Research Note 83-2

THE STATE OF THE ART ASSESSMENT IN BASIC SKILLS EDUCATION PROGRAM II

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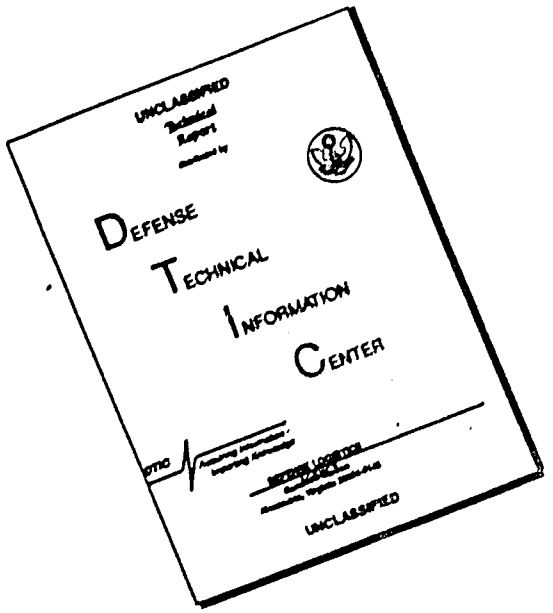

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The Army has a current need to provide literacy and life-coping skills training for many soldiers to enable them to perform in their MOSs. General literacy training has been found ineffective in improving job performance, and a military job specific functional literacy program has been mandated by the Army.

The purpose of this project was to assess the present state of the art in Army Basic Skills Education for soldiers in their first permanent duty

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Military Life Coping Skills	Training
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item 20- continued

assignment. On-going programs were assessed in relation to their goals and objectives, target populations, curriculum, delivery systems, personnel and facilities.

Recommendations for improving the Army's functional literacy and life-coping skills training program were made, based upon: the Army's stated program goals; the discussion of pertinent issues in six papers produced by experts; the current practice in other military settings and in civilian settings; and interviews with recognized authorities on basic skills, adult basic education, and functional literacy. Project findings indicated that the Army should develop and instructional system designed to provide criterion-referenced functional literacy and life-coping skills training based upon task analysis of MOS requirements.

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INTRODUCTION

The contemporary all-volunteer Army has a continuing need for recruits who have the competencies to perform adequately in military work assignments. All of these work assignments call for some measure of functional literacy and basic mathematics skills. In addition, soldiers must have life coping skills to enable them to adapt to living and working in a military setting (DoA, the Army Continuing Education Policy, 1979).

However, in the population at large from which Army recruits are drawn, it is estimated that one person in four is functionally illiterate (Ball, 1975; Berman, Note 1). Studies show, too, that many high school students lack skills needed for independent living (Hall, 1979). It is scarcely surprising that among Army recruits there are a number who lack the basic skills competencies the Army requires. The lack of basic skills competencies in recruits, if not remedied, leads to the failure of some recruits to reach criterion performance levels required to stay in the Army.

Soldiers not only need to learn the skills required to complete basic and first-enlistment training, but must also be capable of more advanced training if modern military equipment is to be usable. The ever-increasing sophistication of military systems and equipment with which soldiers must learn compounds the problem of inadequate basic skills (Monroe, Note 2); and the gap between soldier competencies and the skills required to operate modern weapons systems has been widening (Dueitt, 1979). At present a large number of soldiers lack the basic skills competencies to achieve success in their Army Military Occupational Specialty (MOS).

Basic skills deficiencies of soldiers are a source of widespread concern because of their influence on combat readiness (Monroe, Note 2). It has been attested in the public press that the inability of recruits to function in their military specialties contributes to the dissatisfaction and even resignation of senior non-commissioned officers, has affected unit capabilities and morale, and undermines military preparedness in general (Reed, 1980; TIME, 1980).

The soldiers' lack of job-related life-coping skills also affects job competence, because soldiers are finding it hard to perform on the job, and to adjust to military job situations. Aggravating the problems of soldiers whose basic skills and life coping skills are inadequate is the further problem that they lack the learning strategies (Dansereau, 1978) that facilitate assimilation of the information essential to their military job success. They have neither the primary learning strategies for identifying,

comprehending, and retaining information needed for use on their jobs, nor the strategies which support learning, such as developing an appropriate attitude towards the learning task, overcoming anxieties, controlling their learning environment, and correcting and monitoring their primary learning strategies.

It is anticipated that the number of young men of military age will decline 15% from 1978 levels by the mid-1980's (Nunn, 1979). Therefore, it is essential that the Army make every effort to improve the skills and effectiveness of its present workforce, since replacing soldiers who fail to reach criterion performance will be difficult.

Also, since Army incentives in terms of wages and working conditions are not competitive with the civilian sector for many specialties (Seidel, Note 3), it is essential for the Army to offer other long-term incentives to servicemen to motivate them to succeed in training programs and to keep them beyond their first tour of duty. One such incentive is the Army's education and training program.

The concern of the Army with the education and career development of its recruits is thus justifiable on the grounds of its own as well as its recruits' self-interest. The cost of training to improve basic academic and life coping skills and to develop career potential represents a substantial burden to the Army. Nonetheless this responsibility has been undertaken and will have to be expanded in order to obtain and conserve sufficient military manpower (Dueitt, 1979).

The problem of illiteracy among Army recruits has been recognized since the 1940's, when training to improve basic skills was first given. Most such training up to the present has been designed to raise literacy levels in terms of primary or secondary grade level accomplishments, rather than to improve military job competency. However, these earlier training programs were designed when job performance was not an issue, and grew increasingly ineffective for accomplishing the Army's needs as the target population changed. These programs, of which high school completion was most prominent, resulted in varying degrees of success in terms of raising general literacy levels, but did not significantly improve the soldier's job performance (Sticht, 1975a).

In 1978 the Army replaced its on-duty high school completion program with the Basic Skills Education Program (BSEP), a functionally-oriented approach to remediation to provide job-related basic skills training for all levels of the service, from the

soldier's entrance into the Army through his or her advanced training (See Army Regulation 621-45, Appendix D). The new program was divided into three phases: BSEP I, II, and III, to correspond to needs in Basic, MOS, and Advanced Career Training.

Since its inception in 1978, the program has been in operation throughout the Army but with limited success. Since many soldiers still lack basic skills necessary to perform their MOSs and continue in Army careers, the Army has begun a reassessment of its original policies and practices in regard to basic skills education. Efforts have been undertaken to discover the kind and extent of basic skills instruction which contributes most to improved job effectiveness, successful adaptation to military environments, and long-range commitment to military careers. One such effort is the present project.

The success of the Army's basic skills program will have far-reaching implications for the quality and preparedness of our Armed Forces and for the overall career training of young adults in the civilian economy. The experience of the Army's programs will be widely disseminated and provide program data which civilian schools and social programs can incorporate into future planning (See DoA, TAGO, memorandum, Appendix E).

The purpose of this report is to provide recommendations for near-term specifications for a revised, functionally-oriented 3SEP II. It includes summaries of relevant research theory and descriptions of existing basic skills training programs and relevant R & D efforts. The report also discusses the implications of these findings on a revised functionally-oriented BSEP program.

The results of the project are presented in eight chapters. Chapter I explains the methodology used in conducting the project. Chapters II - VII present the project findings under six major topic areas: goals and objectives, target population, curriculum, delivery systems, personnel, and facilities. Chapter VIII includes the recommendations for revising the BSEP program to bring it into alignment with present program goals. Long-term specifications for a revised BSEP proposed by the Adjutant General are included in the Appendix in the "Implementation of Army Continuing Education Policy and Recommendations Plan."

Figure 1 is a summary of the state of the art of BSEP II. For each of the six topic headings, the figure provides a synopsis of where the Army is now and where the Army should be in relation to BSEP programs.

Figure: 1

SUMMARY OF STATE OF THE ART OF BSEP II INSTRUCTION

Topics	Where Is the Army Now?	Where Should the Army Be?	Recommendations
1. Program Goals and Objectives	- evolving from a general to a job-related appraoch to BSEP II instruction	- criterion-referenced, job-related goals and objectives	- complete revised BSEP II regulations - implement revised BSEP II as indicated in the ACEP Implementation Plan, Jaunary 18, 1980
2. Target Population	- soldiers who: o receive a GT score of less than 90 o are recommended by unit commander o are self-referred o do not achieve minimum standards on the SQT exam o achieve less than 9th grade on the SelectABLE	- soldiers having performance problems on the job - soldiers who do not achieve minimum standards on the SQT exam or other designated exam	- eliminate use of norm-referenced achievement tests for determination of program eligibles - emphasize inadequate performance on the job, supervisor referral, and self-referral as criteria for job inclusion in BSEP program
3. Curriculum			
a. Content	- general high school completion-oriented basic skills; a few programs with differing versions of military-related basic skills - limited inclusion of learning strategies and life coping skills - geared to school aged students rather than contemporary adults	- adult level, job-specific instruction of basic skills required to perform MOS baseline skills - increased emphasis on appropriate learning strategies and life coping skills	- clarify BSEP goals and objectives to curriculum designers - more actively involve military command in content planning - conduct comprehensive task analysis of MOSs to determine basic skills requirements for each job specialty - incorporate instruction of learning strategies and life coping skills that facilitate mastery of particular MOS skills - incorporate instruction of job-specific life coping skills
b. Instructional Strategy	- predominantly individualized, sequential, modular instruction - cursory treatment of basic concepts, with limited practice and feedback - delay between skill mastery and skill application	- strategies particularly suited to teaching military job-related skills to functionally-literate adults	- utilize strategies that: o show relevance to the material o provide appropriate, sequential instruction for each concept o allow soldiers to assume some responsibility for their learning o provide feedback, reenforce success, and minimize failure o reduce anxiety, and demonstrate respect, trust, and concern for the learner o allow immediate applicability of skills. - identify any strategies particularly necessary for the successful instruction of the BSEP curriculum

Topics	Where Is the Army Now?	Where Should the Army Be?	Recommendations
c. Instructional Materials	- primarily printed modules at above reading levels of target population	- print and non-print materials, to include realia, military forms and manuals, modified military materials, and realistic simulations - materials that are written at 5th - 6th grade reading levels.	- revise military manuals to lower reading level - use job aids and non-print materials whenever possible - develop or revise instructional materials to: o be more military job-related o be adult-oriented, 5th - 6th grade reading level materials
d. Performance Assessment	- assessment based on general rather than job-related skills - norm-referenced high school-oriented GT and/or ABLE; JRTT utilized to limited extent - soldiers assessed after completion of 340 hours of BSEP instruction - assessment primarily to determine soldier performance in the BSEP course. - no assessment of learning strategies and life coping skills	- assessment based on clearly defined program goals and objectives - criterion-referenced assessment tests to test only those basic skills necessary for particular MOS - soldiers assessed after instruction for a particular skill - assessment conducted to determine soldier performance in the BSEP program, soldier performance on the job, and program effectiveness. - instruments to reflect standard testing principles and military constraints: validity, reliability suitability for adults, availability of alternate forms; easy to administer and evaluate.	- define program goals and objectives - complete comprehensive task analyses of MOSs - develop criterion-referenced, basic skills assessment instruments for each MOS - develop and implement systems to evaluate soldiers' job performance and program effectiveness - define importance of learning strategies and life coping skills to successful completion of BSEP
4. Delivery Systems	- varying, depending on the site-some lecture but generally individualized print, modular materials; also some computer-assisted instruction, commercial books, and independent reading materials	- system selected to complement instructional content, strategies, and materials - system selected according to soldier needs and site constraints - system with minimal emphasis on reading - skills presented as realistically as possible	- develop pilot programs to explore the use of delivery systems which include: o simulations, role plays, and hands-on experience with little reliance on basic skills o feedback loops between MOS job sites and BSEP instructors o peer teaching and proctoring o microcomputer/videodisc interfaces o interaction with ongoing R&D civilian and military programs

Topics	Where Is The Army Now?	Where Should The Army Be?	Recommendations
5. Personnel	- teachers dedicated but ill-prepared to teach military functional literacy to adults - Adult Education Center Staff providing testing and counselling support - staff often unclear of program goals and objectives - teacher evaluation by contract organization	- well-trained, dedicated teachers - support staff needed to develop and implement revised BSEP curriculum - periodic teacher assessment to ensure proper program implementation	- develop more stringent qualifications for teachers - hire better qualified teachers - provide comprehensive teacher training, to include manuals and modelling, for: o adult level, basic skills education o individualized instruction o BSEP goals and objectives o military environment - develop and implement teacher evaluation system
6. Facilities	- varying from good to adequate with traditional desks and chairs as primary furniture; equipment often not available - located away from job site	- facilities designed to complement instructional program of the site - facilities in close proximity to job site whenever possible - flexible off site learning environments conducive to learning	- provide instruction on-site whenever possible - provide detailed guidelines on type of facilities to be used for off-site, formal training sessions

I. METHODOLOGY

To accomplish the objective of the project, it was necessary to develop a clear understanding of the history of BSEP, the key issues involved in providing functionally oriented basic skills training, and the present state of the art in basic skills education in the military and civilian sectors. The theoretical-experiential methodology for developing specifications for a revised BSEP II therefore, included the following steps:

Review Relevant Literature

Pertinent literature was reviewed to gather background information on (1) the history, structure, and implementation of BSEP; and (2) the theoretical/philosophical issues related to BSEP instruction, which included ongoing experience and research in adult education, job-related instruction, life coping skills, functional literacy, learning system design, and learning strategies. Materials reviewed included books, technical manuals, program implementation and evaluation reports, and other current related literature. Military and non-military documents were reviewed.

Develop Criteria for Analyzing Military-Relevant BSEP Programs

Current BSEP programs were analyzed in terms of their suitability for teaching functionally-oriented basic skills. Evaluation criteria were based on five "clusters" or topic areas relevant to the description and evaluation of BSEP programs: (1) Program Philosophy and Methods; (2) Program Content, Organization, and Materials; (3) Student Selection and Eligibility; (4) Program Personnel; and (5) Program Data (Borich, Wagner, & Berkowitz, (Note 4)).

These topic areas were modified into the six key elements considered essential for a BSEP instructional program: program goals and objectives; target population characteristics; curriculum (to include content, instructional strategy, instructional materials, and performance assessment); delivery systems; personnel (including qualifications, responsibilities, and assessment); and facilities.

The primary criteria for the basic skills training were selected according to the goal of the BSEP program--to develop educational competencies required for a soldier's job performance, skill qualifications, and career growth (Appendix D; DeWeaver & Prather, in press). The selection was based on: (1) the target audience of the program, i.e., soldiers from age 18-21 and (2) the objective of

the program, i.e., the improvement of job performance. Adult-level training and military job relevance were, therefore, selected as the primary criteria.

Adult level materials were defined as those with suitable graphic design, low readability level/high interest content, and appropriate illustrations. Job relevant materials were defined as those that incorporated military vocabulary, job-related examples, and learning strategies to aid in learning the information and applying it to job performance.

Secondary criteria developed were essential subcomponents for the primary structural and content criteria. Structurally, these criteria addressed the curriculum design and format. Entry level placement instruments at the beginning of the instruction should test the information being taught within the instruction and provide an accurate, efficient method of placing beginning soldiers in the BSEP program. Performance objectives should specify the behavior to be accomplished, the standards of performance, and the conditions under which the behavior should be performed (Davis, Alexander, & Yelon, 1974). Program objectives should address appropriate cognitive, affective, and psychomotor domains.

Due to the time constraints of the BSEP program --a total of 360 hours provided in 2-4 hour intervals--the instructional materials should be organized into small units or modules so that individual learners can work only on those skills in which they are deficient. The instruction should include appropriate readings, examples, exercises, learning strategies, and/or other instruction necessary for the soldier to master the stated objectives. Material should be sequential, progressing from simple to complex, and proceed through each skill from the concrete through the representational and abstract stages. Material should also be non-sexist, multi-cultural, and multi-ethnic.

The specific needs of the military jobs were the basis for the selection of the secondary content criteria. Because of the limited teaching background of most Army BSEP instructors, teacher training materials should be comprehensive. Instructional materials should focus on the skills necessary to improve military job performance.

Collect and Evaluate Army BSEP Training Materials

Training materials were collected from BSEP II programs throughout the Army to provide data on the present state of the art in BSEP. To insure complete cooperation from all BSEP sites, a

letter was sent from the Adjutant General to the educational officer at each Army site requesting that they submit a complete set of their BSEP II materials. A sample copy of that letter is included as Appendix C. These materials were provided by the Adjutant General for review and evaluation. A list of sites that submitted materials is also included in Appendix A. Materials were labeled according to the site from which they were submitted and then grouped according to the key subject areas included in BSEP II instruction: reading, mathematics, communications, and life coping skills. A dual analysis process was conducted of all curriculum materials received.

First, curriculum experts with expertise in reading and mathematics instruction reviewed and evaluated the curricula in terms of its job-relatedness, and the soundness of instructional content and format. They also determined the readability levels of all materials and evaluated their appropriateness for adult instruction.

Independent of that evaluation, an instructional technologist performed a second analysis in collaboration with an adult education expert with experience in the Army BSEP program. The adult education expert reviewed the curriculum analysis criteria developed and suggested refinements to make the criteria conform more closely to BSEP constraints (Larson, Note 5). The refined criteria were used to perform a two-stage evaluation of the reading, mathematics, and communications curricula. Curricula which met the two primary criteria were then analyzed according to the revised secondary criteria. The curricula in each subject area which most closely met the primary and secondary criteria were tentatively selected as prototype materials which could be suggested for use in ongoing BSEP programs.

The independent evaluations and recommendations of the "best" curricula by the reading and mathematics consultants were then compared with the results of the second study, and final best choices were made.

Commission State-Of-The-Art Papers

State-of-the-art issue papers were commissioned from recognized experts in areas relevant to the successful long-range implementation of BSEP II. Title and authors are as follows:

1. Improving Reading and Other Learning Skills in the Context of Army Career Development, by C. V. Bunderson, A. C. Cranney, and J. B. Olsen.

2. Suggestions for Instructional Materials for the Basic Skills Education Program II, by Mary J. DeWeaver and Cynthia J. Prather.

3. State of the Art Assessment of Basic Skills Education--Job Related Life Coping Skills, by Betty L. Hall.

4. Implementation Issues for a Revised Basic Skills Education Program, by Gordon Larson.

5. Teacher Training for Revised Basic Skills Education Programs, by Helen W. Turner.

6. State of the Art Assessment of Basic Skills Education Learning Strategies, by Claire E. Weinstein.

Copies of the papers are available through the National Diffusion Network, and the Army Research Institute.

Convene Panels and Conduct Interviews

Panels were convened as necessary to discuss the evaluation criteria and the ongoing research. Experts on basic skills education at the Department of Education, the Department of Labor, local universities, the American Federation of Teachers, and the National Urban Coalition contributed information and materials in use, as did Army and Navy Personnel contacted.

II. GOALS AND OBJECTIVES OF BSEP II

It is apparent from our analysis of curriculum materials, our discussions with knowledgeable individuals in the field of Army education, and our study of military directives pertaining to BSEP, that the program at present is in an evolutionary state.

Historical Background of BSEP

In March 1977, the General Accounting Office (GAO) issued a report citing the need to address literacy problems in the military services, and indicating that soldiers' inability to read was adversely affecting the Army's mission and soldier welfare. GAO challenged the Army to address its literacy problems, implying that within selected groups of servicemen the average reading ability was well below the ninth grade level required for MOS training success (GAO, 1977).

In 1978, the Army determined that 6 percent (Brown, 1978) were, in fact, functionally illiterate* and that one in three accessions was in need of some skills remediation. At this time an on-duty high school completion program was being offered to deal with literacy problems. However, this program removed soldiers from training, and the Fiscal Year 1978 Department of Defense (DoD) budget review stated that high school completion programs conducted during duty hours had a potentially adverse impact on readiness and morale. After July 1978, therefore, high school completion programs were offered only during duty hours, and on-duty remediation was restricted to the provision of academic training only in basic skills required to meet military job requirements.

