problems Subtest Scores  
by Post-BSEP GT Scores

Post-BSEP TABE Grade Level Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 9.0	13.5% (26)	4.2% (8)	17.6% (34)
>=9.0	29.5% (57)	52.9% (102)	82.4% (159)
Total	43.0% (83)	57.0% (110)	100% (193)

Table A6-6

Post-BSEP TABE Total Math Subtest Scores  
by Post-BSEP GT Scores

Post-BSEP TABE Grade Level Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 9.0	12.6% (23)	2.7% (5)	15.3% (28)
>=9.0	30.1% (55)	54.6% (100)	84.7% (155)
Total	42.6% (78)	57.4% (105)	100% (183)

Table A6-7

Post-BSEP TABE Mechanics & Expression Subtest Scores  
by Post-BSEP GT Scores

Post-BSEP TABE Grade Level Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 9.0	19.2% (35)	16.5% (30)	35.7% (65)
>=9.0	25.3% (46)	39.0% (71)	64.3% (117)
Total	44.5% (81)	55.5% (101)	100% (182)

Table A6-8

Post-BSEP TABE Spelling Subtest Scores  
by Post-BSEP GT Scores

Post-BSEP TABE Grade Level Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 9.0	28.3% (47)	29.5% (49)	57.8% (96)
>=9.0	15.7% (26)	26.5% (44)	42.2% (70)
Total	44.0% (73)	56.0% (93)	100% (166)

Table A6-9

Post-BSEP TABE Total Battery Scores  
by Post-BSEP GT Scores

Post-BSEP TABE Grade Level Score	Post-BSEP GT Score		Total
	< 100	>=100	
< 9.0	22.1% (29)	5.3% (7)	27.5% (36)
>=9.0	18.3% (24)	54.2% (71)	72.5% (95)
Total	40.5% (53)	59.5% (78)	100% (131)

**APPENDIX B**

**CLASSROOM OBSERVATION**

**SHEET**

BSEP - II

CLASSROOM OBSERVATION SHEET

Subject \_\_\_\_\_  
Instructor \_\_\_\_\_  
No. of Students \_\_\_\_\_ Room \_\_\_\_\_

1 Time	2 Materials a) BSEP II materials (MGA) b) commercial texts c) military material d) teacher made materials e) realia f) blackboard	3 Activities a) individual b) group c) paired	4 Teacher Behavior a) keeps records, organizes materials b) assigns work c) instructs students d) uses incentives e) corrects papers	5 Student Behavior a) works on course materials b) waits for papers to be corrected or for teacher's assistance c) works on non-course materials	6 Class Leader Behavior a) corrects papers b) fills in chart c) helps students d) does own work

Check each occurrence:  
Student waits for teacher or class leader \_\_\_\_\_  
Student asks for help from another student \_\_\_\_\_  
Student not attending \_\_\_\_\_  
  
Teacher checks papers \_\_\_\_\_  
Teacher gives attention to individual student \_\_\_\_\_  
Teacher gives attention to group of students \_\_\_\_\_  
Teachers uses incentive \_\_\_\_\_  
Class leader helps student \_\_\_\_\_

## Questionnaires

**Soldier Performance Rating**  
**BSEP II - 11/84**

Name of soldier being rated \_\_\_\_\_ Army Post \_\_\_\_\_  
 (last) (first)

Name of supervisor \_\_\_\_\_ Date \_\_\_\_\_

How does this soldier perform each reading, writing, or mathematics task compared with all soldiers you supervise?

	Better than most soldiers	As well as most soldiers	Not as well as most soldiers but gets by	Performs inadequately	Not observed
<b>Reading</b>					
● reads authorization, identifies, and permits entry (Guard Duty)					
● reads manuals and SOP and demonstrates comprehension by performing required tasks					
● interprets diagrams, charts, schematics, tables, graphs, and maps					
● locates information in tables, indexes, and manuals					
● reads markers (NBC)					
● sends radio messages using radio procedures, prowords, and phonetic alphabet and numbers					
● OVERALL, performs all reading tasks required for duty performance					
<b>Writing</b>					
● takes notes when needed					
● writes short descriptive paragraphs					
● completes forms					
● marks equipment					
● names terrain features, determines location					
● writes dose rate in rad/hr and labels markers with type of agent					
● OVERALL, performs all writing tasks required for duty performance					
<b>Using Mathematics</b>					
● estimates range using the binocular reticle/mil-relation method					
● determines the grid coordinates of a point on a military map					
● determines magnetic azimuth using a compass					
● OVERALL, performs all mathematics tasks required for duty performance					
<b>General Performance</b>			Noticeably improved	Slightly improved	No observed change
● Compared with his or her performance before taking BSEP, how do you rate this soldier's <u>attitude</u> and <u>motivation</u> since taking BSEP?					
● Compared with his or her performance before taking BSEP, how do you rate this soldier's <u>ability</u> to perform his or her job since taking BSEP?					



# U.S. Army Research Institute for the Behavioral and Social Sciences

The attached data collection form is for use by the U.S. Army Research Institute (ARI) and its contractor, the American Institutes for Research (AIR), in their efforts to study the BSEP II Program. This form is for teachers of the FORSCOM BSEP II Curriculum.

## BSEP II Questionnaire for Teachers

### Data required by the Privacy Act of 1974:

PRESCRIBING DIRECTIVE: AR 70-1  
AUTHORITY: 10 USC Sec 4503

#### PRINCIPAL PURPOSE(S):

The data collected with the attached form are to be used for research.

#### ROUTINE USES.

This is an experimental personnel data collection form developed by the U.S. Army Research Institute for the Behavioral and Social Sciences pursuant to its research mission as prescribed in AR 70-1. When identifiers (name or Social Security Number) are requested they are to be used for administrative and statistical control purposes only. Full confidentiality of the responses will be maintained in the processing of these data.

#### MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION:

Your participation in this research is strictly voluntary. Individuals are encouraged to provide complete and accurate information in the interests of the research, but there will be no effect on individuals for not providing all or any part of the information. This notice may be detached from the rest of the form and retained by the individual if so desired.