Army Regulation No. 621-45 (Appendix D) responded to this restriction by requiring the implementation of the BSEP program and provided that after a 15-month Army-wide evaluation process, this new basic skills program would be integrated into the Army Continuing Education System (ACES). This program, BSEP, was to be designed as "the commander's primary on-duty education program" to upgrade the soldier's job performance and potential through remedial education (Appendix D). It was to be divided into three phases:

- BSEP I, conducted within the training base during initial entry training to provide the soldier with basic literacy instruction in reading and arithmetic through a 5.0 grade level as measured by the Adult Basic Learning Examination (ABLE) (Harcourt, Brace, 1967) and English-as-a-Second Language (ESL) for soldiers whose primary language was not English.

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* Berman (1980) defines functional literates as those persons with visual/aural comprehension of language between 5th and 7th grade levels, and functional illiterates as those with visual/aural comprehension between 1st and 5th grade levels. For this project, these are the definitions used to define literacy levels of BSEP soldiers.

- BSEP II, conducted at the first permanent duty station to raise language and computational skills to 9th grade levels; and

- BSEP III, conducted at permanent duty stations, to provide career soldiers functional instruction directly related to MOS or career management fields.

The BSEP program was designed to be flexible enough to meet the needs of both the commander and the individual soldiers. It was to use standardized testing and include participation of high school graduates as well as non-high school graduates, be offered at no cost to the soldier, and support unit readiness. A built-in evaluation was to be provided.

Since an Army job-specific program which met these requirements was not then in existence, a joint effort to develop such a program was begun between Headquarters, DoA , and Headquarters, the Army Training and Doctrine Command (TRADOC). Elements from within other major Army commands, and the American Council on Education were also to be involved in the design of a functional, Army job-specific basic skills program.

On December 7, 1978, a State of the Art Assessment in Basic Skills Education was approved by the Adjutant General as a joint venture between the Army Research Institute (ARI) and the Education Directorate of the Adjutant General Center (TAGCEN). ARI and TAGCEN were to review ongoing military and civilian basic skills programs and analyze existing BSEP curricula being used at permanent duty stations. The assessment objectives were to consider soldiers' life coping literacy needs and learning strategies in relation to MOS-related reading and mathematics requirements as a first step toward development of job-related curriculum materials for the first term soldier; explore alternative instructional approaches to improving literacy and their cost-effectiveness; identify technical strengths and gaps in approaches to basic skills education; and help chart the future of BSEP within the Army (DoA, BSEP Symposium 1979). This report discusses the results of that assessment.

The objectives of BSEP II outlined in AR 621-45 (Appendix D) were stated in terms of improvements in vocabulary, reading, spelling, and mathematics as measured by the ABLE II. Information on BSEP programs reviewed indicates that these are, indeed, the competencies being addressed by existing BSEP II programs, although Army-sponsored research has indicated that improving general literacy skills results in less improvement in job-related military competencies than does training which focuses directly on the particular skills needed for specific military jobs (Dueitt, 1979;

Sticht, 1975a). These findings appear to have influenced BSEP program objectives. Some installations were found to be using curriculum which was developed around competencies needed for passing the MOS proficiency assessment, the Skills Qualifications Tests (SQT), rather than those required to improve ABLE scores.

Moreover, the most recent documents relating to BSEP indicate that the Army has reconsidered the value of the BSEP programs as a continuum of educational experiences leading the functionally literate trainee in the direction of greater academic skills, and is moving towards a program that would give all Army personnel the training required to become competent at their jobs (Sunderson, et al.,in press). The development and implementation of such a program is mandated by the "Implementation of Army Continuing Education Policy and Recommendations Plan" (Appendix E). This memorandum outlines the development by TRADOC of plans, resources, and milestones which "....Provide a functional (job-related) approach to basic skills development instead of the general approach...." This memorandum also calls for the development by TRADOC of an Army-specific, job-related BSEP in four major areas defined in TRADOC Regulation 621-1 (Appendix F) as:

1. MOS baseline skills.
2. Military life coping skills.
3. Learning strategy skills.
4. English-as-a-second-language skills.

BSEP II will continue to exist as a separate program, distinct from BSEP I, and TRADOC is to "develop a milestone/status briefing for implementing BSEP I and II improvements and present to APSC and during second quarter FY 80" (TRADOC Reg 621-1, p. 285). The goal for BSEP II stated in AR 621-45 (Appendix D) is to be revised; however, at present, the specific goals of BSEP II as distinct from BSEP I have apparently not been fully articulated.

At present, therefore, BSEP II is a program without clear goals and specification of objectives to meet them. However, the January 1980 Implementation Plan (Appendix E) calls for an analysis of the MOS training most relevant to those soldiers requiring basic skill remediation. The information this analysis provides should make possible the specification of realistic program goals, based on identified MOS baseline training requirements.

The goal of increasing math and reading competencies is not itself in dispute. Those who favor a traditional approach and those who champion a more functional curriculum are in agreement that many soldiers cannot read or compute well enough to complete their MOS

training, and that academic deficiencies can lead to MOS training failures if they are not remediated. The larger question is: "How can this remediation best be accomplished?" The goal of BSEP should be to address the gap between a soldier's required level of competence and the competence he or she has. The Army needs a valid instrument to measure this gap and appropriate instruction to bridge it.

III. TARGET POPULATION FOR BSEP II

AR 621-45 describes those eligible for BSEP II as soldiers who are referred in one of four ways:

1. they have received a GT score of less than 90 during inprocessing at permanent duty stations,

2. they are recommended based on their unit commander's referral,

3. they are self-referred, or

4. they have received less than the minimum required for MOS verification on their SQT. (Among those in this group, priority consideration is given to soldiers whose retention is in the best interests of the Army as determined by the commander, but who are in jeopardy of being eliminated from active duty.) (Appendix D)

Course enrollment for BSEP II in the first three quarters of FY 79 was 84,204. Data from Army installations between October 1, 1978, and July 31, 1979, show that an average of 52.6% non-prior service enlistees, or 59,578, scored below 9.0 grade level and thus were potentially eligible for BSEP II (DoA, BSEP Symposium , 1979). The average age of first-time enlistees is between 18 and 21, and they are mostly male (TIME, 1980). Many soldiers are married men with dependent wives and children (Dueitt, 1979).

The number of enlistees who are not performing at the 9th grade level and are therefore eligible for referral to BSEP II has increased due to lowered service entrance standards, a higher percentage of high school graduates with less than 9th grade reading levels, and a shrinking pool of eligible young adults (Nunn, 1979; TIME, 1980). The Army has presently reached the point where of all non-prior service enlistees, 58.6% are eligible for BSEP II instruction (Executive Summary, Note 6). If the number of enlistees needing BSEP continues to increase, the Army will be faced with a mammoth task of providing remedial training to a majority of its enlistees.

The Army could initiate a number of actions to address this problem. One alternative would be to provide conventional basic skills training. However, to provide extensive basic skills training for so large a number of soldiers would be costly and time consuming and would not guarantee improved job performance. In the civilian sector, for example, a North American Rockwell Information

Systems study (Magnum & Walsh, 1977, p. 105) showed, that it takes approximately 73 hours of instruction to raise the average enrollee one grade in reading and, 82 hours of instruction for a one-grade increase in math, and that basic skills education was relatively ineffective for those youths testing below sixth grade level.

Another possibility would be to modify the criteria for eligibility for the program. This is now being done. Since improved scores on the General Technical (GT) test, a sub test of the DoD Armed Services Vocational Aptitude Battery (ASVAB) (DoD, 1978) have not been shown to result in an improvement in job performance, the criterion of less than 90 on the GT test has been eliminated. Instead, emphasis is being placed on other criteria which better reflect job performance. This modification may significantly alter the composition of the target population. Any soldier who is experiencing a problem on the job will be eligible for BSEP. The target population, therefore, will be more diverse as soldiers master the skills which caused difficulty, and return to MOS duties, making room for someone else with a difficulty in another skill area and perhaps in another MOS.

Admittedly, there will be some similarity between this new target population and the old; many who received low scores on the GT will also experience problems on the job and be referred to the program. But the target population for BSEP will be composed only of those soldiers with a critical job-specific need for skill remediation. This method of assigning soldiers to BSEP identifies the program as a source of help which is available to anyone on an as-needed basis. Offering help to all soldiers, rather than only to those scoring low on ABLE or GT tests will both enlarge the target population and make it more heterogeneous in terms of ability. This is an important consideration, since, McFann's (1971) studies of MOS soldier trainees showed that MOS training performance varied across, as well as within, mental categories. Making the BSEP population more heterogeneous in terms of ability could have positive effects on achievement. Rutter's (1979) recent research on factors influencing academic success in high schools showed that heterogeneity in terms of student ability is correlated positively with achievement, because more capable students affect performance and motivation of both teachers and students.

In any event, acceptance into the program on the basis of need changes the target population and mandates appropriate BSEP instruction that can meet varied job needs. Programs using high school equivalency materials will be irrelevant to the job-specific problems of this population.

IV. CURRICULUM

The key to a successful, functionally-oriented, military-job related BSEP II program is a well-organized curriculum which corresponds specifically with the revised needs and goals of the program. These needs and goals should be reflected in all components of the curriculum, including content, instructional strategy, instructional materials, and performance assessment. The BSEP II curricula presently in use will have to be revised to meet the new program modifications.

Although AR 621-45 (Appendix D) established a BSEP program to provide skill training necessary to meet military job requirements, the program was still based on the soldiers' grade level advancement in language and computational skills. The curricula that were developed reflected that emphasis. However, an evaluation of the program after it had been in operation for 15 months (Dueitt, 1979) concluded that BSEP needed a more functional (job-related) approach to basic skills development and the inclusion of cost-effective methods to teach learning strategies and life-coping skills. An analysis of the skills needed in particular MOSs and the development of instruction based specifically on improving those skills were recommended.

A more recent study highlighted inadequacies and concerns with the present BSEP II curricula (DeWeaver & Prather, in press). In a study to identify any existing BSEP II materials that respond to the need for a job-related, basic skills program, materials from a representative group of BSEP programs in the United States, Panama, Japan, Korea, and Europe were analyzed according to two primary functionally-oriented criteria: military job relatedness and suitability for adult learners. The study revealed that, on the whole, curriculum materials in use in BSEP are suited to a public junior or senior high school class, with a focus on general competencies rather than military-related job tasks. Readability levels are too high while interest levels for the identified adult target population are low. The study concluded that there is no single curriculum and no combination of materials presently in use which would entirely meet the Army's stated BSEP criteria. Some curriculum materials reviewed could be adapted to meet BSEP objectives. These materials, with suggested recommendations for implementation, were identified to the Army for use in BSEP programs on an interim basis while a revised, Army-wide program is being developed. The materials recommended addressed to some degree the requirement for military job relatedness and the characteristics of the BSEP target population.

A careful review of the curricula supports these studies. Judging the apparent suitability of the curricula in terms of vocabulary, examples, concepts, and learning strategies which appear to relate to military proficiencies, many BSEP materials in use have no relevance to this criterion whatever. Other materials have adapted GED or high school curricula for BSEP by simply substituting

military vocabulary and terminology wherever possible, while preserving the instructional objectives of a high school course. Even where the content of programs contains excellent military-related concepts and information, the instruction is often written at too high a level of reading difficulty to be of practical use for 9th grade readers.

Those materials which reflect the heaviest emphasis on military relatedness do not have the orientation towards high school course completion that is characteristic of most BSEP II programs (DeWeaver & Prather, in press). One approach teaches functional literacy using Army manuals, and relates classroom teaching to military job-related tasks. In these programs, though, it is difficult to distinguish the instruction from that offered in BSEP I, since the materials seemed to anticipate levels of competence below 5th grade. In another approach, BSEP training is integrated completely with military jobs and is indistinguishable from skill training. For example, Aberdeen Proving Ground's materials seem to be adapted MOS training materials rewritten at a lower grade level, with graphics to complement the text. In these programs competence in using reading and math skills is required to perform the job-related training tasks. The method used to deliver instruction for those soldiers lacking math and reading skills is not explained in the program materials.

In terms of suitability for adult basic literacy training, the readability of most BSEP curricula in use tends to be between the 9th and 12th grade level, although the materials' intent is to raise learner capabilities from 5th to 9th grade. An entry reading level no higher than grade 5 could be assumed, and no justification for providing materials written at the course exit level or above is provided. Math problem narratives, as well as reading instruction, are written at levels of reading difficulty above 5th grade, and many materials for independent reading practice are written at the 10th grade level or higher. Although an effort is being made at some sites to provide reading materials with multi-ethnic content, these materials are also at a readability level too difficult for the identified target population.

The interest level of the reading materials and of many math problems is unsuited to teaching contemporary adults (DeWeaver & Prather, in press). Unrealistic prose portrayals and text illustrations of life both in and out of the Army are common, and some texts appear to have been developed during World War II and never revised. Old magazine articles dealing with personalities no longer well known seem to be in common use. Some programs are using math and reading workbooks of the type common in lower elementary grades, which are inappropriate for adult learners.

Instructional strategies differed from the more traditional classroom lecture approach to automated instructional approach. The lecture approach that was in wide use prior to 1965 (Bunderson, et al., in press), is much less prominent. Generally speaking the

present instructional strategy seems to be based on an individualized approach to instruction (Bunderson, et al., in press). Most programs are using curricula which are organized into modules and intended to be learner-centered. Curricula usually provide feedback to the learner and to the instructor. Many require one-to-one interaction with the teacher. Independent reading exercises are included. Some curricula also provide the opportunity for soldiers to work with media on an individual or whole-group basis. It was not clear how the independent reading materials provided are used, whether as part of a class activity or as take-home or independent in-class assignments.

Most instructional materials can be used in a sequential fashion and allow a trainee to begin at the most appropriate level. Some curricula encourage teachers to utilize strategies such as redundancy and spaced review recommended by Weinstein (1978). Overall, however, there is insufficient attention paid to such strategies, given the findings of researchers that low-achieving students do not use these strategies while more successful students do (Weinstein, in press). The intended use of the materials by the teacher is not always apparent; and in some instances, the content to be taught is not sufficiently explained by the textbooks. However, whether this failing is overcome by supplementing the instruction with live teaching, or by the use of other materials is not evident.

The instructional materials conform rather closely to the strategy of the curricula. Modules vary in their levels of individualization. Some require a great deal of teacher assistance while some are totally self-instructional. The curriculum materials in use include independent reading materials, media materials, commercial books and other print materials, and computer-assisted instruction.

The performance assessment instrument used to assess both entry and exit competencies is, in most instances the ABLE II (Harcourt, Brace, 1967), especially the reading and math subscores, which measure achievement according to grade level equivalencies. The GT is also used by many BSEP programs to assess student performance. These tests are norm-referenced tests and are based on general skill competency, rather than specific military or job-related skill competence.

However, there are some sites that utilize criterion-referenced, job-related tests rather than the norm-referenced ABLE to evaluate performance in BSEP II. The Job Reading Task Test (JRTT), designed specifically to measure military job reading proficiency, is used at several sites, including Ft. Dix, Ft. Jackson, Ft. Bliss, and Aberdeen Proving Ground (DeWeaver & Prather, in press).

A successful functionally oriented BSEP II will have to develop effective ways to present appropriate instruction in a manner which enables soldiers to master job skills quickly and effectively.

Suggestions on how the curriculum can be revised to accomplish this are described in the sections below.

Content

The revised BSEP program is intended to provide soldiers on-duty, job related training needed for a successful service career (Farr & O'Neil, Note 7), including not only educational skills but also enabling skills necessary for achieving career advancement. To accomplish this, the focus of BSEP has been expanded to include MOS baseline skills, life coping skills, and learning strategies (Farr & O'Neil, Note 7). (The expanded definition also includes English as a second language which is not discussed in this report.) The content of the curriculum for a revised BSEP program should reflect this new emphasis.

MOS Baseline Skills. TRADOC defines MOS baseline skills as "those prerequisite competencies without which a soldier cannot be efficiently trained or perform adequately on the job." (Farr & O'Neil, Note 7, p. 308). This parallels the suggested goals and objectives for the revised BSEP. If the goals of BSEP II are to aid soldiers in successfully performing their jobs, the BSEP MOS baseline skills curriculum should be designed to enable them to do this. This will exclude most grammar and punctuation, phonics instruction, and secondary school lessons in social studies, algebra, and math word problems. Most subject matter irrelevant to military skills required of the soldier should be eliminated from BSEP II instruction. If BSEP II is to be military-specific, functional literacy training, wide-ranging content changes will have to be made to the curricula now in use.

To determine what materials are appropriate, the Army should conduct an assessment of the skills required for those MOSs in which BSEP students are being trained and determine what basic skills competencies are required for adequate job performance. It will then be necessary to determine which of these competencies should be included in the BSEP curriculum.

One effort developed around this functionally-oriented approach was developed by Sticht (1975a). This program (developed before BSEP was inaugurated) produced an experimental Army training sequence designed to provide a level of functional literacy appropriate to current minimal MOS reading requirements. To aid soldiers in performing job reading tasks (or tasks in which the soldier must refer to written material for information about a job skill), Sticht reviewed materials used by soldiers in six MOSs in which functional literacy problems were concentrated and identified the skills needed by the soldiers to extract information from these materials: using the table of contents, using the index, using tables and graphs, extracting information from the body of the manual, and following procedural directions. The program was developed in two Strands, Functional Literacy (FLIT) Strand I and II. Strand I is a technique-type course which teaches soldiers how

to perform the identified job reading tasks. Strand II teaches decoding, basic grammar and syntax, and conceptualizing and structuring, using simplified passages, vocabulary, and job concepts from the soldier's particular MOS. Using this approach, soldiers showed significant improvement in performance as measured by the Job Reading Task Test (JRTT) a job-related performance test for Strand I. Training effectiveness by component ranged from 33% to 83%, with highest improvements in using the table of contents, index, and tables and graphs, (83%, 67%, and 66%), and lower improvements for using the body of the manual and following procedural directions (48% and 33%).

Other Army efforts attempting this job-specific approach are the Big Bend and Boston University curricula (Farr & O'Neil, Note 7; DeWeaver & Prather, in press). Concentrating on the content of the MOS manuals, rather than on how to locate information in them, these programs teach prerequisite skills for mastering the information in regular MOS training. For both programs, the skills to be taught were chosen based on an evaluation of the MOS skills. Information is presented in a military context, and applications of the skill in MOS manuals are indicated. New military vocabulary is also taught where appropriate. In the Boston University program, DeWeaver & Prather (in press) found that many examples are taken from actual MOS exercises.

BSEP curriculum should avoid, when possible, material with very high concept content. McFann's (1971) research has shown that Army enlistees with low aptitude are limited in dealing with such materials. It may be that among BSEP II students there are some who can master such learning; however, it would seem appropriate for these courses to deal with concrete operational learnings (Berman, Note 1), since all information in the course is directly related to functional tasks with immediate job referents. When concepts must be taught, however, learning can be maximized by controlling the instructional sequences so that concrete learning precedes any necessary abstract learning (Gagné, 1965). The present BSEP curricula often do not do this, and this is also a problem in similar programs in other contexts.

The Navy Department, for example, in a project funded partly by the Department of Education, is attempting a program with a similar functional approach, the Job-Related Basic Skills Program (JOBS). Navy recruits who do not qualify for "A" school, the Navy training comparable to Army's MOS training, are rescreened, and ASVAB (DoD, ASVAB, 1978) subscores are checked to identify occupational aptitudes. Those who seem to have sufficient motivation and potential are sent to JOBS training which is an A school preparatory course. If they pass this course they are eligible for A school. A

combination approach, JOBS teaches technical skills, such as note taking and identifying the main idea in a paragraph, as well as concepts, theories, and essential basic skills needed for technical jobs.

Skills tested on the ASVAB which were needed for each job specialty were identifed. All training offered to the individual in JOBS was then related to remediating the deficiencies in those skills which the ASVAB score revealed. In the first year of the program's operation, instructional materials have been developed for four basic strands--propulsion engineer, administrative, clerical, and electronics. The curriculum outlines, instructors' manuals, and the diagnostic evaluation instruments used in the program have also been developed.[1] At the present time, the materials are being pilot tested, and revisions will be made as needed (Anastasi, Note 8).

Cmdr. George Anastasi, Action Officer for the project, at Washington, D.C., reports that the number of students completing the course to date is too small to evaluate its success. However, he feels the program holds promise. The attrition rate for the course is higher than the Navy would like, but considering that all of these enrolled would formerly have been excluded from A school programs, the success rate is encouraging. The Navy will track the graduates of the program through their A School experience and through their entire first enlistment. They are interested in such data as on-the-job performance, promotion, retention, and reenlistment (Anastasi, Note 8).