POST: Bragg \_\_\_\_\_  
Campbell \_\_\_\_\_  
Carson \_\_\_\_\_  
Hood \_\_\_\_\_  
Lewis \_\_\_\_\_  
Ord \_\_\_\_\_  
Polk \_\_\_\_\_

DATE: \_\_\_\_\_

### QUESTIONNAIRE FOR TEACHERS

1. What subjects do you teach? (Check all that apply)

Math \_\_\_\_\_  
Reading \_\_\_\_\_  
Language \_\_\_\_\_  
All of these \_\_\_\_\_

2. How is your program organized?

- I teach all three subjects simultaneously \_\_\_\_\_
- I teach each subject in a separate block of time \_\_\_\_\_
- I teach only one subject \_\_\_\_\_

3. How long have you taught in each of the following settings?

- BSEP programs using the McFANN, GRAY & Associates (MGA) curriculum months \_\_\_\_\_ weeks \_\_\_\_\_
- BSEP programs (other than the MGA curriculum) years \_\_\_\_\_ months \_\_\_\_\_
- Other military settings years \_\_\_\_\_ months \_\_\_\_\_
- Civilian setting years \_\_\_\_\_ months \_\_\_\_\_

4. Do you have a current state teacher certification in any state (elementary or secondary)?

Yes \_\_\_\_\_ No \_\_\_\_\_

5. Are you certified in any subject(s) you currently teach?

Yes \_\_\_\_\_ No \_\_\_\_\_

What subject(s)? \_\_\_\_\_

6. What degree(s) do you hold?

BA or BS \_\_\_\_\_ PhD \_\_\_\_\_  
MA or MS \_\_\_\_\_ other \_\_\_\_\_

7. What training did you receive to teach the MGA BSEP II curriculum?

- I attended the initial 2 or 3 day teacher training sessions presented by FORSCOM \_\_\_\_\_
- I attended a presentation by my BSEP coordinator \_\_\_\_\_
- I observed other teachers teaching the curriculum \_\_\_\_\_
- I received no specific training \_\_\_\_\_

8. If you attended it, did the orientation session and the packet of orientation materials presented by FORSCOM prepare you adequately to teach the new curriculum?

Yes \_\_\_\_\_ No \_\_\_\_\_ Didn't attend \_\_\_\_\_

9. How often are your classes observed by a supervisor?

\_\_\_\_\_ time(s) a month

10. During each visit, how long does the supervisor observe your class?

\_\_\_\_\_ minutes

11. Do you meet with military personnel from the units to discuss your students' progress in BSEP II?

- Yes, on a regular basis for all my students \_\_\_\_\_
- Yes, occasionally, for all my students \_\_\_\_\_
- Yes, only for problem students \_\_\_\_\_
- No, I have no contact with the unit personnel \_\_\_\_\_

12. How many students are currently enrolled in your class(es)?

Morning \_\_\_\_\_ Afternoon \_\_\_\_\_

13. What has been the average number of students in your class in the past?

\_\_\_\_\_ students

14. Do your students use the learning center or lab on a regular basis as part of BSEP II?

- Yes, for an hour each day \_\_\_\_\_
- Yes, for more than an hour each day \_\_\_\_\_
- Yes, 2 or 3 times a week \_\_\_\_\_
- Yes, once a week or less \_\_\_\_\_
- No, not at all \_\_\_\_\_

15. What instructional material do they use at the learning center?

- PLATO \_\_\_\_\_
  - Viking \_\_\_\_\_
  - Apple \_\_\_\_\_
  - MOS materials (developed by the military) \_\_\_\_\_
  - Other (write in) \_\_\_\_\_
- \_\_\_\_\_

16. Did you receive training on how to use military equipment or how to teach military subjects?

- Yes, I took an inservice program on military equipment and subjects \_\_\_\_\_
- Yes, I taught MOS classes \_\_\_\_\_
- Yes, I was in the military service \_\_\_\_\_
- Yes, I received other kinds of training \_\_\_\_\_
- No, I received no training \_\_\_\_\_

17. What is your opinion on the effectiveness of the Class Management System (CMS)? For each component in the CMS, place a check in the appropriate column.

	<u>Beneficial for Learning</u>	<u>Motivating</u>	<u>Pedagogically Sound</u>
<b>Activity Sheets:</b>			
Math	Yes ___ No ___	Yes ___ No ___	Yes ___ No ___
Reading	Yes ___ No ___	Yes ___ No ___	Yes ___ No ___
Language	Yes ___ No ___	Yes ___ No ___	Yes ___ No ___
Module Previews and Reviews	Yes ___ No ___	Yes ___ No ___	Yes ___ No ___
Class Leader	Yes ___ No ___	Yes ___ No ___	Yes ___ No ___
Incentive System	Yes ___ No ___	Yes ___ No ___	Yes ___ No ___
Wall Charts	Yes ___ No ___	Yes ___ No ___	Yes ___ No ___

18. How do you feel about the usefulness of the Student Record Sheets and the Module Record Sheets?

	<u>Agree</u>	<u>Disagree</u>
● They take a lot of my time to complete but they are worth the effort because they allow me to keep good records.	___	___
● They take a lot of my time but they are worth the effort because they show a student's progress.	___	___
● They take a lot of my time to complete and they are <u>not</u> worth the effort because they duplicate information I put on other record keeping forms.	___	___

19. Place a check mark indicating how well you feel the Module Previews diagnose students' deficiencies?

- 100% accuracy \_\_\_\_\_
- 75% accuracy \_\_\_\_\_
- 50% accuracy \_\_\_\_\_
- 25% accuracy \_\_\_\_\_
- 0% accuracy \_\_\_\_\_

20. What other methods or materials do you use to diagnose students' deficiencies? (Check all that apply)

- I ask them questions \_\_\_\_\_
- I write problems for them \_\_\_\_\_
- I use tests from other programs \_\_\_\_\_
- I develop informal tests \_\_\_\_\_
- None \_\_\_\_\_
- Other (write in) \_\_\_\_\_
- \_\_\_\_\_

21. Please answer 'Yes' or 'No' to the following questions.

	<u>YES</u>	<u>NO</u>
● The activity sheets give adequate instruction and require little explanation by me	_____	_____
● The activity sheets give adequate instruction but students still need more assistance	_____	_____
● In general, there is insufficient instruction on the activity sheets	_____	_____
● I have so much paperwork that I'm not able to give students individual attention	_____	_____
● The class leader takes care of grading, allowing me to help individual students	_____	_____
● Because students are working on different activity sheets at different times, it is impractical to group students	_____	_____
● There is a frequent backlog of activity sheets for the class leader to grade	_____	_____

22. Which of the following indicates how you usually manage class activities so that students receive attention when they need assistance? (Choose one)

- Students rarely need individual attention at the same time \_\_\_\_\_
- I group students together \_\_\_\_\_
- I ask the class leader to help students when I'm unavailable \_\_\_\_\_
- I ask students to wait until I'm available \_\_\_\_\_
- Because the program is so individualized, I'm unable to give the necessary attention \_\_\_\_\_
- I use other methods \_\_\_\_\_

23. How many times a day do you meet with a student to give individual instruction?

\_\_\_\_\_ times a day

24. What total percent does a student need to score on the activity sheets before you decide to give instruction?

\_\_\_\_\_ percent

25. Do BSEP students receive instruction for GT improvement?

Yes \_\_\_\_\_ No \_\_\_\_\_

26. If yes, how is it presented?

- to all students during last week of class as a separate unit of instruction \_\_\_\_\_
- integrated into course materials and presented throughout course \_\_\_\_\_
- to only students recommended for re-testing on the ASVAB \_\_\_\_\_
- I don't teach GT improvement materials. Students are sent to another teacher for GT tutoring after they complete BSEP \_\_\_\_\_

	<u>100%</u> <u>of the</u> <u>time</u>	<u>75%</u> <u>of the</u> <u>time</u>	<u>50%</u> <u>of the</u> <u>time</u>	<u>25%</u> <u>of the</u> <u>time</u>	<u>00%</u> <u>of the</u> <u>time</u>
27. How often do students make enough errors on the A activity sheets to require work on the B sheets?	_____	_____	_____	_____	_____
28. How often do you give instruction when students commit errors on the A activity sheet?	_____	_____	_____	_____	_____
29. How often do students make enough errors on the B activity sheets to require further instruction?	_____	_____	_____	_____	_____
30. How often is the instruction on the activity sheets insufficient or inadequate, requiring more help?	_____	_____	_____	_____	_____
31. How often do you have to give students supplementary materials?	_____	_____	_____	_____	_____
32. How often do you give instruction to the class as a whole?	_____	_____	_____	_____	_____
33. Do you use military materials (e.g., Soldier's Manual of Common Tasks, Army Regulations, Army publications) as teaching aids?					
Yes _____ No _____					
34. Do you have difficulty using military materials?					
● Yes, all of the time	_____				
● Yes, sometimes	_____				
● Yes, on rare occasions	_____				
● No, never	_____				



35. Who provides the following? (Check the appropriate column)

	Provided by <u>Ed Center</u>	<u>Contractor</u>	I Provide	Provided by <u>Unit</u>	<u>Don't Use</u>
● military materials	_____	_____	_____	_____	_____
● general educational materials	_____	_____	_____	_____	_____

36. Which materials are more effective? (Choose only one)

Activity sheets \_\_\_\_\_  
 Supplementary Materials \_\_\_\_\_

37. How do you think students learn best? (Choose only one)

- Self-paced instruction using activity sheets \_\_\_\_\_
- Individual instruction by the class leader \_\_\_\_\_
- Individual instruction by the teacher \_\_\_\_\_
- Group instruction by the teacher \_\_\_\_\_

38. Does the MGA BSEP II curriculum teach students the reading, math, and language skills they need to solve problems on the job?

Yes \_\_\_\_\_ No \_\_\_\_\_

39. What incentives do you use?

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

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# U.S. Army Research Institute for the Behavioral and Social Sciences

The attached data collection form is for use by the U.S. Army Research Institute (ARI) and its contractor, the American Institutes for Research (AIR), in their efforts to study the FORSCOM BSEP II Program. This form is for soldiers who took the FORSCOM BSEP II Program. It is to be used by soldiers during the final weeks of the BSEP II cycle.

## BSEP II Questionnaire for Soldiers

### Data required by the Privacy Act of 1974:

PRESCRIBING DIRECTIVE: AR 70-1  
AUTHORITY: 10 USC Sec 4503

#### PRINCIPAL PURPOSE(S):

The data collected with the attached form are to be used for research.

#### ROUTINE USES:

This is an experimental personnel data collection form developed by the U.S. Army Research Institute for the Behavioral and Social Sciences pursuant to its research mission as prescribed in AR 70-1. When identifiers (name or Social Security Number) are requested they are to be used for administrative and statistical control purposes only. Full confidentiality of the responses will be maintained in the processing of these data.

#### MANDATORY OR VOLUNTARY DISCLOSURE AND EFFECT ON INDIVIDUAL NOT PROVIDING INFORMATION.

Your participation in this research is strictly voluntary. Individuals are encouraged to provide complete and accurate information in the interests of the research, but there will be no effect on individuals for not providing all or any part of the information. This notice may be detached from the rest of the form and retained by the individual if so desired.

Questionnaire for Soldiers  
U.S. Army BSEP II Curriculum  
11/84



Last Name \_\_\_\_\_ First Name \_\_\_\_\_

Social Security Number \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Name of Army Post \_\_\_\_\_ Date \_\_\_\_\_

The Department of the Army has asked us at the American Institutes for Research in Washington, D.C. to study your BSEP II course. We want to know if the course is helping to improve your reading, math, or language skills. You will help us learn this information if you answer the questions in this survey.

It will not take you long to fill out this survey. You can answer most of the questions by checking the response that best fits your experience. Filling out this questionnaire is voluntary. If you fill it out, you will be helping us find out how much the BSEP II course helps students improve their reading, math, and language skills. This is not a test. The information you give us is for our use. It will not be given to your sergeant or included in your Army records.

1. What is the highest educational level you have attained? (Check one)

- completed elementary school \_\_\_\_\_
- GED certificate \_\_\_\_\_
- high school graduate \_\_\_\_\_
- some college, no degree \_\_\_\_\_
- Associate degree (two-year college) \_\_\_\_\_
- Bachelor's degree (four-year college) \_\_\_\_\_

2. Counting this week, for how many weeks have you been attending BSEP II classes during this cycle?

1 \_\_\_\_\_, 2 \_\_\_\_\_, 3 \_\_\_\_\_, 4 \_\_\_\_\_, 5 \_\_\_\_\_, 6 \_\_\_\_\_, 7 \_\_\_\_\_, 8 \_\_\_\_\_

3. How many hours of classes have you missed?

0 \_\_\_\_, 1 - 3 \_\_\_\_, 4 - 6 \_\_\_\_, 7 - 10 \_\_\_\_, 11 or more \_\_\_\_

4. How important is it to you that completing BSEP will . . .

(CHECK ONE RESPONSE AT EACH LEVEL)