Since the JOBS program is very close in its goals and objectives to BSEP, the Navy's experience with this program could provide direction for BSEP planners in terms of curriculum content as well as other essential areas. However, based on a careful scrutiny of JOBS materials, it seems unlikely that BSEP could use the JOBS approach. JOBS instructional materials are not suited to a target population that is experiencing problems with functional literacy. Reading levels of the materials are as high as grade 13. Moreover several abstract concepts which would be foreign to a person new to the Navy are sometimes introduced in a single page, and line drawings of 3-dimensional tools and apparatus introduce the "lexical loop" problem (Bunderson, in press) in which the concrete is made abstract. No experiential teaching is included in the curriculum.

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[1]The authors reviewed the JOBS materials in the Department of Education's Basic Skills Office in Washington, D.C. This review provided a basis for the program description.

However, research supports the job-oriented approach to instruction and generic needs assessment models include the principle of ensuring that there is a requirement to train the student only to the task to be accomplished (Kulhavy, 1977). Relevance of training is a feature correlated with success, according to many researchers. For example, Kulhavy (1977) found that giving practice feedback to students who did not have knowledge related to the material had little usefulness. Johnson and Sulzer-Azaraff (1975) also found that instruction must have meaningfulness in order for students to recall textual context, and that even when learners were of high aptitude (pilots) the presence of unfamiliar and unexplained concepts and terms interfered with learning. Therefore learning basic skills through a familiar job context is a policy with strong support.

The job-specific approach to basic skills education is not without its detractors, however. Huff, et al. (1977, p. 12), for example, in a report on the Air Force basic skills programs, say that reading improvement which is limited to specific assignments and non-verbal training is only useful in the short run. Learners improve one specific skill, but are not flexible enough to do another job if reassigned, and they have difficulty in adapting to any changes in the information. It would appear that a balance should be struck between presenting material which has no relevance outside of the specific job setting and presenting job-related basic skills which can be used by a soldier to perform and improve on the job. If job-specific content is required to facilitate job mastery, and learning strategies and on the job supervised practice are included to ensure a degree of flexibility, the curriculum will not only help soldiers master the first job but provide them with additional skills that they can use to master another job task. If job requirements are greatly modified or a new job is assigned, it may also be necessary to provide further training. The new training should be better received if the first training provided a successful experience (Schneider, 1979).

Learning Strategies. TRADOC defines learning strategies as strategies that help soldiers acquire, process, retrieve, and apply information (Farr & O'Neil, Note 7). Stated more simply, they are strategies for learning how to learn. Emphasizing logical thinking and information transfer and application, they permit the individual to develop into an efficient, independent learner (Farr & O'Neil, Note 7). If soldiers are having problems grasping the instruction being taught, the inclusion of instruction on learning strategies should be helpful.

Singer (1973) provides support for the inclusion of learning strategies in the BSEP curriculum. In his report on motor skills and learning strategies, he discusses the complex process of receiving, processing, and using new information, especially in the motor skills. He emphasizes that even the most psychomotoric skills involve a great deal of cognitive skill and learning and that training programs need to provide learners with coping behaviors and learning strategies appropriate for on-the-job anticipated or unanticipated situations and for self learning techniques.

Singer further states that trainees need to learn foundational and fundamental skills as well as strategies and rules that apply to a variety of circumstances, to insure that they can not only perform a particular plan of action but can adapt to changing needs and situations. The actual kind of learning strategies taught will depend on the nature of the skill to be learned (self-paced or externally-paced; open-looped or close-looped) and the amount of cognitive learning involved. However, learners should be taught strategies to become familiar with the material or of the skill involved, and then ways to practice the skill until the standard of mastery is attained.

Weinstein's study (in press) also supports the use of learning strategies. She found that college students differ from community college students and high school graduates in their utilization of learning strategies and the kinds of strategies they use. College students in her study used a number of learning strategies, while high schoolers for the most part utilized only rote memorization as their primary means of learning information. These results imply that BSEP students should be able to perform at a higher level if they use learning strategies during instruction.

Like every other curriculum component, the kinds of learning strategies included should reflect the goals and objectives of the program: to master those basic skills needed to perform a particular MOS. To this extent, learning strategies can help a soldier achieve success in MOS jobs. To perform the MOS, a soldier must be able to use the instructional manuals which are the primary information source. Soldiers can be taught to locate information in training manuals and identify the needed information within a page or paragraph. They can also be taught methods to facilitate retention or review of the information found in the manuals through such study strategies as rereading, outlining, highlighting, and note taking. Weinstein (in press) cites evidence to support that students using these kinds of study skills, particularly note taking, demonstrate an improvement in performance. Strand I of the FLIT program mentioned earlier,

with its emphasis on the use of the table of contents, index, tables and graphs, the body of a manual, and procedure directions incorporates information retrieval strategies into its content. The Navy JOBS (NPRDC, 1979a, 1979b) program incorporates similar retrieval strategies into its curriculum. Because sailors receive duty training primarily by lecture and written materials, sailors in JOBS are taught learning strategies for taking notes and determining the main and supporting ideas from paragraphs.

The fallacy with this approach overall is that it relies a great deal on the premise that the learners can read and comprehend well enough so that these study skills will be of benefit. However, soldiers who cannot decode and comprehend words cannot identify the main idea from a printed page or benefit from outlining and note-taking strategies. Ability to use a table of contents to locate information on a particular topic is of little help if the soldiers cannot understand the page contents. As has already been noted, the instructional manuals are written at a much higher reading level than the levels of most BSEP II soldiers, and the results of FLIT showed that soldiers made their lowest gains on extracting content from the body of the material (Sticht, 1975a).

More beneficial would be an emphasis on those learning strategies that help a learner to absorb the information being presented (not necessarily in a written form), internalize and retain it, and retrieve it at the appropriate time. In a paper on learning strategies, Weinstein (in press) states that learning is no longer viewed as something that will simply "happen" if the proper stimuli are presented. Emphasis must also be placed on the degree to which the incoming information is being processed by the learner and related to his or her previous knowledge and experiences. The teacher should therefore not only present information to facilitate intake but also to relate it to previous learning. Many of the jobs in which a large number of BSEP II soldiers are concentrated include a number of psychomotor skills jobs (such as combat, clerk-supply, medic, communications, mechanic, and cook) (Sticht, 1975a). Therefore, the learning strategies taught should facilitate cognitive and psychomotor learning.

Learning the skills for these jobs, could involve what Dansereau (1978) refers to as primary strategies or direct manipulations of the material to be learned, as well as supporting strategies, or strategies that facilitate implementation of the primary strategies. Primary strategies, include strategies that aid in identification, comprehension, retention, and retrieval of information. Secondary strategies are strategies that enable a

learner to develop a positive attitude toward learning, and cope with internal and external distractors (such as tension, anxiety, noise, environment).

For example, primary strategies could include mnemonics, a way to remember information by associating it with a previously learned set of "peg words" or images. Examples of mnemonics include Every Good Boy Does Fine to aid in recalling the lines on the treble staff and "I before E except after C" to aid in spelling. Other related pairing strategies include relating new information with something already known and arranging items in a list according to smaller meaningful groupings.

Other primary strategies could include: visual elaboration such as drawing sketches of the process (Sticht 1975a); showing pictures of the new item interacting with or accompanied by a familiar object, or verbal elaboration such as paraphrasing, analogies, and the creation of stories or themes to make material more meaningful. Weinstein (in press), in her paper on learning strategies useful for BSEP soldiers, suggests the use of several such strategies for using military materials.

Life Coping Skills. In AR 621-45 and again in a final report a year later (Dueitt, 1979), the Army committed itself not only to providing on-duty, job-related basic skills training to improve the soldier's performance on the job but also to improving the soldier's life coping skills.

In an effort to identify these skills so that they could be incorporated into BSEP instruction, a panel convened by TRADOC at Ft. Monroe, Va., in September 1979, identified a variety of skills needed to cope with military life successfully (DoA, Note 9). These included skills related to proper military dress and behavior, understanding military authority and the military justice system, and awareness of military career and reenlistment benefits. They also included skill in setting personal goals, consumer awareness, health education, personal and family concerns, leisure time activities, citizenship responsibilities, and adaptation to life in overseas posts.

The proposed content will depend on the definition. The Army seems to be using a broad interpretation of the term "job-related life coping skills" for its revised BSEP program. The Dueitt Report commits the Army on-duty education program to "improving soldier capability of functioning in the community outside the immediate work setting." Also, TRADOC, (Appendix F) defines military life

coping skills as those competencies that enable the soldier to adapt, adjust, or otherwise successfully deal with the demands associated with military life. However, using this general interpretation, life coping skills can refer to any situation that might come about by simply having a particular job. This could include not only non-technical job performance skills, but also skills related to functioning in a new and often different environment, such as finding a place to live, reading maps and bus schedules, getting help for personal problems, and getting absentee ballots. TRADOC includes seven subareas that range from knowledge of the military system to coping with family and personal problems (Farr & O'Neil, Note 7).

Hall, in her paper on job-related life coping skills for BSEP (in press), supports the idea that a life coping skills program should not cover every facet of living independently, but rather should concentrate on job-related life coping skills. Her program is based on a broad definition of what is job-related. She proposes a course of study to duplicate as closely as possible the actual experiences that will be faced by individuals who leave school and go out on their own. Her recommended course would include instruction in 24 life coping areas ranging from completing forms neatly, accurately, and completely, finding and performing on a job, and finding a place to live, to registering to vote and planning a realistic financial budget. Her program was designed for high school graduates, but some of the items can be applied to a generalized job-related Army life-coping program. Those include: gauging availability of permanent and temporary living accommodations, finding out about the career opportunities in the Army, knowing the appropriate Army offices to contact when specific personal problems arise, applying for an absentee ballot, reading a road map and bus schedule, and knowing how to use travelers' checks. Some would be especially useful for soldiers in a new Army environment. Other topics included on the outline such as how to compute income tax, write a check, or get a social security card have minimal relevance to job-related performance for soldiers already at their permanent duty station.

However, this general interpretation of "job-related" does not correspond with the military specific emphasis given to the BSEP content areas. A job-specific life coping skills curriculum should include only those life coping skills that have a direct influence on job performance. This would limit the content to those nontechnical social skills needed to perform on a job, such as worker attitude and responsibility.

For example, in the civilian sector, the Job Corps' World of Work (DoL, 1979) course which is designed to provide skills necessary to find and keep a job, covers topical problems encountered by employees during the first few weeks on the job, and is divided into four major topics: "New On the Job," "Dealing with Supervisors," "The Rules of the Game," and "Moving Up or Out" (DoL, 1979, p. I-8). Corpsmembers begin this program as soon as they arrive in the Corps and therefore begin applying the skills in the Job Corps environment, even before they leave and get a job. The program has sections on consumer education, supplemental skills, and exit readiness which are taught after trainees have completed their instruction on job readiness and are ready to face the work world.

The Army addressed the distinction in the definition of job related life coping skills in September, 1979, when it prioritized the 16 life-coping skills to be taught in BSEP (DoA Life Coping, Note 9.) High priority was given to such skills as leadership-role, accountability on the job, coping/dealing with peer pressure, and goal setting, while lower priority was given to consumer know-how, local laws and customs, movement, spiritual growth, and leisure time activities. The Army thereby acknowledged the need for helping soldiers adjust to the surrounding environment, but are highest priority to job performance.

However, if the Army is concerned only with military job-related life coping skills, only those skills necessary for job performance should be included in the BSEP II instruction. A broad-based life coping skills program could include skills in every conceivable area from consumer awareness to sex education. More general life-coping skills including more general reading and math skills, should be provided in other off-duty educational programs. The on-duty program should concentrate on the life coping skills to improve job performance.

To prepare the content for its BSEP II program, the Army could adapt the four major headings used by the Job Corps in its World of Work program, in which would be included the Military Life Coping Skills Panel's higher priority, job-related coping skills (DoA, Note 9). Because of the unique Army situation where many people from various backgrounds, ethnic groups, races, and sexes must work together, often for the first time, the life-coping curriculum should include training on interpersonal relationships and getting along with others. Other more general life-coping skills can be offered in off-duty programs.

Instructional Strategies

Instructional strategies are those methods used by teachers and curriculum designers to insure that the content of the instruction is assimilated. Instructional strategies used in BSEP must be suited to the target population for BSEP instruction, the content to be taught, and the constraints imposed, in terms of staffing and scheduling, by the military setting. Therefore they must be strategies appropriate for teaching adult and minority students in a short-term, military, job-related basic skills remediation program. Programs with similar goals in the civilian sector described by the National Association for Public School Adult Education (NAPSAE) (1979) and the Job Corps (DoL, 1979), focus on individualized entry, placement, and progress, modular instruction, teacher-assisted instruction where feasible, and objective measurements of achievement. Strategies used in BSEP should allow the program to take the soldier at the level of achievement where she or he is and provide him or her with the skills required to perform adequately in a military job. Since most adults in basic education programs have a history of failure in conventional school settings, such programs require instructional strategies which do not closely duplicate those with which students have experienced failure, such as lock-step, lecture methods. That those methods are unsuitable is supported by the extensive experience in adult basic education of the programs sponsored by the Department of Labor and the NAPSAE cited above. BSEP programs should therefore be modular and individualized.

The review of research related to the Youth Employment and Demonstration Project (YEDPA) of 1977 (Hoyt, 1978) showed that successful programs for young adults used strategies which improved such skills as developing and executing plans, working with others, controlling impulses, communicating, problem solving, working within an authority structure, and experiencing rewards for accomplishments. Rutter (1979) also found student responsibility for learning and participation in decision making correlated with academic success. These are skills which can be developed through encouraging students to take responsibility for their own progress, interact with their peers in a learning situation, and receive feedback and reinforcement for their accomplishments.

One strategy which encourages students to plan and work with others is peer mediated instruction, which is used by Job Corps programs (DoL, 1979). This technique, developed by Rosenbaum (1973), establishes procedures and provides materials for students to work in pairs, each one alternating as student and teacher. The underlying theory is that when students must explain material to each other they are both motivated to master it. The peer-mediated model includes all class members, and thus it can provide more interpersonal feedback and reinforcement than can programs which depend on a teacher, tutors, or aides. It would be particularly useful in isolated settings where teachers were not always available. Peer-mediated instruction not only offers an opportunity

for interpersonal interaction, but it can also embed several of the learning strategies which Weinstein (in press) has shown to be identified with improved study skills, for example, using rote strategies which emphasize repetition of the material learned; using physical strategies which involve the physical properties of the material, such as spelling; and using verbal elaboration which involves actively working with the material by asking and answering questions about it.

Weinstein (in press) found that learners, if they are to be successful, must enter the learning situation purposefully and with the motivation to be responsible themselves for actively engaging the material. It is the responsibility of the instructional developer to include prompts or activities that will assist students to engage the material effectively. Developing instruction appropriate for peer-pairing can accomplish this result.

The Personalized System of Instruction (PSI) approach of Keller (1968) is also a strategy which encourages the development of coping skills, placing responsibility upon the soldier to complete modules of instruction, ask for help when necessary, and request assessment and feedback on performance when appropriate. It is a well-organized and widely used plan for providing individualized, modular learning. Keller, an early promoter of individualized instruction, said that his experience with students had taught him that they were not unmotivated, and that they could learn a great deal when the right contingencies of reinforcement were provided. PSI students move through modular course materials at their own pace, taking tests from student proctors when they (the students) are ready, receiving feedback as to whether mastery level was reached, and being tutored in any information not mastered. Students who master the information can become proctors, who provide feedback, tutoring, and social interaction, and become more effective as they gain experience (Johnson & Sulzer-Azaraff, 1975). PSI focuses on student, not teacher, activity. Since the use of student proctors in college courses increased the likelihood of the proctors' having career-oriented goals in the discipline, soldier proctors might also be expected to become more competent and valuable in their own MOS, and this instructional strategy could help students enlarge their areas of responsibility and develop leadership potential.

Instructional strategies used in BSEP should deemphasize dependence on reading and writing. Bunderson, et al., (in press) points out that orienting military job-related skills training too heavily towards print and reading distorts the learning process by mediating psychomotor job skills through print. This results in "the lexical loop" in which presentations that should be visual, auditory, and tactual are translated into words. This translation requires the soldier to then translate verbal abstractions back into job skills that are rapid, spontaneous, and thoroughly ingrained (Bunderson, et al., in press). BSEP instructional strategies should minimize this. Where appropriate, hands-on or other realistic

experience such as simulations should be provided. Such strategies as using interviewing techniques, where verbal discussion by the student with an instructor can replace written assignments, should be employed wherever feasible, as is also suggested by Goldman and Burnett (1971) in their discussion of this problem in a public school context. These authors concluded in their book on visual education that many students have been estranged from the joy of learning and have dropped out of conventional education because of their verbal-language limitations. They contend that visual language is the most pervasive and influential educational experience of American children and should be given a prominent place in instruction.

Many soldiers, according to McFann (1971), require more time to accomplish MOS training tasks than is allotted. Since time on task has been found to be a very important variable in learning success (Rutter, 1979), BSEP materials could provide opportunities to repeat the tasks which require basic skills and to comprehend those which are task related.

Another important variable in learning described by Rutter (1979) and the NAPSAE (1969) is the experience of success by the student. To maximize early success, BSEP modules should be arranged in small steps in a sequence from least to most difficult and from least to most abstract and presented in appropriate formats. It is especially important that instructional materials first presented contain lessons which the soldier can master, to build the soldier's confidence that the MOS tasks can also be mastered. The BSEP student has probably failed frequently in school settings, and now he or she is also failing in some aspect of MOS task training. It is also important that BSEP instructional materials be designed in small steps and provide feedback and reinforcement so that the soldier can assess his or her progress.

For example, recognition and use of MOS-specific vocabulary words may be essential to MOS success. These words should be taught by the most concrete method possible. BSEP instructional materials must include realia. For example, if cooking terms are to be learned, the BSEP learning modules can include samples of each kind of food, utensil, etc., which typifies the vocabulary words to be learned. These materials will permit the soldier to role play activities he or she is expected to relate to the words in the lesson. When role playing is not feasible, then these foods, utensils, and the training activities associated with them should be modeled by means of 8 mm filmloops, or videotapes. The soldiers should have an opportunity to use the vocabulary words being learned and to discuss the MOS-related activity with the teacher or another student. Lists of words in print, with pictures and an accompanying audiotape which pronounces, spells, and uses the words can also be included in the training module.

Sticht (1975a) and others have pointed out that in all the military services technical manuals are the primary source of

on-the-job training information. Therefore, strategies for using these manuals are needed. Sticht suggests the use of such helpful strategies as working as closely as possible with the materials to be used by providing simply-written indexes to manuals, paraphrasing the most-used parts of manuals in soldier "jargon," and planning instruction in the use of manuals so that BSEP training sessions correlate with MOS training activities.

A hands-on approach for teaching soldiers to cope with military manuals has also been suggested by Weinstein (in press) in her analysis of the Soldiers Manual of Common Tasks (DoA, Soldier's Manual, 1977) and BSEP instructors should describe these suggestions to the soldier and give instruction and practice in using them. She recommends, for example, that in dealing with new materials (i.e., the manual), the soldier be instructed to (1) attempt to create an overview or advance organizer, (2) skim through the materials looking at topic sentences, key phrases, and descriptive diagrams, (3) carefully and actively read the material while using mental imagery and verbal elaboration to add meaning to the material and to group the material into subsets to facilitate organization for recall; (4) use a self-test, such as oral reciting, writing an outline of steps to follow, or using key words or images to cue recall of the information, (5) identify which parts of the material should be reread by using a self-test, (6) immediately practice any physical task, performing under supervision to get feedback on the adequacy of the performance.

Hall (in press), in her paper on Job-Related Life Coping Skills, recommends instructional strategies that stress a relevant, functional approach. For example, she suggests developing instructional strategies which use realistic items such as forms in current use, and inviting appropriate speakers to discuss relevant issues. She also suggests that BSEP instruction focus on comprehension of vital facts, not on rote repetition, so that the soldier will be able to transfer the learning from the instructional setting to life experiences. She also cautions that copies of all forms, directions, and other materials taught should be provided for future reference, rather than that the soldier attempt to commit to memory important but seldom-used information.