	<u>Very important</u>	<u>Some importance</u>	<u>Not very important</u>	<u>Does no apply to you</u>
● improve your GT score enough so that you meet reenlistment standards	_____	_____	_____	_____
● improve your GT score enough so that you can be reclassified to a different MOS	_____	_____	_____	_____
● prepare you to take and pass the G.E.D. examination	_____	_____	_____	_____
● prepare you to pass your SQT high enough to qualify for reenlistment	_____	_____	_____	_____
● prepare you to pass the TABE high enough to retake the test from which the GT score is calculated	_____	_____	_____	_____
● prepare you to pass the BNCOC screening test	_____	_____	_____	_____
● qualify you to take junior college, vocational, or college courses	_____	_____	_____	_____
● prepare you to do your regular job better	_____	_____	_____	_____
● if there is anything else you would like to get from completing BSEP, write it below				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

5. After you complete BSEP, how likely is it that you will be able to. . .

(CHECK ONE RESPONSE AT EACH LEVEL)

	<u>I expect to do it</u>	<u>I might do it</u>	<u>I do not expect to do it</u>	<u>Does not app to you</u>
● improve your GT score enough so that you meet reenlistment standards	_____	_____	_____	_____
● improve your GT score enough so that you can be reclassified to a different MOS	_____	_____	_____	_____
● prepare you to take and pass the G.E.D. examination	_____	_____	_____	_____
● prepare you to pass your SQT high enough to qualify for reenlistment	_____	_____	_____	_____
● prepare you to pass the TABE high enough to retake the test from which the GT score is calculated.	_____	_____	_____	_____
● prepare you to pass the BNCOC screening test	_____	_____	_____	_____
● qualify you to take junior college, vocational, or college courses	_____	_____	_____	_____
● prepare you to do your regular job better	_____	_____	_____	_____
● if there is anything else you would like to get from completing BSEP, write it below	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. When you make errors on the activity sheets and need to see the teacher, how often does the teacher . . .

(CHECK ONE RESPONSE AT EACH LEVEL)

	<u>Usually</u>	<u>Sometimes</u>	<u>Never</u>
● tell you to rework the problems you missed on the A sheets	_____	_____	_____
● assign the B activity sheets	_____	_____	_____
● explain what you did wrong and then assign the B activity sheets	_____	_____	_____
● explain what you did wrong and then give you work to do out of books or worksheets	_____	_____	_____

7. How often do you use each of the following in your class?

(CHECK ONE RESPONSE AT EACH LEVEL)

	<u>Almost every day</u>	<u>Several times a week</u>	<u>Once in a while</u>	<u>Never</u>
● A activity sheets	_____	_____	_____	_____
● B activity sheets	_____	_____	_____	_____
● Books and worksheets other than the A and B activity sheets	_____	_____	_____	_____
● Soldier's manual or other military materials	_____	_____	_____	_____
● GT improvement materials (timed tests, vocabulary drills, extra story problems)	_____	_____	_____	_____

8. How helpful are these materials to learning?

	<u>Very helpful</u>	<u>Some help</u>	<u>Little or no help</u>	<u>Not used in your class</u>
● The A activity sheets	_____	_____	_____	_____
● The B activity sheets	_____	_____	_____	_____
● The module preview and review tests	_____	_____	_____	_____
● The other materials the teacher gave you (books, worksheets, etc.)	_____	_____	_____	_____
● The military manuals and materials	_____	_____	_____	_____
● The GT improvement materials	_____	_____	_____	_____

9. Which teaching methods help you most to learn?

	<u>Very helpful</u>	<u>Some help</u>	<u>Little or no help</u>	<u>Does not apply in your class</u>
● The self-paced approach used in this program	_____	_____	_____	_____
● When the teacher groups students together for instruction	_____	_____	_____	_____
● The instruction of the teacher to the entire class	_____	_____	_____	_____
● Working in the learning center or lab	_____	_____	_____	_____
● Help you get from other students in the class	_____	_____	_____	_____

10. If you used the learning center or lab, which programs or materials did you use?

PLATO	_____	Did not use learning center or lab	_____
Viking	_____		
Apple	_____		
MOS materials or TEC tapes	_____		
Other	_____		

11. How much would each of the following help you to learn better?

(CHECK ONE RESPONSE AT EACH LEVEL)

	<u>Would be very helpful</u>	<u>Would be of some help</u>	<u>Would be of little or no help</u>
● More activity sheets on particular subjects	_____	_____	_____
● More individual attention by the teacher	_____	_____	_____
● More grouping of students for instruction	_____	_____	_____
● Demonstrations by the teacher	_____	_____	_____
● Opportunities to practice the skills in actual situations where they are needed	_____	_____	_____

12. Please answer each of the following questions:

	<u>Usually</u>	<u>Sometimes</u>	<u>Hardly ever</u>
● Are the practice drills and problems presented clearly on the activity sheets?	_____	_____	_____
● Do the drills give you enough practice on the particular skill you are learning?	_____	_____	_____
● Is there review of the skills you have learned on other sheets?	_____	_____	_____



13. Please answer each of the following questions:

	<u>Usually</u>	<u>Sometimes</u>	<u>Hardly Ever</u>
● Is the subject matter presented in a logical order on the activity sheets?	_____	_____	_____
● Is the subject matter interesting to you?	_____	_____	_____
● Is the subject matter motivating to you?	_____	_____	_____
● Does the subject matter relate to the reading, writing, or language skills you need on the job?	_____	_____	_____

14. Do the previews seem to identify correctly the problems you are having?

Almost always \_\_\_\_\_ Sometimes \_\_\_\_\_ Almost never \_\_\_\_\_

15. How much is the BSEP instruction helping you to improve in your reading, writing, or language skills needed on your job?