Another strategy suggested by Hall which could be adapted for use in BSEP is using a learning contracts for soldiers who cannot attend formal sessions. In this instructional method, the soldier is given a workbook/textbook, the contract is explained, and the instructor and soldier sign the contract which states that the instruction covered by the contract will be completed at certain intervals. This involves the soldier in a formal written contract agreement, encourages him or her to budget time, and assume responsibility. All of these features are in themselves desirable outcomes for a life-coping program.

As we have mentioned previously, however, we have serious reservations about including a broad-based life-coping curriculum in

BSEP. We feel that interpersonal skills in relating to fellow workers and supervisors of different backgrounds are essential and can be fostered during task-related instruction through peer-pairing. A knowledge of Army time, metrics, foreign signs, and tables which are job-related should be integrated into the MOS work site and into the job-related BSEP instruction, not presented as "coping" skills. If they have a bearing on job performance they are part of the job information and their significance to job performance should be apparent to the soldier.

It should be stressed that coping skills of the BSEP soldier must be reinforced at the MOS training site if such training is to be useful. Racial and sexual attitudes at the job site, for example, must give credibility to such training in BSEP to the same extent that BSEP basic skills training has reference to MOS training. Negative attitudes of on-the-job personnel towards trainees who cannot read have been reported in the press (Reed, 1980), and Dueitt (1979) has condemned such attitudes as unworthy and unhelpful. Racial antagonisms have also been reported to be widespread, hindering discipline which is essential to combat readiness (Reed, 1980).

Instructional Materials

Instructional materials used in BSEP II curriculum should be print and non-print individualized modular materials through which necessary job information can be communicated to the BSEP soldier in formal instruction outside of the MOS job-site. Instructional materials for BSEP should include realia, military forms and manuals, modified military materials designed to make the manuals themselves accessible or to bypass the manual in teaching the job task information, and realistic simulations, including computer simulations and audiovisual materials which can provide job information or simulate job situations.

As MOS task analyses are projected in the report of the Army's BSEP Symposium, (Note 10), to identify task elements for each MOS and determine which elements are related to basic skills proficiency, these elements should be carefully reviewed to determine whether basic skills competency is critical to performance, or whether a different approach to training or job design will enable MOS personnel to teach the job task elements without relying on reading or math. Bunderson, et al. (in press), have challenged the primacy of print literacy as an educative norm for military training which often requires psychomotor skills. Most MOS jobs now require soldiers to read their MOS manuals; but it is patently unrealistic to expect that soldiers who have little competence in reading will be able to master these print materials many of which are written in a tightly packed format, with difficult and technical vocabulary suitable for college level readers.

MOS materials should be presented in a more accessible form than is presently being used. A 6th grade readability level for military manuals is, in fact, required by MIL-M-38784A; and most manuals in use are well above this level (Kniffin, 1979). Some basic skills training might be eliminated by providing less difficult MOS manuals.

Some basic math skills should probably not be taught either. Where simple hand calculators can be used, it might be cheaper to provide them or require the soldiers to buy them than to send soldiers to BSEP to learn to do the computations required for their work. Gilbert (1979) has pointed out that training is costly and that most of the costs of training result from time employees spend away from their work in a training situation. MOS task analyses which eliminate or clearly identify needed basic skills training will be reflected in the development of more efficient performance and lower training costs. Time in the BSEP program could be shortened and instructional effectiveness improved by applying the findings of MOS task analyses to reassess basic skills training needs.

Job Aids It is often possible to use job aids to guide performance so as to preclude the need for reading training materials or doing computations (Horabin, 1971). Examples of such job aids would be arrows, color codes and directional signs, or photographs and charts. For example, a job aid could be a sign showing different types of fire extinguishers with pictures of the kinds of burning materials for which each kind is used. An example of an aid which might eliminate the need for computation would be Gilbert's (1979) system for the conversion of Farenheit temperature to Celsius by the intuitive device of using simple rhymes, such as "20 is plenty." This quickly teaches the concept that 20° Celsius is a comfortable temperature, without involving complicated conversion formulas. MOS training should develop and use similar job or performance aids which minimize formal literacy training requirements.

Efficient job aids used in training can reduce the time for training, and provide high-quality, low-cost instructional tools. The hand-held calculator is itself a kind of job aid, as is the commonly-used "go-no go" gauge which allows an inspector to judge whether a part is within tolerance by using the discrimination built into the tool. The engineering calculations which made this decision are embedded into the gauge design.

Training Modules. As tasks are analyzed and basic skill requirements become known, modular BSEP instructional materials can be developed which will assist soldiers to meet essential basic skills requirements, either by teaching the interpretation of the job aids used, by teaching the essential reading and math required, by teaching the MOS task information, or by providing the soldier with strategies for assimilating that information.

Soldiers should be required to take only those BSEP modules which they need and the BSEP program should be competency-based. It should identify for the soldier the basic skills proficiency needed and return the soldier to the MOS site as soon as the skills have been mastered. MOS trainers will need to be entirely familiar with the BSEP training modules which complement their teaching and capable of evaluating the BSEP instruction in terms of job performance change. This will require a joint MOS-BSEP effort in which instructors from both programs will be involved.

Materials used in BSEP learning modules should be either exactly those used in the job task, or they should be materials which will present the same job information, but in a format more accessible to the functionally literate soldier. Commercial materials for use in individualized civilian basic skills reading programs have been compiled (Giuliano, Kacandes, Lethbridge, & Serrao, 1972), and individually prescribed instruction in Job Corps programs are

described in Job Corps literature (DoL, 1972a, 1972b). However, none of these materials will be MOS job-specific and the relationship of the BSEP curriculum materials to MOS job criteria should be obvious to the soldier. General educational materials presently used in BSEP programs should be replaced with content which contains accurate, work-related vocabulary, problems, and examples related to MOS task requirements. There is no evidence that an information gap which reflects a lack of military-specific information will be bridged by BSEP materials which teach general competencies such as spelling, grammatical usage, etc., in a short training course (Sticht, 1975; Bunderson, et al., in press). This is not to deny the usefulness of these subjects, but merely their ability to improve competence immediately on specific, job-related tasks which do not require such information.

The Army is not alone in facing the need to reevaluate GED and high-school equivalency materials as a means to improve work skills. Civilian educators also face the problem of the irrelevance to career competency of traditional teaching and assessment tools, and have, in large measure, had to reevaluate the objectives of elementary and secondary education. A large Federal and state effort has been implemented to identify the skills which are necessary for students to succeed in the job market and include them in public school curricula (Marland, 1973). Competency test requirements have been instituted in many states, because high school completion can no longer be correlated with the competency in basic skills required for work (Hall, in press). However, a serious problem in selecting work-specific instructional materials for civilian career education programs arises from the inability to predict with certainty which jobs students can expect to find and arrange to teach the competencies these jobs require.

The Army on the other hand, has the capability to determine needed job competencies and to provide ongoing feedback to training programs as to their effectiveness in enabling soldiers to master these competencies. Therefore, the Army should be capable of developing BSEP materials which teach to its own MOS requirements and of providing feedback on their effectiveness. BSEP materials can be developed which take advantage of the Army's unique position as both provider and consumer of its own career education. Those within the Army education community who prefer materials related to high school completion for the functionally literate soldier should consider the findings of Sticht (1975a) and Farr (1973) that such materials do not correlate with improved military job competence or help the soldier to succeed in the Army. Berg (1971) and Harrison (1972) also found that in the civilian economy, factors other than years of formal schooling often have a significant impact on job performance, and Magnum's investigations on the effectiveness of training in basic skills on youth employability point to the greater usefulness of job-related curricula (1973). He found that youth employment programs which taught basic literacy skills in the

civilian sector had their greatest success with job-related curricula. Of all the Job Corps programs, for example, those which were closely correlated with employer and union training have had the most success.

The insistence of the Army training personnel that BSEP provide only basic skills training that soldiers need to perform MOS tasks has strong support from the Army's own research, which concluded that it was ineffective to teach what the learner could not use (Kulhavy, 1977). Furthermore, limiting BSEP programs to goals related to specific, well defined objectives makes use of the behaviorist model of teaching which has been shown to be best suited to low-ability students with grade-level competencies between 6 and 9 (Berman, Note 1), a population very similar to BSEP trainees.

NAPSAE (1969, II-20, 21) recommends that adult basic education use methods and materials which draw upon the following principles :

(1) the law of effect: provide success experiences

(2) the law of primacy: create immediately a sense of need for the information to be taught

(3) the law of exercise: teach what can be immediately practiced

(4) the law of disuse: do not let the skill go unused

(5) the law of intensity: relate the instruction to realistic applications.

In the past, there has been little involvement by military training personnel in the development of MOS-related BSEP training materials and this is reflected in curriculum materials in use which attempt to develop general reading and math skills to improve the soldier's ability on standardized tests. When such military involvement has been available it has had a marked effect on the efficacy of BSEP in improving MOS competence. Larson (Note 5) reports that in 1978 after Ft. Dix designed literacy training specifically related to MOS requirements, and MOS trainers checked the course materials for usefulness and accuracy, MOS training achievement of trainees in this curriculum showed improvement. Farr (1978) also reports that when military personnel were involved in BSEP classes, they contributed to the accuracy and credibility of the BSEP training.

Military Manuals. The primary reading materials to be mastered by the trainee appear to be the military manuals, and mastery of this reading is a different instructional objective than that of improving general reading. The vocabulary in these manuals is specialized and the concepts presented do not relate very closely to any civilian

referent. The readability of most of these manuals is higher than the 9th grade. Therefore, general reading training will not, in a brief period of time, improve skills sufficiently so that functionally literate soldiers can read these materials.

Several types of efforts have been made to teach soldiers to use military manuals through BSEP training. For example, Sticht (1975a) developed Job Reading Tasks, which consisted of instructions in finding information in the manuals themselves. These lessons represent good learning strategies, but in themselves they have not been particularly useful in terms of job task improvement. Although soldiers improved in the ability to locate material, they still could not comprehend the content.

A more practical effort is the use of revised manuals which have the same content but also contain illustrations and pictures which would make suitable job aids for the MOS training site. For example, an Aberdeen Proving Ground BSEP II manual (Farr & O'Neil, Note 7) on shop safety sketches the types of fire extinguishers in use and groups them on separate pages with sketches of the kinds of burning materials, i.e., wood, cloth, etc., which they can be used on. Each page of sketches is also accompanied by the Army descriptor for the kind of fire it shows. Such a revised manual gives an opportunity for even the non-reader to grasp the essential information through the illustration, while allowing the poor reader to read more information written at a simple reading level. Peer pairing would easily allow all BSEP soldiers either to read the written information or to have assistance with reading it. A job aid in the shop area with the same information would make it very likely that this information would be learned. Collaboration between MOS and BSEP trainers could make it possible to develop such materials for use at both MOS and BSEP training sites.

Sticht (1975b) also suggests that military manuals be rewritten in soldier "jargon," and that guides to manuals be provided for soldiers who must use these manuals in their MOS . Instructional materials such as these should be developed for use in BSEP training for each MOS in which literacy problems are identified. Since the number of manuals might be very great, and besides, manuals are subject to revision, these instructional materials could be tailored for individual students by microcomputer-videodisc systems such as those (Molnar, 1980) has suggested. It would then be possible to print out for each individual those pages of the manual which were most relevant to his or her MOS and to include interactive teaching, testing, and recordkeeping which the BSEP and MOS supervisors could evaluate to determine the effectiveness of the BSEP instruction. This computer-videodisc instruction would also allow soldiers to work in a drill and practice mode on math competencies such as those which are prerequisites for using maps, measuring, counting, and using the compass and protractor--once these competencies had been taught using realia and military examples.

Simulators. For some modules, simulators might be appropriate. They are a step removed from real objects, but many military and civilian training projects have used them with good results to teach skills, such as piloting airplanes and driving automobiles. In using simulators the transfer of training to the job site is all important. It is possible to simulate part or all of a task, but whatever is simulated must call for the job skill required. A part or whole task simulated experience could introduce or reinforce MOS concepts.

Materials for Learning Strategies and Life Coping Skills. In addition to teaching MOS task components themselves, BSEP programs can provide materials to assist soldiers to improve their learning strategies, so that they will have less difficulty in assimilating new MOS information. Weinstein (in press) has shown that there is a relationship between the use of such strategies and academic success. The materials used in BSEP should require the soldier to use such strategies as verbal and physical elaboration, and should encourage positive attitudes and concentration. Instructional materials which teach study skills can be adapted from commercial study skills materials available such as those produced by the National Association of Secondary School Principals (1974). Designed for 8th, 9th, and 10th grade students, their HM Study Skills program includes worksheets, a teacher's guide, and a manual for workshop leaders. Materials also can be developed from guidelines proposed by Weinstein (in press), Singer (1978), and others and used to show the soldier that by efficient strategies, he or she can capture and retain more of the information presented on the job site.

Instructional materials used in BSEP to teach job-related life coping skills might also be role plays which model the heirarchical structure of Army ranks and explain the privileges and responsibilities associated with each. Pamphlets or flyers containing pictures of insignia and uniforms appropriate for each Army service branch could be included, so that different uniforms, patches, scarves, etc., would be recognized as identifying different Army units. This has been done previously in both Army and Navy (McGoff & Harding, 1974) reading programs, but publications in color might be more appropriate.

Job accountability might be taught through instructional materials that show organizational charts which relate the mission of the soldier's own unit to the Army's mission. The soldier should be able to perceive himself or herself as having a role within the structure, and to identify the responsibilities for which he or she and other members of the unit must be accountable. Games or simulations which model actual military efforts and portray the breakdown of the effort that will result from poor performance at different levels could teach this concept. Computer simulation of this type could be easily adapted from existing games courseware.

Life coping skills modular materials should stress the importance of cooperation between people to accomplish the military

mission. Since ethnic, race, and sex differences among Army personnel often have an influence on individual and unit effectiveness (Reed, 1980) BSEP materials could use films to stimulate a discussion of differences. Awareness sessions could be presented on videotapes or live discussions could be led by experienced discussion leaders. Filmstrips which deal with differences among people are available commercially, and some are described by Hall (in press), but the discussion among the soldiers concerned is essential to make certain that an appreciation of the need to overcome prejudices and attitudes that hamper job effectiveness is communicated.

Many instructional materials used in BSEP will contain information which is critical to a soldier's job performance. Therefore, whenever possible, materials should be available for the soldier to keep for personal use and review. It should also be possible for soldiers to take BSEP materials from the learning center for study during the term of their BSEP course work.

Performance Assessment

As stated earlier, the ABLE test and to a lesser degree, the GT test are presently used in most programs to assess performance by soldiers in BSEP II. For those programs, improved test scores are indicators that the program is successful in accomplishing the objective as outlined in AR-621-45: to raise general educational competencies to grade 9 as measured by the ABLE II (Appendix D).

However, improved performance on the ABLE or GT tests may not result in greater job proficiency. In his study on basic skills education, for example, Farr (1978) administered the Metropolitan Achievement Test (MAT) (Harcourt - Brace, 1964) - Intermediate to 185 BSEP graduates at 12 sites. Their mean post-test score on the MAT was 7.7. However, on a cloze test developed to measure reading comprehension using sections of the military manual, the Soldier's Manual of Common Tasks (DoA, 1977), where criterion levels for soldier performance were inadequate reading comprehension (0=70%), adequate reading comprehension (70%-80%), and good or above average comprehension (over 80%), the mean percentage of the soldiers performed inadequately. Also, although soldiers at 11 of the 12 sites evaluated in Farr's study demonstrated gains in all three areas of basic skills as shown by increases on means of pre/post tests of the Test of Adult Basic Education (Farr, 1978) (since replaced by the ABLE), soldier attitude measures indicated that they had difficulties in seeing any relationship between BSEP classroom work and their Army jobs. They saw little improvement in their job performance as a result of BSEP instruction, although they were pleased with their BSEP courses and satisfied with the competence of the instructors.

Sticht (1975a) addressed the need for a more military-specific, functionally-oriented assessment instrument. The FLIT Job Reading Task Test (JRTT) mentioned earlier being used at some sites

instead of the ABLE. The tests consist of job reading tasks as determined from on-the-job interviews with soldiers in BSEP II. The instruction provided in the BSEP course is also based on the basic skill task elements that soldiers identified, thereby creating a direct correlation between the information taught and the skills being evaluated in the final assessment. Data on the program (Sticht, 1975a) showed that 50% of the trainees taking the instruction improved more than two grade levels as measured by the JRTT in the reading of job-related materials. Seventy-five percent showed more than a one-year gain, while less than 10% showed no gain. Comparable scores for these trainees on the USAFI general reading test showed that 25% of the trainees did not achieve any gains. Other BSEP programs do not have one comprehensive final assessment instrument but do include assessment instruments throughout the instruction to test mastery of a particular concept.

Of the group of programs using the ABLE or GT as the final assessment instrument, some have comprehensive, job-specific placement tests that are administered before instruction takes place to determine the soldier's entry level. The Military Specific Functional Literacy Test (MSFLT), developed by James Flood (Note 11) of Boston University, is one example. In his analysis of MOS training, he determined the prerequisite skills needed by soldiers in order to perform successfully. Instruction in the resulting basic skills program is directly related to those MOS prerequisites, with each lesson or exercise indicating a particular MOS to which it is related and any prerequisites needed to perform that exercise. Because the placement test is also based on the task analyses and the instruction, the MSFLT reflects skills needed to complete the basic skills instruction successfully and therefore to perform the MOS tasks. It also has the potential to be used as a performance evaluation tool, but whether it has been so used and to what extent could not be determined.

The Big Bend diagnostic test (Antonich, et al. Note 12) is another job-specific placement instrument. Developed on principles similar to those used in the MSFLT, the Big Bend test is also used to determine the point at which a soldier needs to begin instruction. It too may have been used to test whether soldiers have successfully completed the instruction, but to our knowledge it was not so used.

The Army has formally acknowledged the need for an Army-wide change in BSEP assessment procedures to the use of Army-Specific reading tests (Dueitt, 1979; Appendix E). The evaluation report (Farr, 1978) suggested that, in conjunction with a functional approach to instruction, an Army-specific reading test for diagnosing basic skills deficiencies be developed for use instead of a generalized reading test. However, this is only a partial solution to the issue of job-specific performance assessment. A successful assessment would measure all Army-specific basic skills, math as well as reading and any other required basic skill. More

importantly, the performance assessment should be a two level process which will evaluate not only the soldiers' performance in BSEP II training but also determine the effectiveness of the training in preparing the soldier to perform on his or her job (DoA, Army BSEP, Note 10). Developing such an assessment measure requires a well defined organized plan of action. Key issues are discussed below.

Goals and Objectives. Evaluation of a program is very closely related to the program's goals and objectives. Goals express the overall intent; objectives describe specific behavior and standards. (Davis, et al., 1974). For example, a goal could be that a soldier be familiar with jeeps. Objectives for that goal might be that a soldier be able to start, drive, and park a jeep. Evaluation is closely tied to goals and objectives in that it answers questions such as "How will I know if students have reached the objectives?" It therefore becomes extremely important that the goals and objectives of the program are well defined, so that the evaluation can be solidly based and will measure what it is intended to measure.

This is one problem with the BSEP II program. Although the program goal has been stated--that the soldier be able to perform on his or her job--the objectives for reaching that goal are not clear. The objectives of improving scores on the GT or ABLE exams have been superseded by the redirection towards the use of job-specific assessments, but the specific assessment instrument has not been identified.

To accomplish the first level of evaluation of successfully completing BSEP, the appropriate evaluation instrument would test only those basic skills required by a soldier to perform in his or her particular MOS. Ideally, this requires a complete task analysis of MOSs from which BSEP II soldiers usually come and an evaluation tool for each, based on the identified, required skills. The test would exclude any basic skills that were "job aided," i.e., presented in a job aid such that basic skill mastery was not necessary. From those identified tasks, the required basic skills should be separated to make up the "basic skills proficiency requirements (BSPR)". These skills would be taught in BSEP instruction. Soldiers performing minimally on their MOS BSPR test would be considered to have successfully completed BSEP.

The assessment instrument for the basic skills proficiency requirements would test all the basic skills identified by the task analysis. It should be noted that the types of required skills will have an impact on the format of the tests. For the tasks that are psychomotor, the competency test should be psychomotor.