A lot \_\_\_\_\_ Some \_\_\_\_\_ Not much \_\_\_\_\_

16. The BSEP course is

too difficult \_\_\_\_\_

too easy \_\_\_\_\_

just right \_\_\_\_\_

17. The BSEP course is

too long \_\_\_\_\_

too short \_\_\_\_\_

the right  
number of weeks \_\_\_\_\_

18. How do you rate the following parts of the BSEP program?

	<u>Good for learning</u>	<u>Motivating</u>	<u>Not used in your class</u>
● Activity Sheets	yes ___ no ___	yes ___ no ___	___
● Module Previews and Reviews	yes ___ no ___	yes ___ no ___	___
● Class leader	yes ___ no ___	yes ___ no ___	___
● Incentives or awards	yes ___ no ___	yes ___ no ___	___
● Wall charts	yes ___ no ___	yes ___ no ___	___

19. What do you think about using a student as a class leader?

(CHECK ONE RESPONSE ON EACH LEV

- The class leader helps the class run smoothly  
yes \_\_\_ no \_\_\_
- The class would run as well or better without a class leader  
yes \_\_\_ no \_\_\_
- Being class leader takes up too much of my work time  
yes \_\_\_ no \_\_\_
- I like being class leader  
yes \_\_\_ no \_\_\_
- The class leader makes too many errors correcting other students' work  
yes \_\_\_ no \_\_\_

THANK YOU VERY MUCH FOR ANSWERING THESE QUESTIONS

Student Record  
Sheets



Course Data

Name \_\_\_\_\_

Survey of Basic Skills

	Form	Pretest		Form	Posttest	
		Score	Date		Score	Date
Math	___	<u>/33</u>	___	___	<u>/33</u>	___
Reading	___	<u>/52</u>	___	___	<u>/52</u>	___
Language	___	<u>/24</u>	___	___	<u>/24</u>	___

Module Previews and Reviews

	R	or	0 *	Module	Preview		Review		Followup Test	
					Score	Date	Score	Date	P or R **	Score
Math Course	<input type="checkbox"/>		<input type="checkbox"/>	Concepts	<u>/23</u>	___	<u>/23</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Whole Numbers	<u>/54</u>	___	<u>/54</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Fractions	<u>/20</u>	___	<u>/20</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Decimals	<u>/20</u>	___	<u>/20</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Percents	<u>/15</u>	___	<u>/15</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Measures	<u>/15</u>	___	<u>/15</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Story Problems	<u>/19</u>	___	<u>/10</u>	___	___	___
Reading Course	<input type="checkbox"/>		<input type="checkbox"/>	Vocabulary	<u>/25</u>	___	<u>/25</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Text	<u>/11</u>	___	<u>/11</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Locators and Visuals	<u>/20</u>	___	<u>/20</u>	___	___	___
Language Course	<input type="checkbox"/>		<input type="checkbox"/>	Spelling	<u>/40</u>	___	<u>/40</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Capitalization	<u>/16</u>	___	<u>/15</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Punctuation	<u>/20</u>	___	<u>/20</u>	___	___	___
	<input type="checkbox"/>		<input type="checkbox"/>	Grammar	___	___	___	___	___	___
				Section I	<u>/35</u>	___	<u>/36</u>	___	___	___
				Section II	<u>/22</u>	___	<u>/22</u>	___	___	___
			Section III	<u>/23</u>	___	<u>/23</u>	___	___	___	

\* Check R for required module(s) and 0 for optional module(s)

\*\* Write in "P" for followup preview and "R" for followup review

Reason for Exiting Course

	Math	Reading	Language	Tested on TABE	
				Yes	No
Completed all assigned materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Administrative action (academic, disciplinary, or medical)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unit recall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended maximum class hours without completing course materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MATH - Concepts

Module Record Sheet

Student's Name \_\_\_\_\_  
 Social Security Number \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

First Module Preview Score \_\_\_\_\_ /23 Date \_\_\_\_\_ /23 Date \_\_\_\_\_  
 First Module Review Score \_\_\_\_\_ /23 Date \_\_\_\_\_ /23 Date \_\_\_\_\_  
 Second Module Preview Score \_\_\_\_\_ /23 Date \_\_\_\_\_ /23 Date \_\_\_\_\_  
 Second Module Review Score \_\_\_\_\_ /23 Date \_\_\_\_\_ /23 Date \_\_\_\_\_

Activity Sheet	Answer Sheet	Assigned A (check)	Number Correct	%	Teacher Intervention*	Assigned B (check)	Number Correct	%	Teacher Intervention*
1 Mathematical Symbols	C	_____	/20	_____	_____	_____	/24	_____	_____
2 Geometric Shape Recognition	C	_____	/20	_____	_____	_____	/20	_____	_____
3 Commutation	C	_____	/10	_____	_____	_____	/10	_____	_____
4 Length and Perimeters	A	_____	/15	_____	_____	_____	/15	_____	_____
5 Roman Numerals	C	_____	/20	_____	_____	_____	/20	_____	_____
<hr/>									
6 Areas	E	_____	/8	_____	_____	_____	/8	_____	_____
7 Adding and Subtracting Negative and..	E	_____	/25	_____	_____	_____	/25	_____	_____
8 Multiplying and Dividing Negative...	E	_____	/10	_____	_____	_____	/10	_____	_____
9 Ratios	C	_____	/15	_____	_____	_____	/15	_____	_____

\* Please describe type of instruction and materials used (use back of page if needed)

**COURSE DATA**

NAME						
Survey of Basic Skills	Pretest			Posttest		
	Form	Score	Date	Form	Score	Date
Math		/33			/33	
Reading		/24			/24	
Language		/52			/52	

**SECTION C - COURSE INFORMATION**

Module Previews and Reviews	Module	Preview		Review		Followup Test		
		Score	Date	Score	Date	P or R*	Score	Da
Math Course	Concepts	/23		/23				
	Whole Numbers	/54		/54				
	Fractions	/20		/20				
	Decimals	/20		/20				
	Percents	/15		/15				
	Measures	/15		/15				
	Story Problems	/21		/21				
Reading Course	Vocabulary	/25		/25				
	Text	/11		/11				
	Locators and Visuals	/20		/20				
Language Course	Spelling	/40		/40				
	Capitalization	/16		/15				
	Punctuation	/20		/20				
	Grammar							
	Section I	/35		/36				
	Section II	/22		/22				
	Section III	/23		/23				

Reason for Exiting Course	Math	Reading	Language
Completed all assigned materials			
Administrative action (academic, disciplinary, or medical)			
Unit recall			
Attended maximum class hours without completing course materials			

\*Write in "P" for followup preview and "R" for followup review.