The second level of performance assessment--that of evaluating the actual job performance--should be done at the MOS job site. This could be coordinated by the BSEP instructor but requires a close interaction with the MOS instructor. The assessment should measure whether a soldier is in fact performing better because of

the training. It could be measured by standardized tests such as performance on the Skills Qualifications Test (SQT) which is a proficiency test for a particular MOS, or through the use of questionnaires to be completed by MOS instructors, military supervisors, and the soldiers themselves. The cumulative results of on-the-job performance can be used at a third assessment level -- evaluation of the program.

This approach is similar to many existing assessment approaches, but with slight modifications. Sticht's (1975a) JRTT seems to evaluate procedures. This proposed assessment would evaluate content. Many ideas presented here also resemble those used by the Boston University and Big Bend programs. However, one key factor in the assessment being proposed is the time of the performance assessment. Unlike the Boston University or Big Bend programs, where assessment is done after the whole 340 hours of instruction is completed, the proposed performance assessments could be completed in sections as soon as a particular skill has been mastered. This system would work in the following sequence:

- soldier or soldier's supervisor identifies a problem the soldier is having
- soldier participates in BSEP for help in mastering that particular skill
- soldier takes the test on that skill to insure mastery
- soldier returns to his or her MOS to be evaluated as to whether he or she can now perform the skill.

Even if a soldier has a series of skill deficiencies, he or she will not be engaged in long segments of training without returning to the MOS job site to demonstrate mastery on the first skill. This provides for the immediate application of skill training that is so important to skill mastery (Singer, 1978; Davis, et al., 1974; NAPSAE, 1969).

Goals and objectives also need standards for time and quality (Davis, et al., 1974). If the objective is to pass the military-specific test, in reading or math, what are the standards for passing? Eighty percent of the test items? Seventy percent? Are there test items that are <u>required</u> and must be mastered, versus others that are desired but are not critical to job performance? Is there a time limit in which the instruction must be completed? What will happen if soldiers do not meet the minimum requirements? These questions need to be addressed in regard to the goals and objectives of the BSEP program in order to develop adequate performance assessments.

Evaluation may have to be in a state of flux. The advantage of having evaluation of the program's effectiveness is that there is continuous feedback available as to whether an approach is working.

Pilot projects can be implemented to test the various techniques. If the results are not what is desired, the process can be analyzed and the program revised and retested.

Program Implementation. The proposed method of evaluation is based on instruction provided outside of the regular MOS . This leads us to an important issue in program design--how will the program be implemented? As supplemental or remedial instruction, will the soldier study basic skills for part of the work day and return to the worksite afterwards, or will soldiers attend BSEP until they master all basic skill requirements? When, as a result of BSEP training, the soldier masters the required basic skill, how will he or she reintegrate into the MOS job? Will BSEP shorten job experience?

The new direction of BSEP towards concentrating on process skills such as primary and secondary learning strategies and life coping skills seems to be an attempt at alleviating this implementation problem. As stated before, Sticht (1975a) did produce favorable results with his procedural approach; however the lowest gains were demonstrated in terms of content learning. While process skills are helpful, in the long term, the Army should consider providing job training in a variety of instructional modes such that all trainees can participate in the same course, thereby eliminating the need for a separate BSEP program. These implementation issues have an impact on performance evaluation and should be decided before an evaluation plan is set up.

Criterion Referencing. The GT and ABLE tests are norm-referenced tests; that is, they compare the level of an individual's performance in relation to the performance of some general population. They are therefore geared toward the performance of a group. Criterion-referenced tests, on the other hand, measure individual competency in relation to a task. The individual is rated according to his or her mastery of the performance criterion (Davis, et al., 1974). If BSEP II is to provide training to soldiers for specific MOSs and one curriculum and delivery system wil not meet all training demands (Dueitt, 1979), all soldier's performance should not be evaluated according to some general performance level. Criteria for successful performance on a job should be identified for each MOS. The performance assessment should reflect those criteria.

A criterion-referenced test should be designed to test each program objective (Davis, et al., 1974). Again, the Army recommends that learning strategies and life coping skills be included in the BSEP II curriculum, but the role of these skills has not been clarified. Are learning strategies and life-coping skills to be considered additional objectives towards the goal of MOS proficiency, or are they enabling or supporting objectives leading to proficiency? That is, do soldiers have to demonstrate a minimal knowledge of learning strategies, acceptable personal coping skills, and appropriate attitudes in dealing with superiors and subordinates

before being judged to have successfully completed BSEP? If the soldier can perform the job, is his or her knowledge of learning strategies important in terms of further training? If so, then the assessment must test these skills as well.

If learning strategies and life coping skills are to be evaluated, how will they be measured? Weinstein (in press) describes several tests that assess the use of learning strategies. Perhaps these could be used or modified to criterion-referenced instruments for use in the BSEP program. Although the Adult Performance Level (APL) Program (Barron, 1973) offers a criterion-referenced evaluation of broad functionally-oriented life coping skills, to our knowledge, no military-specific test currently exists for the evaluation of job-related life coping skills. However, because superiors and supervisors are often the best judges of attitude changes, questionnaires can be developed for supervisor and peer completion to rate soldiers' life coping skills. The assessment of life coping skills and learning strategies must have standards for performance as well.

V. DELIVERY SYSTEMS

All of the relevant factors that characterize the BSEP program--site location, target population, instructional content, assessment procedures, number and kind of personnel required, and support systems and facilities needed--must be considered in determining the program delivery system.

The problem of delivering basic skills education to adult learners is recognized as critical throughout our society. The Air Force and the Navy as well as the Army have experimented with the delivery of programs to deal with the inability of their recruits to use the basic skill learnings they need to perform on the job (McGoff & Harding, 1974). In the civilian sector, the problem of youth unemployment has also been related to basic skill deficiencies, and Congress is considering passage of a Basic Skills Education Bill (U.S.C., 1980), with funding to the Departments of Labor and Education, to provide a model for delivery of job-related basic skills training nationwide through cooperative efforts of secondary schools and employers. Kozol (1980), an expert in adult literacy training, suggests that adult illiteracy has reached critical proportions and that the delivery of remedial education must involve massive volunteer efforts to provide effective literacy training to the estimated 25 million functionally illiterate adults in the United States. The major consideration in determining a BSEP delivery system should be the characteristics of the BSEP target population.

Extensive research (Allen, 1974; Travers, 1967; Taylor, 1964) has been carried on in recent years to determine what methods of delivering instruction are most appropriate for different students. From this research it appears that some delivery systems are better suited than others for average or below average achievers; and that functionally literate learners such as BSEP soldiers should be taught through experiential methods to the degree that this is possible (NAPSAE, 1969; DoL, 1979).

To the extent possible, therefore, the delivery of work-related skills instruction should be carried on on the job. Horabin (1971), for example, points out that when Ford Motor Company planned to invest several million dollars in the development of programmed instructional materials for their apprentices in the maintenance trades, a task analysis revealed that a structured experiential learning approach would provide a much less expensive and effective approach. Training was designed which put the responsibility for the development of each apprentice on the apprentice himself and his immediate supervisor. This on-the-job training approach developed broad range competence in a comparatively short period of time,

dramatically lowered the job entry requirements, and contributed significantly to the affirmative action program of the company. The experience of this company should be realistically assessed to determine, on the basis of the proposed task analysis of MOSs, what would be required to address the training of soldiers as much as possible in this manner.

We recognize that on-the-job training is not necessarily always feasible when the training would take up scarce resources which should be employed in carrying out the organizational mission (Carpenter-Huffman, Note 13), yet the transfer of learning from formal training to the job site is often poor.

There seems little doubt that even where formal off-the-job functional literacy training is unavoidable, however, programs benefit greatly from instructional delivery systems which provide close coordination between the training site and the intended work site for the trainees. Job Corps programs which have been most effective in terms of job placement over their 16-year history have been those which developed linkages to trade unions or employers who then provided input into the programs, screening to determine which requirements for available jobs the Job Corps enrollee was lacking, and offering vocational skills training for prospective job candidates (Levitan & Johnston, 1975). Involvement with service and community groups and potential employees has been cited in discussing effective employment techniques used in Youth Employment and Demonstration Projects Act (YEDPA) programs (Hoyt, 1978a).

It is apparent that when employers and unions accepted the challenge presented by Job Corps enrollees, and were willing to deal with this challenge, many young people became employable. Analogously, it seems clear, therefore, that a delivery system for BSEP should include as much involvement as possible from those military personnel who will work with and be responsible for training the BSEP soldiers.

Job redesign and job/performance aids for use on the job can undoubtedly eliminate the need for some basic skills training and improve competence immediately. Harless (1980), Bullock (1980), and Gilbert (1979) have shown that job aids have many advantages over formal training: they are less costly to develop, less costly to implement, and less costly to update. They are also more likely to ensure job-related performance, minimize avoidable forgetting, and maximize communication among affected parties. Even when formal training is used, job aids are useful for the period between the end of the training and the mastery learning accomplishment. Together with supervisor feedback, they can produce rapid on-the-job training. Furthermore, compliance with the readability requirements of MIL-M-38784A (Kniffin, 1979) would make military manuals much

more accessible than most are now, and this, too, would circumvent some training.

When it has been determined that formal instruction is unavoidable, it is still possible to use systems of delivery which make the presentation of instruction as concrete as possible. Berman (Note 1), for example, recommends that delivery systems for poor readers include simulations, where a real life environment is created, so that the participant has the opportunity to interact with people, places, and things that behave as they would in the real world. This kind of training can be done through the use of three dimensional instruments, such as those used in driver education classes, or by role playing.

To provide realism, BSEP might use adaptations of the Link Educational Laboratories (1974) competency-based program which provides vocational skills training for secondary students, using materials which require a minimum of reading and math instruction. The delivery system used in this program is principally audiovisual and includes 8 mm single concept film loops, 16 mm films, and filmstrips, and overhead transparencies. In modifying this program to better suit a functionally literate BSEP population, it would be possible to require hands-on performance criteria, and oral rather than written explanations of tool functions and their use.

The 8 mm silent film loop is, in general, particularly well suited for the delivery of skill teaching, because it is capable of breaking up a task involving motion into individual components and presenting each individual task element. These loops can be stopped or slowed and can be captioned to present the specific terms associated with task elements. They can either be projected on a large screen or used in small viewers. Film loops are in common use in special education, to allow a process, once taught, to be endlessly and soundlessly repeated for students so that they can compare their ongoing performance with the model on the film (DeWeaver, 1973).

It might be possible, in fact, to project loops at Army MOS work sites, so that a soldier could view a model task performance or learn to associate tools with their names and uses with a minimum of distraction to others and without leaving the work site or interrupting a supervisor. Loops could be produced economically for an individual BSEP site with an 8 mm camera, to obtain realistic performances of MOS job skills. Loops of actual job tasks would inject a note of relevance. Arrows and other cues could be added to the photographs to increase instructional effectiveness. Furthermore, the selection of MOS supervisors whose work was suitable to portray in this way would undoubtedly increase trainee interest and improve success in learning the tasks shown.

That commercially-produced film loops for vocational training are now available for use in Army training is evident, for example, from their inclusion in the Catalog of Multi-Media Materials published by the Army Education Center, Aberdeen Proving Ground, Md., (Note 14), but they are not military job related.

Another possible delivery system for BSEP would be one similar to the Occupational Technology program designed by Xerox (1972), which teaches automotive technology and other skills similar to those the Army must teach. In this program, students work with simulators to practice skills taught. Training is presented through filmstrips, slides, and audiocassettes in an individualized system. Adapting these concepts for Army use would require building realistic simulation devices, reducing the level of reading materials to a functional literacy level, or replacing the reading materials with audiocassettes.

It would be possible to provide programmed materials by means of audiocassettes and illustrated workbooks. The BSEP II materials in use at Ft. Jackson, for example (Farr & O'Neil, Note 7), could be used with a cassette on which the instruction was recorded. Many such workbook/tape programs exist, although they are not suitable in most cases for the functionally literate student. The Army Education Center at Aberdeen Proving Ground (DoA, Note 14, p. 134), for example, has the Cambridge book and cassette series, "The Relevance of Listening," which teaches listening skills, using a book and 24 audiocassettes. The rate of playback of audiocassettes can also be adapted, by using recent technology (Noonan, 1976), to control the speed of presentation so that the student can listen to material at a rate that is suited to his or her reading speed. This capability improves comprehension for some slow-learning students (DeWeaver, 1979).

Many programs designed for functionally literate persons use delivery systems which rely upon teacher direction and printed programmed materials. Job Corps enrollees, for example, typically enter the program with an average reading and mathematics achievement level of grade 5 or 6, and the delivery system used in their training is primarily the commercially-produced Sullivan Programmed Reading and Math texts (Sullivan Associates, 197_). These present a series of lessons, each of which provides information required to meet a specific criterion performance standard which is considered a prerequisite to making the enrollee employable. These programmed materials are assigned after careful assessment of the trainee's entry level competence has been made by the Systems Teacher; and the math materials are accompanied by math minilabs which provide hands-on experience. Although the Job Corps' objective is to provide the skills remediation required for employability, its provision of literacy training is still broader

than that of BSEP II, and ultimately, it does envision that the enrollee will pass the GED. The Job Corps Systems Teacher is considered a learning guide, able to work with individual students as the need arises, but seldom using the lecture as instructional delivery.

Programmed print materials have serious drawbacks for a BSEP delivery system. They depend upon reading and writing at some level, and for BSEP they would have to be designed to have MOS job relevance. This would be an expensive undertaking, and it would not be successful, in all likelihood, because of the need of functionally literate students for more concrete instruction.

For example, the Navy JOBS program described in the curriculum chapter also uses programmed print materials as its system of delivery. Although designed for functional level readers, materials vary in reading levels, with some paragraphs as high as grade 13. Materials are job specific--they are based on skills for particular A school specialties. However, they attempt to introduce on paper abstract concepts and 3-dimensional tools and apparatus without the benefit of concrete manipulations which would facilitate the learning process (Bunderson, et al., in press).

Furthermore, the statistics on the Job Corps (Levitan & Johnston, 1975), though they are based on very incomplete data, claim an average grade gain of only 2.1 months per month of instruction in reading, and of 2.5 months in math, with the greatest gain being made by the enrollees whose educational level was lowest at entry. Since the median length of stay in the program was 3.1 months, reading gains for most enrollees would be no more than six months, or from the lowest average entry level, grade 5, to below grade 6. The Job Corps accomplishments in terms of academic gains for the average enrollee would seem to be minimal. The Job Corp Program claim that most of those who stayed in the program for 90 days were able to find work would seem to indicate that other factors than improvement in functional literacy were involved in making trainees employable.

Peer teaching is another possible delivery system suggested by evaluators of the Air Force job-related literacy training program (Huff, Sticht, & Joyner, 1977). Evaluators suggested that this peer interaction was very valuable and could be provided in a learning center approach, even when airmen who were working on similar lessons were not present, by having flow charts, pictures, and classifying tables which had previously been produced by other students available for comparison.

Bunderson, et al. (in press) cite the technology breakthroughs in the optical storage of video, audio, and digital information

through videodisc as a presentation format which can break the dependence on print for presenting job training information and would allow the integration of reading and language development skills with the realistic and visual presentation of relevant job skills. Delivery systems for such programs at present would consist of some combination of computer-assisted instruction and videotechnology. Several examples of training and education systems which employ these technologies are in existence, and representative programs will be discussed.

Chevrolet recently produced 27 videodisc sides for training car dealers. Dealers interviewed said their sales managers found the equipment "overly complicated " (Videodisc News). However, this technology is redundant in this situation since the actual cars described in the disc are available for sales people to see and drive.

In Baltimore, Md., Control Data Corporation (CDC) in a program funded under the Comprehensive Education and Training Act (CETA), and the Mayor's Office of Manpower Resources has developed the computer-assisted Fair Break Adult Learning Center to train illiterate adults (Galton, 1979). Program participants spend two hours daily, five days a week in this individualized mastery learning program. Preliminary data show that the average gain in reading is one grade level for 20 hours of instruction, and in math one grade level for 12 hours. Computer-generated graphics and games are used for increased realism and to make lessons less abstract. The program is having its greatest success with older students (Trusty, Note 17).

Another CAI basic skills project of four years' duration is the PLATO Corrections Project in the Illinois prisons (Siegel & Simutis, Note 18). The training results have been as good as or better than those achieved in traditional prison classes, with 71.2% of CAI students passing GED tests, compared to 59.7% for traditional instruction.

In the area of technical training, CDC (Note 15) is also managing an individually-tailored instructional program for United Airlines pilots, using PLATO terminals. This very expensive system is an economical delivery system for this target population, since it cuts down on costly training flights and returns the pilot to work with the least interruption. American Airlines uses similar CDC training delivery for 4,000 flight crew personnel (CDC, Note 16).

In the BSEP context, computer simulations could familiarize soldiers with MOS equipment, graphically display tool names and pictures, and introduce relevant vocabulary before soldiers moved on to training simulations. PLATO terminals similar to those

used in the programs described above are in use in the ACES program at Ft. Belvoir, Va., to provide basic skills training and assessment through individualizing instruction. The results (Siegel & Simutis, Note 18) of a comparison of this training with the same training presented by traditional lecture methods showed no significant gains in favor of the computer-assisted instruction (CAI), although in all cases, the CAI group had higher scores. However, implementation problems involving hardware reliability were reported, and it seems clear that this project was a prototype and not a stable system. Siegel and Simutis (Note 18) found that the technology had potential for basic skills instructional delivery and should be studied further. A more serious problem, however, is the fact that this program courseware is off-the-shelf material which is not military job-related. Courseware would have to be developed or adapted to meet the goals of the BSEP curriculum.

Another prototype computer-assisted skills training program that has been developed for a military setting is the Computerized Training System (CTS) developed by TRADOC, in use at Ft. Gordon for training soldiers in field radio maintenance, teletypewriter installation repair, preventive maintenance, and troubleshooting and maintenance of Army Avionics Communication Equipment. This project, evaluated by Seidel, Rosenblatt, Wagner, Schulz, and Hunter (1978), was not concerned with functional literacy problems. However, the finding did indicate that students accustomed to instruction by teachers may not have a wide tolerance for computers. The HumRRO evaluators found that most students considered the instruction too hard, thought the instructors less available than they should be, and found the instructional media difficult to work with, and this has ramifications for BSEP delivery system decisions. However, 80% of the students in the CTS program passed the majority of the tests on their first attempt.

The Air Force Human Resources Laboratory at Lowry Air Force Base, Colo., uses the Advanced Instructional System (AIS), a large-scale computer-based instructional system developed by McDonnell Douglas Corp. (1980), that is designed to provide integrated support for both computer-managed instruction (CMI) and computer-assisted instruction (CAI). AIS was designed to improve the effectiveness and efficiency of Air Force technical training courses for enlisted Air Force personnel, among whom reportedly are many persons with reading ability within the range of the BSEP II population (McGoff & Harding, 1974). This program provides instruction for 800 students daily, however, and the high cost of such a system may not be acceptable for smaller BSEP programs.

The Computer Curriculum Corporation (CCC) has also developed an individualized adult arithmetic and reading basic skills curriculum which teaches skills equivalent to those expected of students who

have successfully completed elementary school. The materials are not military-specific, however, and the cost of developing similar courseware suitable for BSEP would be high (ISI, Note 19).

Computerized delivery systems to provide functional literacy training at remote military sites where teachers were unavailable have also been designed. In USAREUR, ACES Division Headquarters developed and implemented a Microcomputer Literacy Program (Flood, 1979) and introduced it at 15 sites. Curricula used were adapted from those already in use in BSEP. In terms of the project's purpose there was no significant improvement in job-related transfer skills. However, the technology was well accepted and could hold promise for use at sites such as those in Korea, where teachers are not available.

In isolated Army settings, it might also be possible to provide BSEP instruction in informal settings as was done in the MITRE computer-assisted instructional system for handicapped, homebound children (MITRE, 1976). This program provided instruction using home television screens as terminals to link children's homes to a computer through cable television. Such an informal approach might be more acceptable and promote peer interaction, an important feature, since where no teacher is on hand, a delivery system must not only be reliable, but motivating in terms of its location, ease of use, and attractiveness to the soldier.

The Time-shared Interactive Computer-Controlled, Information Television (TICCIT) System (Hazeltine, 1980) provides individualized, modular lessons in basic skills. TICCIT is now a time sharing system, but its developers expect that microcomputers and videodiscs will make courses more economical and increase flexibility by allowing for the integration of media from many formats.

If videodisc/computer technology is used however, it must be remembered that the present state of the art requires that to use the capability of videodisc to integrate all media, everything which will appear on the disc must be first assembled and synchronized, frame-for-frame, for premastering on videotape. This means that even the original disc will not be an original master copy, and other media may, of course, be additional generations old.

There is little doubt that the technologies exist to allow for the delivery of BSEP instruction by computer and video technology However, the capability of all delivery systems is limited, and the courseware required for BSEP must be designed to produce instruction compatible with MOS learning objectives. Pilot projects should develop courseware for MOS-related skills, so that stable systems can be shared among sites.

In making decisions on the use of computer-assisted instruction, Seidel (Note3) points out: (1) that they must be determined by examining data which relate to a stable operational system, not to prototypes; (2) that the use of computers will probably result in some gain in learning and some increase in costs; and (3) that a decision to use computers should be predicated on whether the increase in costs is "tolerable," in terms of learning gains. Clearly, for a small site this tolerable cost would probably be less than for a large one.

The decision as to which of the delivery systems available is best suited to a specific BSEP program would have to be made on the basis of such site characteristics as the number of soldiers to be trained, the number of MOSs included in the training, and the availability of personnel to deliver the instruction.

However, in every situation the information gained from MOS task analyses should be used to determine what training can be job aided, and wherever possible reading requirements should also be minimized. Where formal training is necessary, it should rely as little as possible on reading skills. Delivery systems should encourage peer interaction and individualization of instruction. Where sites are isolated or large numbers of soldiers must be trained, the training potential of computers and video technology should be explored.

VI. PERSONNEL

The configuration of the entire BSEP instructional system is not clear at this time. Therefore, it is not possible to identify with certainty all the personnel that will be required, prescribe their responsibilities, and suggest ways of assessing their performance. The program has not yet identified its instructional goals and objectives, established MOS task referents for each, constructed assessment measures for evaluating instruction in terms of job task competence, or developed curricula and delivery systems for the revised BSEP program. However, to accomplish these efforts, BSEP will require personnel with a wide range of experience and competencies.

It is quite possible that the revised BSEP staffing patterns will require new professional and non-professional personnel unique to this program, with new roles and responsibilities. Farr (1978) has suggested that pilot programs be developed to try out alternative materials, methodologies, organizational and staffing patterns which could then be shared across programs. He reports, for example, that one BSEP program was testing the role of an NCO Class Aid who was serving as a teaching assistant to clarify matters that related to MOS and SQT materials. The need for BSEP staff members who are knowledgeable about MOS basic skills training requirements and able to provide appropriate suggestions for effective remedial training in basic skills is evident. Providing military job-related basic skills training presents a different challenge from the provision of high school completion materials and it may require a mix of military and civilian training personnel. At present, BSEP programs operate with staffing patterns comparable to those in public high schools. Programs have: Education Services Officers, counsellors, master teachers (contractor's on-post representatives), classroom teachers, and teacher aides (Farr, 1978).

BSEP programs will probably require the following categories of personnel to encompass the diverse requirements of the program and to insure coordination of MOS and BSEP instructional aims and content for soldiers served by both programs.

Administrators: Both educational and military administrators will be required to open BSEP facilities and provide them with staff, equipment, and logistical support. Such administrators should include both top echelon personnel to oversee the entire worldwide BSEP program, and its integration with MOS training, and area and local administrators responsible for the oversight of ongoing BSEP programs.

Administrators at the central program level should coordinate the development of overall military support and instructional excellence and encourage locally administered pilot projects and the transfer of useful instructional curricula and strategies among sites. Central program administrators should also disseminate to area and local administrators information regarding changes in MOS requirements that include new or different basic skills components. Wherever exemplary MOS-related BSEP materials are developed locally that are adaptable widely, central administrators should determine how they should be disseminated for the greatest instructional effect.

At the area level, administrators should be responsible for local programs in a large geographic area. They should coordinate efforts so that there will be consistency in program goals and objectives and should be responsible for evaluating the area-wide program to provide the Army with data on which to judge the effectiveness of BSEP in terms of improved MOS competency. Area administrators should be able to oversee the development of quality programs at individual sites within large geographic areas, permitting each site enough latitude to develop a site-specific program, but insisting that BSEP programs be instructionally effective as measured by improved MOS effectiveness.

Farr's (1978) observation was that at present, BSEP program central administrators in USAREUR spend too little time observing ongoing programs at field sites and meeting with military personnel. If it is impossible for central administrators to carry out this responsibility because of the burden of administrative duties, area administrators should certainly be required to visit sites on a regular basis, with central administrative staff visits at least twice-yearly.

At the local level the BSEP administrator can be, depending on the size and location of the site, a military officer who oversees a self-instructional program developed elsewhere, a principal teacher who is responsible for several staff members at one BSEP center, or a full-time administrator at sites where there are two or more BSEP centers serving soldiers from several different companies. The local BSEP administrator would be analogous to a Job Corp Education Administrator (DoL, 1979) who is responsible for: enacting policies and practices related to educational personnel and training; directing, scheduling, and determining accountability of the program staff; maintaining educational records and reports; insuring that courses are conducted according to program guidelines; and providing required materials and equipment. A BSEP administrator would also act as an interface between the BSEP and MOS programs and between BSEP and the military and civilian communities.

The local administrator should also be responsible for providing an effective management structure and insuring that the BSEP staff is responsive to individual soldier needs; recruiting and hiring qualified staff, or sharing this responsibility with the area administrator; insuring compliance with Army personnel policies; and overseeing the proper maintenance of the program facilities.

In addition to these administrators, BSEP programs will also need:

Secretarial and support staff: to perform clerical work related to attendance, recordkeeping, and other services, such as duplication and correspondence. Farr (1978) observed that there was insufficient secretarial and clerical assistance available, and that at some sites there was none. These services will be essential for the smooth operation and recordkeeping tasks required for an individualized, competency-based BSEP.

BSEP Teachers: At most sites, it will be possible to hire teachers to oversee BSEP programs and it is the experience of all basic skills education programs, both in the military and in the civilian sectors, that such teachers are an extremely important factor in the instructional effectiveness of adult literacy programs. At present, individual BSEP programs are operated under contracts with educational institutions who hire civilian teachers to teach BSEP courses. Army Education Centers have the responsibility for overseeing the programs. For the most part, teachers are recruited from those individuals available in the military community who meet the requirements of the contractor, and the available teachers are usually women military dependents. This pool of available teachers, however, does not provide the experience or training required to implement a functionally-oriented, military job-related BSEP program.

Farr (1978) reports in his evaluation of programs in USAREUR that, on the whole, teachers are hard working and dedicated, but ill-prepared to teach adult basic literacy classes. Their previous experience has been mainly as first-year or student teachers, and they conduct their programs in a fashion typical of junior or senior public high schools. Farr also reports a high rate of turnover of teachers in the program, since teachers tend to be dependents of military personnel and leave the installation at the end of their spouse's tour of duty. He found reading teachers to be the least well prepared in both training and experience, although the greatest need is the improvement of soldiers' reading skills. Teachers typically did not know how to use the materials provided and were principally assignment givers and recorders of assignments

completed. His description of classes visited suggests that teachers did not use effective learning strategies and were poorly trained in individualizing instruction.

In spite of their lack of experience, however, BSEP teachers, during the first three sessions of the program have been expected to diagnose academic deficits, prescribe instructional solutions for each trainee, and estimate the length of time the soldier will require to reach a 9th grade level of proficiency. The Big Bend teacher orientation package clearly states that this represents a very difficult task for teachers (Antonich, et al., Note 12).

Farr observed sites that had master teachers, and in the best run programs these people coordinated the programs capably and provided opportunities for new teachers to work as aides with experienced teachers before taking over a class alone. But this was not typical of the programs observed by Farr in Europe in 1978 or of those described by Larson (Note 5) generally.

All teachers, teacher aides, and master teachers observed that more inservice training was needed, and identified seven training needs (Farr, 1978):

1. Preparation in subject areas, especially reading
2. Preparation to teach for inexperienced teachers
3. Preparation to work with adult and minority students in a military setting
4. Preparation to implement the mandate that language, math, and reading materials be military related
5. Training in curriculum development and materials selection for adult basic skills programs
6. Training for master teachers in administrative procedures
7. Training for regional coordinators in business and professional responsibilities

Larson (1980) reported that the problem of inadequate teacher training is equally serious in installations in the United States where teachers are also usually wives of military personnel. They are paid on an hourly contract basis and extra funding for attending training and orientation sessions is not budgeted.

In regard to teacher training, the language of AR 621-45 (Appendix D) states, "The institution is responsible for employing qualified instructors, providing inservice training (e.g., certain instruction requires a basic knowledge of the military environment), and ensuring that substitute teachers are available to meet class requirements." In practice, however, there appears to be little formal training for BSEP teachers, although the curriculum materials developed for the various sites contain teacher training modules which may be intended to meet this requirement. Some of these modules include lengthy and very sophisticated discussions on diagnosing weaknesses and prescribing instruction (often in several subject areas), writing learning contracts, and monitoring progress. Reading and assimilating the information in these training modules would be a time-consuming task which would have to be accomplished by the teacher during out-of-class time. No effective method is described for insuring that the teacher is doing the work even though it would appear that the program results are heavily dependent on the teacher's familiarity with and capability to apply this information. Little attention is given in the training modules to the practical aspects of class organization. The materials point out the serious constraints within which the teachers must work, but offer the teacher little help in dealing with these problems (Antonich, et al., Note 12).

Teachers of adult basic education classes face a complicated teaching task in any setting. They must understand and sympathize with the problems of undereducated adults and provide remedial education for part-time students, each of whom is unique in terms of academic preparation, capabilities, and life and work experience (NAPSAE, 1969). In the military environment, basic education teachers must, in addition, understand how to relate the education they provide to helping students to stay in the Army and advance in their MOS. At the present time, BSEP programs are not providing sufficient teacher training to accomplish these objectives. Therefore, to the greatest extent possible, BSEP programs should hire teachers who have these qualifications or provide better teacher training.

Traditionally, BSEP teachers have been drawn from those civilian personnel available on the Army installation who had at least the minimal qualification of an undergraduate degree. Many have little teaching experience, especially in adult basic education. It seems likely that, in the foreseeable future, this group will continue to be the source of BSEP faculty. If teacher qualifications cannot be improved, BSEP teacher training should be modified to include training to help teachers develop the skills they need, such as interpersonal skills to make adult learners comfortable in teaching/learning situations where they have previously experienced failures, and training in the instructional strategies, organization,

are responsible for BSEP logistical support, and the Army Education personnel who are responsible for giving ongoing professional advice and assistance to teachers.

The TAGO memorandum on the Implementation of Army Continuing Education and Recommendation Plan (Appendix E) calls for a "training program" in conjunction with the development and award of contracts for six MOS-specific baseline skills programs (Appendix F). It would seem, therefore, that the Army is aware of the necessity to include training for teachers in its revised BSEP programs.

BSEP teacher training should provide the program with qualified teachers. Qualifications for BSEP teachers are those which have been identified by Job Corps programs (DoL, 1979), by NAPSAE (1969), and by Turner (in press) in her paper on Teacher Training for a Revised BSEP. They are summarized here:

Interpersonal skills: Teachers in BSEP should have good interpersonal skills. The close interaction between teachers and students in an individualized program requires consistency, emotional stability, tolerance, and sensitivity to student feelings. The Job Corps literature points out, however, that these skills can be learned, and that although public or private school teachers have difficulty adapting to basic education programs, they are an asset to the program, once they have been persuaded of the effectiveness of the basic skills approach.

Participatory Teaching Style: Effective BSEP teachers must be active, aggressive participants in each soldier's progress, and not merely recordkeepers, a problem with BSEP teachers to which Farr (1978) called attention. Kozol (1980) also cautions teachers of adults to be interested in their students' progress and aggressively encourage performance and improvement.

Cultural and Ethnic Awareness: Among BSEP soldiers many different races and ethnic groups are represented. Teachers need to be sympathetic to and informed about the problems related to race and sex discrimination. They should be committed to assisting the educationally disadvantaged and neither patronizing nor unrealistic in their attitudes towards student problems.

Individualized Instruction: BSEP instruction will be modular in nature, and teachers will need to be knowledgeable about the use of individualized, self-paced instruction, peer tutoring, and modular learning packages in order to be effective BSEP teachers.

Mediated Instruction: BSEP instructional modules will contain many kinds of learning activities. Some will require the use of audio-visual materials, such as filmloops, projectors, overhead

transparencies, audio and videotapes, and in some instances, computers. The BSEP teacher will need to be familiar with and able to use any media included in the course and to show soldiers how to use it.

Behavior Management Techniques: Turner (in press) suggests that teachers can learn to communicate and solve problems which arise in day-to-day classroom situations by the use of Teacher Effectiveness Training principles, which are based on a six step teacher-student problem solving model developed by Gordan (1974). The BSEP teacher is likely to encounter behavior problems arising from soldiers' impatience and frustration with the task of learning basic skills as an adult. BSEP teachers should be able to use behavior modification techniques suggested by Job Corps (DoL, 1979) to motivate and shape appropriate behavior.

Remedial Education Techniques: Soldiers in BSEP need instruction in military job related reading and math, and BSEP teachers will not be expected to teach phonics or other elementary reading skills. However, a basic knowledge of the techniques of teaching reading will enable a teacher to provide practical suggestions for improving reading skills. BSEP teachers should have at least minimal knowledge of the teaching of reading and elementary math. Civilian schools have recognized the need for every teacher to have some skill in teaching reading, no matter what his or her subject area is. The D.C. Public Schools, for example, require teachers in all disciplines to be trained to teach reading, and reading teachers themselves have developed materials for use by classroom teachers inexperienced in teaching reading. An example is Reveleon and Sullivan's, (Note20) The Bridge Between, developed for classroom teachers in South Boston schools.

Diagnostic Techniques: BSEP teachers will be expected to place each BSEP soldier in the module which contains the information in which he or she needs remediation. Therefore, teachers will need skill in administering tests, assessing individual abilities, and determining individual placement and progress.

Military-Specific Information: BSEP teachers need the ability to interact with military personnel who are concerned about the progress of the soldiers, especially MOS personnel who have referred the soldiers to BSEP. Teachers need to know as much as possible about the work that the soldiers will be doing in the MOS in order to adapt their teaching approach as nearly as possible to each soldier's instructional needs.

Community Outreach: Teachers should be aware of the potential within the military and civilian community to support the BSEP program. They should be able to request military personnel to visit

and techniques suited to the teaching of military job-related, functional literacy.

Ideally, the designing of new BSEP programs will be a cooperative effort between the military trainers and the BSEP teachers. Farr (1978) reports that military commanders are now reluctant to encourage BSEP teachers to deal with MOS-related materials, out of fear that the teachers will give students inaccurate information. This cannot continue to be the case if BSEP is to prepare the student for the military job. For instance, exact definitions of basic skill needs for MOS performance must be determined together by military trainers as subject matter experts, and teachers, as instructional designers. Although task analyses must be directed by experts in educational technology and human factors, MOS and BSEP first line training personnel should be involved in the process in order to establish the credibility of the findings and encourage cooperation with the new BSEP curriculum. One way to involve them would be to make available to them orientation guides to task analyses, such as the Training Guide for Observation and Interviewing in Marine Corps Task Analysis (Kuriloff,Yoder. & Stone, 1975). This guide describes methods used in job analysis: individual interviews, technical conferences, group interviews, observation interviews, and checklists and questionnaires. It also explains how reliability and validity are achieved in task analyses. The Instructional Quality Inventory used by the Navy (Wulfeck, Ellis, & Richards, 1978;Ellis, & Wulfeck, 1978) also provides guidance on the systematic development of military instruction in conformity with sound principles of training and the psychology of learning and instruction.) Collaboration between military trainers and BSEP teachers should result in task analyses which identify every basic skills learning which is an enabling objective leading to the terminal objective of passing the SQT for the specific MOSs. Teachers also will need training to help them build feedback loops between the military and BSEP classes to supply information on student performance and on necessary updates and revisions of MOS instruction.

In short, the revised BSEP programs cannot succeed in providing military relevant job-specific skills unless careful attention is paid to staffing. Teachers must understand the characteristics of the target population and the terminal objectives of BSEP for the particular MOSs with which they will be working. Some of this training can be provided in print, but correct teaching techniques should be modeled, either live or by television or film sequences, and teachers should have opportunities to role play them.

The beginning BSEP teacher should know what MOS his or her instruction complements, the personnel on the installation who

the program as Hall (in press) has suggested or to provide any realia or information needed to make the BSEP training as realistic as possible.

Assessment of Teacher Performance: Turner (in press), writing on Teacher Training for Revised BSEP, suggests that BSEP employ the Clinical Supervision mode of teacher evaluation and assistance, developed by Goldhammer (1969). This allows the teacher to have an active part in discussing and designing the goals and objectives of the program, establishing guidelines, and performing self evaluation with the help of a supervisor. Clinical Supervision follows the outline below:

1. Preobservation

   This stage is mainly intended to provide framework for the supervisory sequence. It can serve to reduce anxieties and to open lines of communication. The supervisor meets and talks with the teacher. This could be done by a more senior teacher. It is intended to be non-threatening and to let the teacher know that help and support are available.

2. Observation

   The supervisor observes what is happening in the teaching situation. Instead of recording general descriptions, the observer writes down as much as possible, verbatim.

3. Analysis and Strategy

   During this stage an attempt is made to make sense of the observation data and to plan the management of the supervision conference to follow.

4. Conference

   This is a very important step of the model. Here the observer might focus upon the teacher's anxiety, rather than on the teaching, or it might simply serve as a time to offer reassurance, to make decisions, or to plan future teaching. The conference should:

   Provide a time to plan future teaching in collaboration with another professional educator. Perhaps the best measure of a successful conference is whether it has left with the teacher something concrete, i.e., a design for the next sequence of instruction.

Provide a time to redefine the supervisory contract.

Provide a source of adult reward.

Provide teachers with training in techniques for self-supervision and develop incentives for professional self-analysis.

Deal with an array of factors that may affect the teacher's vocational satisfaction as well as technical competencies.

5. Post-Conference Analysis

This can serve to assess whether the supervision is working productively, and to plan modifications of supervisory practices (Turner, in press).

As stated previously, Clinical Supervision could serve to stengthen the BSEP teacher training program by involving teachers, supervisors, and other administrative staff members in the implementation of the program. The use of techniques of Clinical Supervision by teachers and supervisors should result in improved instruction for BSEP soldiers.

Teacher assessment is crucial to the success of the new BSEP curriculum. As Amarel (Note 21) has pointed out, the role of the teacher in the implementation of a new curriculum must not be overlooked. Siegel (1976) suggests using a five-step plan to insure that teachers use curriculum as course developers intended:

1. train a group of teachers to use the package of curriculum materials according to the authors' specifications;

2. develop and use observational systems to describe the instructional variables which are considered specific to the program and most emphasized by the curriculum planners;

3. study the relationships between instructional activities and behavioral change in the students in a variety of outcomes;

4. modify the training procedures, observation instruments and/or curriculum materials on the basis of these outcomes;

5. retrain some or all of the teachers.

This "descriptive-correlational-experimental" loop interelates training and feedback such that both the teachers and students benefit.

Another source of professional help and development for teachers is the teacher center. Turner (in press) also describes how these can be set up. Information on funding, organizing and using teacher centers is available from the American Federation of Teachers (Boner, 1980a, b, c, d) and from local school districts. Eligibility for Federal funding is described by Turner (in press). BSEP programs may qualify for teacher center funding, depending on their affiliation with universities, or they may be able to share teacher center programs developed by the Army dependent schools.

Other Personnel. In addition to administrators, clerical support staff, and teachers, the following personnel will be required to develop and implement a revised BSEP program:

Instructional Technologists: to plan and steer the project from the orientation stage to the implementation stage and to make revisions as evaluation data becomes available. In a computer-based program they would also serve as an interface with both military and educational administrators. They will need experience in task analysis and learning systems design.

Behavioral Scientists: to insure that the psychological, intellectual, and emotional needs of students are met, monitor job performance success, understand the needs of the adult functionally literate learner, and monitor pre- and post-training conditions and behavior. In a computer-based training system, they would also make recommendations to implement a smooth orientation to the computer application for all computer users. They should be behavioral psychologists.