Module Record Sheets



MATH - Concepts

Module Record Sheet

Student's Name \_\_\_\_\_

Social Security Number \_\_\_\_\_

First Module Preview Score /23 Date /23 Date  
 First Module Review Score /23 Date /23 Date  
 Second Module Preview Score /23 Date /23 Date  
 Second Module Review Score /23 Date /23 Date

Activity Sheet	Answer Sheet	Assigned A (check)	Number Correct	%	Teacher Intervention*	Assigned B (check)	Number Correct	%	Teacher Intervention*
1 Mathematical Symbols	C		/20				/24		
2 Geometric Shape Recognition	C		/20				/20		
3 Commutation	C		/10				/10		
4 Length and Perimeters	A		/15				/15		
5 Roman Numerals	C		/20				/20		
<hr/>									
6 Areas	E		/8				/8		
7 Adding and Subtracting Negative and..	E		/25				/25		
8 Multiplying and Dividing Negative...	E		/10				/10		
9 Ratios	C		/15				/15		

\* Please describe type of instruction and materials used (use back of page if needed)

MATH - Whole Numbers

Module Record Sheet

Activity Sheet	Answer Sheet	First Module			Second Module		
		Assigned (check)	Number Correct	Teacher Intervention*	Assigned B (check)	Number Correct	Teacher Intervention*
1 Introduction to Numbers	C		/10			/10	
2 Adding Two One-Digit Numbers: Columns	E		/32			/40	
3 Adding Two One-Digit Numbers: Rows	E		/40			/40	
4 Adding Two-Digit Numbers: Columns	E		/30			/30	
5 Adding Two-Digit Numbers: Rows	E		/32			/32	
6 Carrying: Numbers in a Column	E		/40			/40	
7 Carrying: Numbers in a Row	E		/28			/28	
8 Adding Two Three-Digit Numbers in a Column	E		/30			/30	
9 Adding Two Three-Digit Numbers in a Row	E		/32			/32	
10 Practice Numbers in Columns: Addition	E		/35			/35	
11 Practice Numbers in Rows: Addition	E		/30			/30	
12 Subtracting Two One-Digit Numbers: Columns	E		/40			/40	
13 Subtracting Two One-Digit Numbers: Rows	E		/40			/40	
14 Subtracting Two-Digit Numbers: Columns	E		/30			/30	
15 Subtracting Two-Digit Numbers: Rows	E		/32			/32	
16 Borrowing: Numbers in a Column	E		/40			/40	
17 Borrowing: Numbers in a Row	E		/28			/28	
18 Subtracting Two Three-Digit Numbers.....	E		/30			/30	
19 Checking Subtraction by Adding	E		/24			/24	
20 Practice Numbers in Rows: Subtraction	E		/30			/30	
21 Practice Numbers in Columns: Subtraction	E		/35			/35	
22 Multiplying Two One-Digit Numbers: Columns	E		/40			/40	
23 Multiplying Two One-Digit Numbers: Rows	E		/40			/40	
24 Multiplying One Digit Times Two Digits....	E		/30			/30	
25 Multiplying Two-Digit Numbers: Rows	E		/32			/32	

Student's Name \_\_\_\_\_

Social Security Number \_\_\_\_\_

First Module Preview Score \_\_\_\_\_

/54 Date \_\_\_\_\_

Second Module Preview Score \_\_\_\_\_

/54 Date \_\_\_\_\_

First Module Review Score \_\_\_\_\_

/54 Date \_\_\_\_\_

Second Module Review Score \_\_\_\_\_

/54 Date \_\_\_\_\_

Activity Sheet	Answer Sheet	Assigned A (check)	Number Correct	Teacher Intervention*	Assigned B (check)	Number Correct	Teacher Intervention*
26 Carrying: Numbers in a Column	E		/40			/40	
27 Multiplying Two-Digit Numbers	E		/30			/30	
28 Carrying: Two-Digit Numbers	E		/40			/40	
29 Multiplying Three-Digit Numbers	E		/30			/30	
30 Dividing and Multiplying are Related	E		/21			/21	
31 Dividing One Digit Into One or Two....	E		/32			/32	
32 Converting from $\frac{1}{2}$ to $\frac{1}{10}$	E		/20			/20	
33 Dividing One Digit Into Two Digits	E		/30			/30	
34 Dividing One Digit Into Two with a ....	E		/25			/25	
35 Dividing Two Digits Into Three Digits	E		/20			/20	
36 Dividing Three Digits Into Four Digits	E		/20			/20	
37 Introduction to Algebra	C		/6			/6	
38 Solving Algebraic Equations	F		/12			/12	
39 Understanding Powers and Roots	C		/15			/15	

\* Please describe type of instruction and materials used

## MATH - Fractions

## Module Record Sheet

Activity Sheet	Answer Sheet	Assigned A			Assigned B			Teacher Intervention*						
		(check)	Number Correct	%	(check)	Number Correct	%	(check)	Number Correct	%				
1	A		/10			/10								
2	A		/20			/20								
3	E		/15			/15								
4	E		/20			/20								
5	E		/20			/20								
6	E		/20			/20								
7	E		/20			/20								
8	E		/20			/20								
9	E		/20			/20								
10	E		/20			/20								
11	E		/20			/20								
12	E		/20			/20								
13	E		/20			/20								
14	E		/20			/20								
15	E		/20			/20								
16	E		/20			/20								
17	E		/20			/20								
18	E		/20			/20								
19	E		/20			/20								
20	E		/20			/20								

\* Please describe type of instruction and materials used (use back of page if needed)

Module Record Sheet

Student's Name \_\_\_\_\_

Social Security Number \_\_\_\_\_

First Module Preview Score _____	Second Module Preview Score _____	Date: _____ /20 Date: _____
First Module Review Score _____	Second Module Review Score _____	Date: _____ /20 Date: _____

Activity Sheet	Answer Sheet	Assigned A			Assigned B			Teacher Intervention*						
		(check)	Number Correct	%	(check)	Number Correct	%	(check)	Number Correct	%				
1	E		/20											
2	E		/10											
3	E		/10											
4	E		/10											
5	E		/10											
<hr/>														
6	E		/15											
7	E		/10											
8	E		/20											
9	E		/20											
10	E		/20											
<hr/>														
11	E		/20											
12	E		/20											
13	E		/20											

\*Please describe type of instruction and materials used (use back of page if needed)

MATH - Percents

Module Record Sheet

Student's Name \_\_\_\_\_

Social Security Number \_\_\_\_\_

First Module Preview Score /15 Date /15 Date

Second Module Preview Score /15 Date

First Module Review Score /15 Date /15 Date

Second Module Review Score /15 Date

Activity Sheet	Answer Sheet	Assigned A (check)		Teacher Intervention*		Assigned B (check)		Teacher Intervention*	
		Number Correct	%	Number Correct	%	Number Correct	%	Number Correct	%
1 What are Percents?	C	/10				/10			
2 Percents and Fractions	E	/20				/20			
3 Changing Percents to Decimals and ....	E	/20				/20			
4 Finding Percents of Numbers	E	/20				/20			
5 Adding or Subtracting Percents	E	/10				/10			
6 Multiplying Percents	E	/10				/10			
7 Dividing Percents	E	/10				/10			