Course Developers: to confer with the above named personnel, design, and supply the core instructional content, including appropriate tests and assessments. The course developers would also develop supplementary materials using various instructional media, and would be responsible for accuracy of content, course maintenance, and updating. In the BSEP context, they would have to interface, on a routine basis, with whichever military offices are responsible for updating MOS course information. These individuals would need training and development, preferably in a military, functional literacy context.

If the decision is made to use computer based training, Pflaumer, (1980) writing of the experience of Illinois Bell Telephone in training its employees, says that the right combination of human resources can make CBT either a success or a failure as a training medium. She lists the following personnel as necessary to the implementation of successful CBT, in addition to those listed above:

Computer Technologists: to interface with the computer software technical support groups on system and program design, troubleshoot problems, and interface with other personnel to assure efficient

usage and cost efficiency. They will need experience in systems analysis and the development of computer software.

Instructors: to serve as computer course managers, interfacing with learners, offering needed resources and counselling, making recommendations to course developers as necessary, and arranging for on-the-job follow up training. Instructors will need to possess a wide familiarity with CAI and with military training.

This last task will be especially important to every type of BSEP program, to insure that job-related materials discussed in BSEP instruction are available and accepted by MOS supervisors. All BSEP information should be consistent with MOS skills, and instructors at both programs should use and require students to use the learning strategies and basic skills techniques which BSEP has introduced (Farr, 1978).

VII. FACILITIES

Another important factor of any learning system is the facility or environment in which the instruction and the learning will take place. Programs with even the best developed curricula, delivery systems, and personnel will be hampered by an environment that is not conducive to learning. Learning environments are an integral part of the total learning system--they play an important role in attracting learners to the site, and facilitating the learning process. Unless the facilities are given proper consideration, the total effectiveness of an instructional system will not be realized (Holt & Stevenson, 1980).

Facilities should be designed in accordance with their use. BSEP facilities therefore should be designed according to the program needs. To realize optimum program effectiveness, the facilities should correspond closely with the total instructional program. They should reflect: the target population; the intended curriculum with its specific content, instructional strategies, and instructional materials; the delivery system by which instruction will be provided; and the personnel support system. They should also reflect the extensive research done in the area of human factors which describes what people need to be comfortable and to function adequately.

Just as the instructional system will vary at each site because of resources and program needs, so too will facilities vary according to the needs of particular learning sites. However, every learning environment should reflect BSEP's basic program focus. BSEP facilities should therefore be designed for adults who have already been unsuccessful in the traditional classroom environment. Facilities should support the suggested individualized modular approach to instruction and the use of print and non-print instructional materials that are recommended. They must also accommodate the selected delivery systems.

Present facilities used for BSEP programs are often inadequate for BSEP even according to the directives contained in AR 621-45 (Appendix D). Farr (1978) reported, for example, that facilities varied in quality from site to site. Classrooms were often shared with High School Completion Programs. Classroom conditions varied from good to poor in terms of learning conduciveness, with student desks as the primary furniture, limited table space, inadequate supplies, and often nonexistent office equipment.

However, the BSEP learning environment plays an important instructional role, and facilities used should be well planned. They should not be planned according to traditional classroom settings, because such facilities were not intended for the

population and the program that BSEP addresses. Spacing, lighting, furnishings, and equipment should all be appropriate for the BSEP soldier.

It should be noted here that all training for the suggested revised BSEP program will not occur in a formal BSEP training site. The job aid and apprenticeship approaches to training, for example, would work most effectively if presented right at the MOS site. Slight modifications at the MOS site might have to be made so that job aids can be the quick, handy references they are intended to be. Job aids such as posters and charts should be displayed near the point where they should be used, and other types of job performance aids should be easily accessible. Apprenticeship may require some small quiet place where the worker-teacher and the soldier-trainee can confer, away from the distractions of the immediate job environment. However, for the most part, the facilities required for the BSEP training delivered at the MOS site will result in only minor modifications to the workplace.

However for the instruction that will have to take place at a BSEP training facility rather than at the MOS job site, the target population, curriculum, delivery system, and personnel mentioned earlier should be considered in planning the facility.

There are certain characteristics of adult learners that would have an impact on the learning facilities to be used. According to NAPSAE (1969), adults require more and better light, do not easily adjust to external temperatures changes and distractions, and are more likely to be physically tired and less alert when they come to class. The physical facilities should be designed to address these characteristics. Lighting should be adequate. Temperature and room arrangements should discourage distraction and fatigue. Suggestions relating to appropriate room environments have been suggested by the Army Chief of Engineers (DoA, Note 22).

The NAPSAE (1969) report also names fear of school as an attitude held by most undereducated adults. Many have not been successful in previous classroom situations and do not have good feelings about them. Therefore, in BSEP classes, to whatever extent possible, the facilities should not remind the soldier of such previous learning situations. Facilities should be appealing so that the soldier will be attracted to the environment and will want to work in it.

The Job Corps standards reflect many of these principles. In their ET Handbook No. 401 (DoL, 1979), they provide the following guidelines for the classroom:

- each student should ideally have about 10 square feet of unencumbered space.

- the layouts and furnishings should depart from the stereotyped classroom; settings and decorations should be as adult-oriented as possible.

- furnishings should permit variations between group and individual work whenever possible.

In addition, rooms should have adequate lighting and ventilation.

The Army Chief of Engineers established environmental specifications for a General Education Development (GED) training program. Its report on GED Centers (DoA, Note 22) provides extensive detail on how such a learning center should be set up. Because the center plays such an important role in attracting students and making programs effective, the report suggests three general architectural and planning concepts successfully used in retail merchandising that can be helpful in making educational programs attractive: window shopping to arouse interest and curiosity; accessibility, which includes convenient location of the training site, location and identification of entrances, and schedules of times the facility can be used; and graphics to attract and instruct learners. The Army could adopt some of these characteristics for its BSEP learning environment.

Jake Liebbe (1980), in his article on designing training facilities, also makes some general recommendations for training environments. He says that square classrooms bring people together physically and mentally, provide good acoustics, and allow for greater flexibility in room arrangement. If a square room is not available, the length of the room should not exceed the width by over 50%. Windows in classrooms are discouraged because they reduce space for job aids and bulletin boards, require shades to black out light for media presentations, provide distractions, and reduce class unity.

Liebbe also recommends using only wall decorations that are training related, and providing comfortable chairs to forestall fatigue, study tables of appropriate color and materials, and carpet to reduce sound and add to the atmosphere. Clocks should not be displayed in the learning area. Lighting, wall colors, and furniture should protect against glare and eyestrain. Whenever possible, there should also be environmental controls for air temperature, air velocity, and humidity. The Chief of Engineers' handbook (DoA, Note 22) also provides extensive detail on atmosphere, lighting, acoustics, and space requirements for learning centers.

Correlating the environment with the suggested revised curriculum involves substantial environmental requisites. Since lectures and large group instruction will seldom if ever be the BSEP instructional delivery method, the traditional desk and chair or lecture type arrangements are totally unacceptable. To support the revised BSEP program the learning center should be arranged to accommodate the techniques appropriate to an individualized, modular approach to instruction.

For this approach, flexibility is key. The learning center should provide places where individuals can study and use individualized materials without distraction, whether the individualized materials are revised manuals, mediated instruction, or computer-assisted instruction. However, facilities should also be adaptable to accommodating teaching strategies where interaction with teachers or peers is required. Flexibility is also important for logistical reasons (DoA, Note22). The increasing rate of change in educational programs and continuous improvements in teaching aids and equipment are leaving many learning facilities obsolete before their full usage is realized. Large sums of money must then be reinvested to "update" the learning environment. GED training administrators have already recognized the need for facilities that are adaptable to change on a cost-benefit basis, and are encouraging the design of more flexible learning environments.

One commonly used approach to providing individual work areas is the use of study carrels. Bell Telephone Laboratories of New Jersey (Holt & Stevenson, 1980), for example, has an individualized training program that has many similarities to the revised BSEP program: the training is learner-centered and is provided on duty; the knowledge and skills are immediately job relevant; and courses are taken just before the training is utilized. Instruction is provided primarily in learning carrels. These carrels are arranged so as to not give a cluttered or crowded appearance or to resemble a long maze of cubicles. Lighting and space are planned. Carrels are close enough to utilize space effectively but separate enough to allow for privacy. Inside the carrels are all the media and materials needed to master the task. Detailed research (Spangenberg, 1975; Goff, 1980) on the characteristics of carrels has been done which can be used as references in selecting such furnishings.

However, BSEP learning environments should not be composed of carrels alone. There is one significant difference between the Bell Telephone training and the BSEP training programs--the people being trained at Bell have Bachelor's and Master's degrees (Holt & Stevenson, 1980). Their instructional strategy is designed for people to work totally on their own in acquiring new skills. BSEP soldiers are not expected always to work alone. Their instructional

materials may require some assistance from the teacher. Strategies such as simulations, role playing, and peer interaction require more openness and flexibility than a classroom of carrels can provide. Facilities must also be conducive to these other strategies as well. In addition to individualized environments, BSEP facilities can include work tables and seating arrangements for use in simulations, teacher-student, and student-student interaction.

The Chief of Engineers (DoA, Note 22) suggests two means of providing spatial flexibility: an open plan and a divisible loft space plan. In the open plan, there are very few closed in areas. Furniture placement is the primary device used to divide the room and separate activities. The divided loft space approach is a more closed approach which divides the room with the use of semi-permanent walls. For the latter approach, environmental considerations such as lighting, air circulation, and electrical outlets take on added significance. A room design combining the use of carrels and one of these flexible designs might be useful to BSEP environmental designers.

Because the BSEP learning facility is not just an area where instruction is provided, but is an area that is central to the whole instructional system, the learning facility should provide accomodations for other program needs as well. Adequate office space should be provided for the BSEP program administrators, teachers, and other personnel required for successful program implementation (see Chapter VI on Personnel). Again, the Chief of Engineers handbook for the GED program (DoA, Note 22) provides extensive details on location, size, atmospheric conditions, lighting, acoustics, and furnishings that can be used as guidelines in planning similar facilities for BSEP. BSEP teachers could also benefit from a teacher resources area which would house resource materials related to the instructional task at hand. This could also be designed to serve as a teacher center space. These areas can include a work table, instructional materials, and adequate shelving and storage space for those materials. The learning facility should have running water, duplicating facilities, adequate storage space for office and instructional supplies and materials, rest rooms, and water fountains. New learning centers should provide access to the handicapped.

Pilot Programs

BSEP programs should develop experimental pilot programs to test the effectiveness of different learning center configurations. Building new centers and renovating existing ones will be expensive and it is important to use what is available. Dunn and Dunn (1978) provide guidelines on how to redesign existing learning environments which might be useful in adapting adult training areas.

Programs could also experiment with the use of other non-BSEP training facilities. Some existing GED programs have vocational training facilities for auto, construction, and mechanics courses, as well as regular traditional high school completion courses (Farr, 1978). Possibly some of these training sites can be shared by BSEP, and MOS job-related basic skills could then be taught in an appropriate work environment. If this proved effective, BSEP facilities might adapt it as a learning center program alternative. Farr (1978) also reported that BSEP and high school completion programs are sharing facilities in a number of Army posts, although with limited success.

RECOMMENDATIONS

Program Goals and Objectives

The goal of BSEP II is to improve the functional literacy of soldiers who have completed Basic Training, so that they have the MOS Baseline Skills and Life Coping Skills (TRADOC, Appendix, F) to reach proficiency in their specific MOSs. We therefore recommend that MOS Baseline Skills and Life Coping Skills be defined in behavioral terms by task analysis procedures for each MOS in which the lack of functional literacy interferes with the MOS performance.

We also recommend that this task analysis be a joint effort of BSEP and MOS personnel, so that it can be determined whether a basic skill or coping skill can best be presented by modifying specific MOS procedures at the job site, through the use of short-term tutoring or job aids; by formal off-the-job teaching; or by a combination of both methods. This collaboration will also ensure currency of information and feedback of performance which is required for evaluation and revision.

We recommend that the terminal objective for each MOS be identified, with a criterion performance measure which describes minimally acceptable performance, and enabling objectives which identify acceptable performance on the subtasks which lead to the accomplishment of the terminal objective. For most MOS training, the SQT appears to be the terminal objective, and in most cases, BSEP training should relate to this objective.

Target Population

We recommend that the target population for BSEP include all soldiers who are experiencing any difficulty in their MOS job which results from inability to deal with MOS Baseline Skills or Life Coping Skills. We therefore recommend that the BSEP program be flexible, so that soldiers can receive remedial help as they need it, and return to their MOS jobs when they have achieved mastery. We recommend that on-duty general literacy training based upon norm-referenced tests be replaced by program entry and exit on an as-needed basis, determined by a specific MOS criterion.

Curriculum

We recommend that curriculum content be modular, incorporate learning strategies, and be developed on behavioral principles to meet the criteria established by BSEP goals and objectives. We recommend that BSEP curriculum materials provide instruction on Baseline Skills and Life Coping Skills and present this, to the extent feasible, by means of instructional strategies which do not rely primarily on reading and math skills.

Delivery Systems

We recommend that the BSEP modular curriculum be delivered by simulations, role plays, and other experiential methods to the extent possible, particularly when the criterion MOS performance is a psychomotor skill.

We recommend that delivery systems provide continuous feedback to the learner and to the teacher, at sites where there are teachers. We also recommend that peer teaching and proctoring be made a part of the delivery system. Where sites are isolated and MOS supervisors cannot refer soldiers to BSEP teachers for remediation, we recommend that self-instructional programs be available and that pilot programs using microcomputers be developed. In developing such programs, both MOS and BSEP personnel should be involved, to be certain that the instruction developed addresses MOS competency requirements and that evaluation reflects them.

We recommend that the Army investigate the possibility of interacting with ongoing functional literacy programs in the civilian sector, such as those identified in this paper, to share experiences and research efforts; and that BSEP delivery systems also encourage the involvement of the Army community in providing speakers and other resources.

Personnel

We recommend that the Army make every effort to recruit and hire better qualified teachers. The Army should also provide paid comprehensive training for BSEP teachers to ensure that they understand the program goals and know how to accomplish them. Since teachers are often inexperienced and supervision is minimal, we recommend that teachers be encouraged to use self-help strategies, such as teacher centers. We recommend that the program develop an ongoing teacher evaluation system such as clinical supervision to give practical, immediately relevant assistance to teachers. We also recommend that sufficient orientation to the use of any new curriculum materials, particularly computer or mediated, be given to teachers who will be required to oversee and use them. We recommend that BSEP personnel include administrative, support, and technical staff appropriate to the size, type and location of each BSEP site. We also recommend that BSEP investigate the use of new staffing patterns and roles.

Facilities

We recommend that instruction be provided at the job site whereever possible. Any off-site training facilities, whether they are built for the program or are modified from existing areas should be environmentally suited to adult learners, capable of housing the delivery systems which are chosen for the particular site, and flexible enough to accommodate a variety of activities. We recommend that they resemble as little as possible the

traditional high school classroom and that BSEP pilot programs experiment with different locations for programs, to determine which sites are most convenient for programs which involve MOS and BSEP personnel on daily basis. Detailed guideliones on the off-site training environment should be provided.

REFERENCES NOTES

1. Berman, B. H. Training the hard to train: the functionally illiterate. Address to NSPI Conference. Washington, D.C., April 1979.

2. Monroe, B. Human performance requirements, 1980-2000. Address to Third International Learning Technology Congress and Exposition, Washington, D.C., 25 February 1980.

3. Seidel, R. J. Cost effectiveness of military training. Address to Third International Learning Technology Congress and Exposition. Washington, D.C., 25 February 1980.

4. Borich, G., Wagner, H., & Berkowitz, M. Some possible dimensions for describing and evaluating the basic skills education program (BSEP). Alexandria, Va.: U.S. Army Research Institute (ARI).

5. Larson, J. Interview. LJA offices, January 24, 1980.

6. Department of the Army. Executive summary of basic skills education planning group, 1979.

7. Farr, B. J. & O'Neil, H., Jr. Handbook for MACOM and local BSEP II curriculum development. Alexandria, Va.: ARI, 1980. (Working draft, unofficial document.)

8. Anastasi, G. Assistant for Special Plans, OPNAV 35, Washington, D.C., Personal communication, June 2, 1980.

9. Department of the Army. Military Life Coping Skills Panel Report. Ft. Monroe, Va., Sept. 28, 1979.

10. Department of the Army. Army's Basic Skills Education Program (BSEP) Symposium, 24-27 September 1979, Atlanta, Ga. Report of curriculum development workshop.

11. Flood, J. Military-specific literact test (MSFLT). Submitted to the University of Maryland Under subcontract dated January, 1979. Boston University, August, 1979.

12. Antonich, J., Anderson, J., Bishoff, S., & Lester, R. The basic skills education program teachers' handbook: a guide to contracting. Moses Lake, Ore.: Big Bend Community College (undated).

13. Carpenter-Huffman, P. Cost-effectiveness of on-the-job training. Address to Third International Technology Congress and Exposition. Washington, D.C., 25 February 1980.

14. Department of the Army. Army Education Center. Catalog of Multi-Media Materials. Aberdeen Proving Ground, Md., 1979.

15. Control Data Corporation. Application report on United Airlines. Available from CDC, PLATO Marketing and Sales Office, HQAOIA, Box O, Minneapolis, Minn. 55440.

16. _____. Application report on American Airlines, available from CDC.

17. Trusty, Yvonne, CDC, Baltimore, Md. Personal communication, June 10, 1980.

18. Siegel, M. A. & Simutis, Z. M. CAI for adult basic skills training: Two applications. Paper presented at the annual meeting of the Association for the Development of Computer-based Instructional Systems (ADCIS), San Diego, Calif., 26 February - 2 March, 1979.

19. Instructional Systems, Inc. (ISI). Computer Assisted Instruction (CAI); Computer Managed Instruction (CMI). This booklet describes adult and GED curriculum strands of the Computer Curriculum Corporation (CCC). Available from the authors, 119 Hudson, Ave., Tenafly, N.J. 07670.

20. Reveleon, M. & Sullivan, P. The bridge between. Book in preparation, 1980.

21. Amarel, M. Evaluating a new curriculum resource: What are the relevant data? Princeton, N.J.: Educational Testing Service, March 1978.

22. Department of the Army. General education development centers: Report on criteria search and travel. Chief of Engineers (undated). Compiled by Warnecke & Ewing, 745 Fifth Ave., New York, N.Y. 10022.

REFERENCES

Allen, W. Intelligence, ability and instructional media design. Bethesda, Md.: Educational Resources Information Center (ERIC), 1974. (ED 905 820).

Ball, J., Marvin, M.D. & Temkin, S. Selecting a curriculum program: balancing requirements and costs. Philadelphia, Pa.: Research for Better Schools, Inc., 1975.

Barron, W. E. The adult performance level study. Austin, Tex. University of Texas, 1973.

Berg, I. Education and jobs: The great training robbery. Boston, Mass.: Beacon Press, 1971.

Berman, Bennett H. Training for invisibility. NSPI Journal, 1980, 19 (3), 16-18, 21.

Bover, R., (coordinator). How to conduct a teacher center talent search. Washington, D.C.: American Federation of Teachers (AFT), 1980a.

_____. How to develop management techniques. Washington, D.C.: AFT, 1980b.

_____. How to open your teacher center doors. Washington, D.C.: AFT, 1980c.

_____. How to organize a teacher center. Washington, D.C.: AFT, 1980d.

Brown, H. Department of Defense annual report fiscal year 1979. Washington, D.C.: GPO, 1978.

Bullock, D. H. Analyzing job performance: a new look for task analysis. NSPI Journal, 1980, 19 (1), 6-10.

Bunderson, C. V., Cranney, A. C., & Olsen, J. B. Improving reading and other learning skills in the context of Army career development. Alexandria, Va.: U.S. Army Research Institute, (ARI), 1980.

Dansereau, D. The development of a learning strategies curriculum. In H. F. O'Neil, Jr, (Ed.), Learning strategies. New York: Academic Press, 1978.

Davis, R. H., Alexander, T. A. & Yelon, S. L. Learning system design. N.Y.: McGraw-Hill, 1974.

Department of the Army. U. S. Army Basic Skills Education Program (BSEP). ACES Symposium, 25-27 September 1979, Atlanta, Ga.