\* Please describe type of instruction and materials used (use back of page if needed)

MATH - Measures

Module Record Sheet

Student's Name \_\_\_\_\_

Social Security Number \_\_\_\_\_

First Module Preview Score \_\_\_\_\_ /15 Date \_\_\_\_\_

Second Module Preview Score \_\_\_\_\_ /15 Date \_\_\_\_\_

First Module Review Score \_\_\_\_\_ /15 Date \_\_\_\_\_

Second Module Review Score \_\_\_\_\_ /15 Date \_\_\_\_\_

Activity Sheet	Answer Sheet	Assigned A (check)		Number Correct		Teacher Intervention*		Assigned B (check)		Number Correct		Teacher Intervention*	
		(check)				%			(check)		%		
1	E			/20						/20			
2	C			/10						/10			
3	F			/12						/12			
4	F			/12						/12			
5	F			/12						/12			

\* Please describe type of instruction and materials used (use back of page if needed)

MATH - Story Problems

Module Record Sheet

Student's Name \_\_\_\_\_  
 Social Security Number \_\_\_\_\_ - - - - - /21 Date \_\_\_\_\_  
 First Module Preview Score \_\_\_\_\_ /21 Date \_\_\_\_\_  
 Second Module Preview Score \_\_\_\_\_ /21 Date \_\_\_\_\_

First Module Review Score \_\_\_\_\_ /21 Date \_\_\_\_\_  
 Second Module Review Score \_\_\_\_\_ /21 Date \_\_\_\_\_

Activity Sheet	Answer Sheet	Assigned A (check)	Number Correct	%	Teacher Intervention*	Assigned B (check)	Number Correct	%	Teacher Intervention*
1 Key Words	C		/15				/15		
2 Understanding Story Problems	B		/12				/12		
3 Addition Problems	C		/10				/10		
4 Subtraction Problems	C		/10				/10		
5 Multiplication Problems	C		/10				/10		
6 Division Problems	C		/10				/10		
7 Two-Step Problems	F		/8				/8		
8 Three-Step Problems	F		/5				/5		
9 Problems with Fractions	F		/10				/10		
10 Problems with Percents	F		/7				/7		
11 Problems with Interest	F		/5				/5		
12 Problems with Measures	F		/8				/8		
13 Mixed Problems	F		/10				/8		

\* Please describe type of instruction and materials (use back of page if needed)



READING - Vocabulary

Module Record Sheet

Activity Sheet	Answer Sheet	Assigned A (check)	First Module		Second Module	
			Number Correct	Teacher Intervention*	Number Correct	Teacher Intervention*
1 Context: Antonyms	A		/20		/20	
2 Context: Synonyms	A		/30		/30	
3 Context: Common Sense	A		/25		/31	
4 Context: Combination Sheet	C		/30		/25	
5 Negative and Positive Words	A		/38		/43	
6 Prefixes	A		/30		/46	
7 Root Words	A		/20		/25	
8 Suffixes and Derivatives	A		/20		/23	
9 Homonyms	A		/20		/23	
10 Combination Sheet	C		/20		/20	

\* Please describe type of instruction and materials used (use back of page if needed)

READING - Text

Module Record Sheet

Student's Name \_\_\_\_\_  
 Social Security Number \_\_\_\_\_

First Module Preview Score /11 Date \_\_\_\_\_  
 First Module Review Score /11 Date \_\_\_\_\_  
 Second Module Preview Score /11 Date \_\_\_\_\_  
 Second Module Review Score /11 Date \_\_\_\_\_

Activity Sheet	Answer Sheet	Assigned A (check)	Number Correct	%	Teacher Intervention*	Assigned B (check)	Number Correct	%	Teacher Intervention*
1 Getting the Main Idea	B		/10				/10		
2 Understanding: Context	C		/10				/10		
3 Understanding: Imagery	A		/4				/4		
4 Understanding: Restatement	A		/5				/5		
5 Understanding: Summaries	A		/5				/5		
6 Order and Sequence	C		/10				/10		
7 Finding Facts	B		/10				/10		
8 Inference	B		/7				/8		
9 Practice Sheet	C		/8				/8		
10 Logic: Order Statements	C		/8				/8		
11 Logic: Order Diagrams	C		/8				/8		

\* Please describe type of instruction and materials used (use back of page if needed)

Module Record Sheet

Student's Name \_\_\_\_\_

Social Security Number \_\_\_\_\_

First Module Preview Score \_\_\_\_\_ /20 Date \_\_\_\_\_

Second Module Preview Score \_\_\_\_\_ /20 Date \_\_\_\_\_

First Module Review Score \_\_\_\_\_ /20 Date \_\_\_\_\_

Second Module Review Score \_\_\_\_\_ /20 Date \_\_\_\_\_

Activity Sheet	Answer Sheet	Assigned A (check)	Number Correct	%	Teacher Intervention*	Assigned B (check)	Number Correct	%	Teacher Intervention*
1	C		/12				/12		
2	C		/12				/12		
3	C		/12				/12		
4	C		/12				/12		
5	C		/12				/12		
6	C		/10				/10		
7	C		/9				/9		
8	C		/10				/10		
9	C		/8				/8		

\* Please describe type of instruction and materials used (use back of page if needed)

Language - Spelling

Module Record Sheet

Student's Name \_\_\_\_\_

Social Security Number \_\_\_\_\_

First Module Preview Score \_\_\_\_\_ /40 Date \_\_\_\_\_

Second Module Preview Score \_\_\_\_\_ /40 Date \_\_\_\_\_

First Module Review Score \_\_\_\_\_ /40 Date \_\_\_\_\_

Second Module Review Score \_\_\_\_\_ /40 Date \_\_\_\_\_

Activity Sheet	Answer Sheet	Assigned A (check)	Number Correct	%	Teacher Intervention*	Assigned R (check)	Number Correct	%	Teacher Intervention*
1 Pronunciation and Syllables	A		26				30		
2 Sounding Out Words	A		31				38		
3 Silent Letters - Vowels	A		37				30		
4 Silent Letters - Consonants, Double....	A		29				25		
5 Suffixes: Silent E Rule	A		23				25		
6 Suffixes: Exceptions to Silent E Rule	A		29				25		
7 Suffixes: Y Rule	A		21				20		
8 Doubling Rule - One Syllable Words	A		30				25		
9 Doubling Rule - Two Syllable Words	A		43				25		
10 CK Rule and Spelling Practice Sheet	C		30				30		
11 Plurals: Regular	A		22				12		
12 Irregular Plurals	A		25				27		
13 IE - EI Rule	A		25				25		

\* Please describe type of instruction and materials used (use back of page if needed)

5/84 Language - Capitalization

Module Record Sheet

Student's Name \_\_\_\_\_

Social Security Number \_\_\_\_\_

First Module Preview Score \_\_\_\_\_ /16 Date \_\_\_\_\_

Second Module Preview Score \_\_\_\_\_ /16 Date \_\_\_\_\_

First Module Review Score \_\_\_\_\_ /15 Date \_\_\_\_\_

Second Module Review Score \_\_\_\_\_ /15 Date \_\_\_\_\_

Activity Sheet	Answer Sheet	Assigned A (check)	Number Correct	%	Teacher Intervention*	Assigned B (check)	Number Correct	%	Teacher Intervention*
1 Initial Capitals	A		/10				/10		
2 Proper Names and Nouns	A		/10				/10		
3 Days, Months, and Holidays	A		/14				/10		
4 Special Groups, Events, Religions, ...	A		/13				/13		
5 Languages and Specific Courses	A		/13				/12		
6 Honorifics	A		/15				/14		
7 Book and Magazine Titles	A		/16				/17		
8 Lines and Titles of Poetry	A		/11				/9		

\* Please describe type of instruction and materials used (use back of page if needed)

LANGUAGE - Punctuation

Module Record Sheet

Student's Name \_\_\_\_\_  
 Social Security Number \_\_\_\_\_ /20 Date \_\_\_\_\_  
 First Module Preview Score \_\_\_\_\_ /20 Date \_\_\_\_\_  
 First Module Review Score \_\_\_\_\_ /20 Date \_\_\_\_\_  
 Second Module Preview Score \_\_\_\_\_ /20 Date \_\_\_\_\_  
 Second Module Review Score \_\_\_\_\_ /20 Date \_\_\_\_\_

Activity Sheet	Answer Sheet	Assigned A (check)		Number Correct		Teacher Inter-vention*	
		(check)			%		%
1 End Punctuation	A		/22		/22		
2 Commas in Series	A		/13		/14		
3 Commas: Appositives	A		/12		/15		
4 Commas: Direct Address	A		/10		/10		
5 Commas: Introductory Words, ....	A		/15		/14		
6 Commas: Dates and Addresses	A		/15		/12		
7 Commas: Phrases, Clauses, and ....	A		/14		/14		
8 Commas: Quotes	A		/10		/17		
9 Quotations	A		/39		/27		
10 Apostrophes: Ownership	A		/11		/11		
11 Apostrophes: Contractions	A		/20		/20		
12 Abbreviations	A		/30		/19		
13 Punctuation Practice	D		/27		/25		

\* Please describe type of instruction and materials used (use back of page if needed)

Module Record Sheet

Student's Name _____	<u>First Module Preview</u>	<u>Score</u>	<u>Date</u>	<u>Second Module Preview</u>	<u>Score</u>	<u>Date</u>
Social Security Number _____	I _____	/35	_____	I _____	/35	_____
	II _____	/22	_____	II _____	/22	_____
	III _____	/23	_____	III _____	/23	_____
	<u>First Module Review</u>	<u>Score</u>	<u>Date</u>	<u>Second Module Review</u>	<u>Score</u>	<u>Date</u>
	I _____	/36	_____	I _____	/36	_____
	II _____	/22	_____	II _____	/22	_____
	III _____	/23	_____	III _____	/23	_____

Activity Sheet

	<u>Answer Sheet</u>	<u>Assigned A (check)</u>	<u>Number Correct</u>	<u>%</u>	<u>Teacher Intervention*</u>
Assigned B (check)					
Number Correct					
%					
Teacher Intervention*					

Section 1 - Subjects and Verbs

1	Subjects: Number	A							
2	Action Verbs	A	/23	/20	/15	/12	/15	/20	/15
3	Linking Verbs	A							
4	Verbs: Number	A							
5	Finding a Hidden Subject	A							
6	Agreement: Special Subjects	A							
7	Helping Verbs	A	/10	/10	/16	/15	/15	/10	/15
8	Action and Linking Verbs	A							
9	Verbs: Person	A							
10	Verbs: Tense	A	/20	/10	/10	/10	/15	/10	/10
11	Regular Past Participles	A							
12	Irregular Past and Past Participles	A	/10	/25	/10	/15	/15	/10	/15
13	Verbs: Changing from Past Tense to....	A	/12	/12	/12	/10	/10	/10	/10

Activity Sheet	Answer Sheet	Assigned A (check)	Number Correct	%	Teacher Intervention*	Assigned B (check)	Number Correct	%	Teacher Intervention*
14 Confusing Verbs	A		/12				/11		
15 Subject and Verb Agreement	A		/20				/10		
16 Agreement: "There" and "Here"	A		/10				/10		
<u>Section II - Pronouns</u>									
17 Pronouns: Person, Number, Antecedent	A		/10				/10		
18 Verb Agreement with Indefinite Pronouns	A		/10				/10		
19 Indefinite Pronouns as Antecedents	A		/10				/10		
20 Collective Nouns as Antecedents	A		/10				/10		
<hr/>									
21 Practice on Pronouns Agreeing with ....	A		/20				/20		
22 Pronouns Used as Subjects	A		/10				/10		
23 Pronouns Used as Objects	A		/10				/10		
24 Practice on Subject and Object Pronouns	A		/20				/15		
25 Pronouns after Prepositions	A		/10				/10		
<hr/>									
26 Possessive Pronouns	A		/10				/10		
27 Indefinite Pronouns: Who, That, Which	A		/10				/10		
28 Pronouns: Agreement	A		/10				/10		
<u>Section III - Modifiers and Usage</u>									
29 Using Adjectives for Comparison	A		/15				/15		
30 Adjectives: This/That These/Those	A		/10				/10		
<hr/>									
31 Using Adverbs for Comparison	A		/10				/10		
32 Confusing Adverbs and Adjectives	A		/15				/15		
33 Using Prepositions Correctly	A		/10				/10		
34 Blunders: Fragments	A		/15				/10		
35 Blunders: Run-ons	B		/15				/10		
<hr/>									
36 Good Usage of English	A		/40				/40		