_____. Soldier's manual of common tasks. Ft. Eustis, Va.: U.S. Army Training Support Center, 1977.

Department of Defense. Armed services vocational aptitude battery (ASVAB) information pamphlet. Washington, D.C.: GPO, 1978.

Department of Labor. Job Corps education program guide (ET Handbook No. 401). Washington, D.C.: Employment and Training Administration, 1979.

_____. Manpower Administration. Job corps math program manual. Washington, D.C. GPO, 1972(a).

_____. Manpower Administration. Job Corps reading program manual. Washington, D.C. GPO, 1972(b).

DeWeaver, M. J. Listening comprehension by nonblind handicapped students at three rates of speed. Exceptional Children, 1979, 46 (3), 202-208.

DeWeaver, M.J. Special education reading project. In Title II and the right to read: Notable reading project No. 14-15. Washington, D.C.: U.S. Department of Health, Education, and Welfare, Office of Education (HEW, (USOE) (now in the Department of Education), 1973.

DeWeaver, M. J. & Prather, C. J., Suggestions for instructional materials for the Army Basic Skills Education Program II. Alexandria, Va.: ARI, in press.

Dueitt, S. Report on the Army Continuing Education System (ACES). In DoA, The Army continuing education policy implementation plan. 31 October 1979. Tab C.

Dunn R. & Dunn, K. Teaching students through their individual learning styles: A practical approach. Reston, Va.: Reston Publishing, 1978.

Ellis, J. A. Wulfeck, W. H., II. The Instructional Quality Inventory: IV Job Performance Aid. San Diego, Calif.: Navy Personnel Research and Development Center, 1978.

Farr, R. An external evaluation of basic skills - high school completion program - USAREUR and the Seventh Army. Bloomington, Ind.: Reading Research Center, Indiana University, 1978.

Flood, J. Boston University computer-based instructional project final report. USAREUR ACES, September, 1979.

Gagne, R. M. Conditions of learning. N.Y.: Holt, Rinehart, 1965.

Galton, L. A computer war against illiteracy. Parade Magazine, 11 February 1979, 21-22.

General Accounting Office. A need to address illiteracy problems in the military services (Report #FPCD-77-13): Washington, D.C.: GAO, 1977.

Gilbert, T. F. Human Incompetence: The autobiography of an educational revolutionist. NSPI Journal, 1979, 18 (6), 15-21.

Giuliano, H. S., Kacandes, J., Lethbridge, E.; & Serrao, A. D. Taxonomy of reading skills and materials for youths and adults. N.Y.: McGraw Hill Educational Developmental Laboratories, 1972.

Golf, M. R. Carrels for self-paced instruction. NSPI Journal, 1980, 19 (2), 16-19, 34.

Goldhammer, R. Clinical supervision. New York: Holt, Rinehart & Winston, 1969.

Gordan, T. Teacher Effectiveness Training. New York: Peter Wyden, 1974.

Goldman, F., & Burnett, L. R. Need Johnny read? Dayton, Ohio: Pflaum, 1971.

Hall, B. L. State of art assessment of basic skills education: Job related life coping skills. Alexandria, Va.: ARI, in press.

Hall, B. L., et al. State survival series. N. Y.: Holt, Rinehart & Winston, 1979.

Harcourt, Brace & World. Adult basic learning examination (ABLE). N.Y.: Harcourt, Brace, 1967.

Harcourt, Brace & World. Metropolitan achievement test. New York: Author, 1964.

Harless, J. H. Task analysis -- a clarification of the term. NSPI Journal, 1980, 19 (1), 4-5.

Harrison, B. Education, training and the urban ghetto. Baltimore, Md.: Johns Hopkins Press, 1972.

Hazeltine Corporation. TICCIT. McLean, Va.: Author, 1980.

Holt, H.O. & Stevenson, F.L. A model delivery system for individualized instruction. NSPI Journal, 1980, 19 (2), 3-6.

Horabin, I. Toward greater employee productivity. Durham, N.C.: Horabin, 1971.

Hoyt, K. B. Monographs on career education. Refining the career education concept, Part I. Washington, D.C.: GPO, 1977.

_____. YEDPA and career education. Washington, D.C.: GPO, 1978.

_____. Refining the concept of collaboration in career education. Washington, D.C.: GPO, 1978(a).

_____. Career education and organized labor. Washington, D.C.: GPO, 1978(b).

_____. National alliance of business and career education. Washington, D.C.: GPO, 1978(c).

Huff, K. H., Sticht, T. G., & Joyner, J. N. A job-oriented reading program for the Air Force. Brooks Air Force Base, Tex., 1977.

Johnson, K. R. Behavioral instruction. Washington, D.C.: American Psychological Association, 1977.

Johnson, K. R. & Sulzer-Azaraff, B. The effects of different proctoring systems upon student examination performance and preference. In J. Johnston & G. W. O'Neill (Eds.), Research and technology in college and university teaching. Atlanta, Ga.: Georgia State Univ., Urban Life Center, 1975.

Keller, F. S. Goodbye teacher. Journal of Applied Behavior Analysis, 1968, 1, 79-89.

Kniffin, J. D. The new readability requirements for military technical manuals. Technical Communication, 3rd Quarter, 1979.

Kozol, J. Prisoners of silence. N.Y.: Continuum Publishing, 1980.

Kulhavy, R. W. Feedback in written instruction. Review of Educational Research, 1977, 47, 211-232.

Kuriloff, A. H., Yoder, D., & Stone, C. H. Training guide for observation and interviewing in Marine Corps task analysis (Training Manual III). Technical Report No. 2, Los Angeles, Calif: California State University, August, 1975.

Larson, Gordon A. Implementation issues for a revised basic skills education program (BSEP). Alexandria, Va.: ARI, 1980.

Levitan, S. A. & Johnston, B. H. The Job Corps: a social experiment that works. Baltimore, Md.: Johns Hopkins Univ. Press, 1975.

Liebbe, J. A. Guideline recommendations for the design of training facilities. NSPI Journal, 1980, 19 (2), 21-22, 30.

Link Education Laboratories. Time free modular competency based curriculum (Produced in cooperation with the Division of Vocational Education Alabama State Department of Education and the United States Office of Education, Division of Manpower Development and Training). Montgomery, Ala., 1974.

McDonnell Douglas Corporation. Advanced Instructional System (AIS). Denver, Colo.: Author, 1980.

McFann, H. H. Training strategies and individual differences. (HumRRO) professional paper 12-71). Alexandria, Va.: HumRRO, June 1, 1971, (NTIS No. AD-731 915).

McGoff, R. M. & Harding, F. D. A report on literacy training programs in the Armed Forces. Alexandria, Va.: Manpower Development Branch, Air Force Human Resources Laboratory, 1974.

Mangum, G. L. Manpower programs as career education. In S.P. Maryland, Jr. (Ed.) Essays on career-education. Washington, D. C.: U.S.O.E./N.I.E., 1973, 129-141.

Magnum, G. L. & Walsh, J. Employment and training programs for youth: what works best for whom? Washington, D.C.: GPO, 1977.

Marland, S. P., Jr. Essays on career education. Washington, D.C.: USOE/NIE, 1973.

Mathews, J. J., & Valentine, L. D., Jr. Prediction of reading grade levels of service applicants from Armed Services Vocational Aptitude Battery. Brooks Air Force Basee (AFB), Texas, 1978.

MITRE Corporation. An overview of the TICCIT program. Washington, D.C.: MITRE, 1976.

Molnar, A. R. Intelligent videodisc and the learning society. Washington, D.C.: National Science Foundation, 1980.

National Association for Public School Adult Education. Adult basic education: A guide for teachers and teacher trainers. Washington, D.C.: National Education Association, 1969.

National Association of Secondary School Principals (NASSP). Study skills program. Reston, Va.: NASSP, 1974.

Navy Personnel Research Development Center (NPRDC). Job oriented basic skills (JOBS). Final Report. San Diego, Calif.: Author, 1979(a).

_____. Job-Oriented Basic Skills (JOBS) training requirement analysis and objectives report for the administrative/clerical strand. San Diego, Calif., 1979(b).

Noonan, R. Technically speaking. CRCR Newsletter, 1976, 2 (10), 2-3.

Nunn, S. Those who do not serve in the all-volunteer armed services. Journal of the Institute for Socio-economic Studies, 1979, 4 (3), 10-21.

O'Neil, H.F., Jr. Learning strategies. New York: Academic Press, 1978.

Pflaumer, E. Getting started in CBT. NSPI Journal, 1979, 18 (9), 3-6, 29.

Reed, F. This is the Army? Washington Post, February 10, 1980.

Rosenbaum, P. S. Peer-mediated instruction. N.Y.: Teachers College Press, 1973.

Rutter, M. 15,000 hours. Cambridge, Mass.: Harvard University Press, 1979.

Schneider, E. J. Researchers discover formula for success in student learning. AFT Educational R&D Report, 2 (3), 1979.

Seidel, R. & J., Rosenblatt, R., Wagner, H., Schulz, R., & Hunter, B. Evaluation of a prototype computerized training system (CTS) in support of self-pacing and management of instruction. Alexandria, Va.: HumRRO, 1978.

Siegel, M. A. Teacher behaviors and curriculum packages: Implications for research and teacher education. In Rubin, L. J. (Ed.), The handbook of curriculum. New York: Allyn & Bacon, 1976.

Singer, R. N. Motor skills and learning strategies. In H. O'Neil, Jr., (Ed.), Learning strategies. New York: Academic Press, 1978.

Spangenberg, R. W. Human factors in the design of carrels for learning: State of the art. AV Communication Review, 1975, 3, 305-332.

Sticht, T. G. A program of Army functional job reading training: Development, implementation, and delivery systems. Arlington, Va.: ARI, 1975a.

_____. Reading for working. Alexandria, Va.: HumRRO, 1975b.

Sullivan Associates, Programmed reading (Rev. ed). New York: McGraw-Hill, 19__.

_____. Programmed math. New York: McGraw-Hill, 19__.

Taylor, S. E. Listening: what research says to the teacher. Bethesda, Md.: ERIC, 1964. (ED 026 120).

TIME. Who'll fight for America? The manpower crisis. June 9, 1980, 24-36.

Travers, R. M. A study of the advantages and disadvantages of using simplified visual presentations in instructional materials. Bethesda, Md.: ERIC, 1967. (ED 031 951).

Turner, H. W. Teacher training for revised Basic Skills Education Program. Alexandria, Va.: ARI, in press.

U. S. Congress, House of Representatives. Report No. 96-1034, Youth Act of 1980, 96th Cong., 2nd Sess., 1980.

Videodisc News. Playback, 1 (2), 10.

Weinstein, C. E. State of the art assessment of basic skills education learning strategies issue paper. Alexandria, Va.: ARI, 1980, in press.

Weinstein, C. E., et al. Verbal and imaginal elaboration strategies. In H.F. O'Neil, Jr. (Ed.), Learning strategies. New York: Academic Press, 1978.

Wylie, R. & Williams, E. Basic skills education: problems/ issues/ recommendations. Washington, D.C.: Department of Education, Right to Read Office, 1979.

Wood, F. H., & Thompson, S. R. Guidelines for better staff development. Educational Leadership, 1980, 37 (5), 374-377..

Wulfeck, W. H., Ellis, J. A., & Richards, R. E. The instructional quality inventory. San Diego, Calif.: Navy Personnel Research and Development Center, Special Report 79-3, November 1978.

Xerox Learning Systems. Occupational technology series. Stamford, Conn.: Author, 1972.

APPENDIX A

SITES FROM WHICH CURRICULUM MATERIALS WERE RECEIVED

Curriculum materials or descriptions of any in use in BSEP II Programs were received from the following sites:

Aberdeen Proving Ground, Maryland

Ft. Benning, Georgia

Ft. Bliss, Texas

Ft. Campbell, Kentucky

Ft. Davis, Canal Zone

Ft. Dix, New Jersey

Dugway Proving Ground
Dugway, Utah

Eighth Army, Korea

Ft. Eustis, Virginia

Ft. Gordon, Georgia

Ft. Benjamin Harrison, Indiana

Ft. Hood, Texas

Ft. Sam Houston, Texas

Ft. Jackson, South Carolina

Japan/IX Corps (HQ, U.S.A.)

Ft. Knox, Kentucky

Ft. Lee, Virginia

Ft. Lewis, Washington

Ft. McClellan, Alabama

Ft. Lesley J. McNair,
Washington, D.C.

Ft. McPherson, Georgia

Ft. George G. Meade,
Maryland

Ft. Monroe, Virginia

Ft. Shafter, Georgia

USAREUR ACES, Division HQ

U.S. Military Academy
West Point, New York

APPENDIX B

LISTING OF THE MATERIALS FOR THE RECOMMENDED INSTRUCTIONAL PACKAGE

The following materials were recommended for inclusion in the BSEP II Instructional Package:

MATH MATERIALS

Big Bend Community College Teacher's Handbook: A Guide to Contracting

Teaching Strategies for Developing Military Functional Literacy Vol. 1 - User's Guide by Boston University

BSEP Map Reading Program Teacher's Manual by Big Bend Community College

BSEP Map Reading Program by Big Bend Community College

Teaching Strategies for Developing Military Functional Literacy Vol. 5 - Math/Problem Solving

Teaching Strategies for Developing Military Functional Literacy Vol. 6 - Interpreting Graphics

READING AND COMMUNICATION SKILLS MATERIALS

1. Ft. Dix BSEP
2. Big Bend Community College: Selected Reading Packets
3. Teaching Strategies for Developing Military Functional Literacy. Vol. 3 - Comprehension
4. Aberdeen Proving Ground - BSEP I
5. Ft. Jackson BSEP

APPENDIX C

LETTER FROM COL. ANDERSON REQUESTING BSEP II CURRICULUM

UNCLASSIFIED

01 RR UUUU

NO

DA TAGO/TAGCEN WASHDC //DAAG-EDA//

CDR USATRADOC FT MONROE VA //ATAG-ED//

CINCUSAREUR HEIDELBERG GER //AEAGC-C//

CDR USAFORSCOM FT MCPHERSON GA //AGPR-PS-E//

CDR USADARCOM ALEX VA //DRCPT-MP/MR. FULLER//

CDR USAINSCOM ARLINGTON VA //AOPS-PTR-T//

CDR USAMDW WASHDC //AMPE-PSE//

CDR USACC FT HUACHUCA AZ //CC-PA-PT//

CDR USAHSC FT SAM HOUSTON TX //HSPE-HD//

CDR MTMC WASH //MTMC-PEM//

AIG 7406

SUPERINTENDENT USMA WEST POINT NY //MAPS-E//

CDR USARJ CP ZAMA JAPAN //GA-PSE//

CDR USA EIGHTH ARMY SEOUL KOREA //AJ-ACES//

UNCLAS

SUBJECT: ARMY BASIC SKILLS EDUCATION PROGRAM (BSEP) CURRICULUM

A. REF, AR 621-45 W/CL 1, 2 AND 3; PARA 1-4, 2-6 AND 4-4.

B. REF, LTR, TAGCEN, SUBJ: "BASIC SKILLS EDUCATION PROGRAM (BSEP)", 27 SEP 79.

MAJ ANDERSON/DAAG-EDA/EDUCATION DIR
37748/49/10 OCT 79

R. E. BROWN, COL, GS, DIRECTOR OF EDUCATION

UNCLASSIFIED

02 03

NO

1. IN ORDER TO ASSESS CURRENT STATE OF THE ART IN THE DEVELOPMENT OF FUNCTIONAL (JOB-RELATED) BSEP CURRICULUM, IT IS ESSENTIAL THAT A COPY OF ALL CURRICULA/PROGRAMS OF INSTRUCTION, TEXTS, AND LESSON PLANS, INSTRUCTORS' NOTES, ETC., DEVELOPED SPECIFICALLY FOR INSTRUCTION OF SOLDIERS IN BSEP II BE SUBMITTED TO HQDA (DAAG-EDA).

2. REQUEST HQ, TRADOC PROVIDE A COMPLETE COPY OF ALL STRANDS WITH MODULES OF AITPT.

3. REQUEST HQ USAREUR PROVIDE COPY OF ALL FUNCTIONAL CURRICULUM/ TESTING MATERIALS DEVELOPED IN CONJUNCTION WITH RECENT PILOT PROGRAMS TO INCLUDE HEADSTART-ENGLISH.

4. REQUEST ALL MACOMS PROVIDE ANY CURRICULUM MATERIALS DEVELOPED SPECIFICALLY TO SUPPORT SOLDIERS' CAREER PROGRESSION OR DEVELOPMENT PROGRAMS.

5. IF COMMERCIAL (OFF THE SHELF) CURRICULUM, POI, LESSON PLANS TEXTS, AUDIO-VISUAL ARE BEING USED, PLEASE PROVIDE COMPLETE ANNOTATE BIBLIOGRAPHY, BUT NOT A COPY OF MATERIALS THEMSELVES UNLESS OF SOME SPECIFIC FUNCTIONAL (JOB RELATED) VALUE TO THE SOLDIERS.

6. IF MATERIALS BEING SENT ARE COPYRIGHTED, OR DUPLICATION AND/OR FURTHER DISTRIBUTION/USE IS PROHIBITED, THIS INFORMATION MUST BE

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NO

CLEARLY INDICATED ON EACH DOCUMENT WITH EACH PAGE ANNOTATED IF POSSIBLE. MATERIALS TO BE RETURNED TO THE SENDER MUST BE CLEARLY MARKED.

7. REQUEST LOCAL LIBRARY/EDUCATION CENTER SEARCH BE CONDUCTED TO DETERMINE AVAILABILITY OF A COMPLETE USAFI BASIC READING MATERIAL "PRIVATE PETE" SERIES. IF LOCATED, PLEASE NOTIFY MAJ ANDERSON, AUTOVON, 223-7748/7749 IMMEDIATELY.

8. ALL MATERIALS REQUESTED ABOVE WILL BE SENT TO HQDA (DAAG-EDA), ATTN: MAJ ANDERSON, WASH DC 20314, NLT 31 OCT 79. THESE DOCUMENTS WILL BE USED BY LAWRENCE JOHNSON AND ASSOCIATES, UNDER CONTRACT WITH ARMY RESEARCH INSTITUTE, TO REVIEW CURRENT STATE OF THE ART IN BASIC SKILLS EDUCATION CURRICULUM DEVELOPMENT AND TO GLEAN THE BEST AVAILABLE IDEAS, TECHNIQUES AND "LESSONS LEARNED".

ARMY REGULATION
No. 621–45

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *1 September 1973*

EDUCATION

ARMY CONTINUING EDUCATION SYSTEM (ACES) BASIC SKILLS EDUCATION PROGRAM (BSEP)

Effective 1 July 1973 in accordance with congressional guidance.

This is a new regulation. It outlines the phased implementation of a new Army education program. After a 15-month Army-wide evaluation process, the contents of this regulation will be incorporated into AR 621–5 as an integral part of the ACES. Local limited supplementation of this regulation is permitted. If supplements are issued, major Army commands will furnish one copy of each to HQDA (DAAG–ED) WASH DC 20314.

CHAPTER 1
GENERAL

1-1. Purpose. This regulation establishes the Basic Skills Education Program (BSEP) as the commander's primary on-duty education program for enlisted personnel. It sets responsibilities and outlines procedures for implementing this education program designed to develop educational competencies required for a soldier's job performance, skill qualifications, and career growth.

1-2. Applicability. This regulation applies to all members of the Active Army and members of the Army National Guard and Army Reserve on initial active duty for training (ADT).

1-3. Scope. BSEP is to be implemented in three phases: BSEP I, BSEP II, and BSEP III. This regulation focuses on BSEP II implementation; however, it outlines BSEP in its entirety since each phase interlocks to form a continuum for the soldier's career growth. Implementation guidance for BSEP III will be added to this regulation during October 1978 to be effective 1 January 1979.

1-4. BSEP concept. BSEP will develop job-related educational skills from soldiers' entry into active service through their completion of the Advanced Course, Noncommissioned Officers Education System (NCOES). This paragraph gives an overview of each phase. Figures 1-1 and 1-2 provide schematic flow charts showing how three phases interlock. Chapters 2, 3, and 6 give specific procedures for BSEP's I, II, and II implementation. As a command program, BSEP will be integrated into education plans and master training schedules. It will be conducted during normal duty hours at no cost to participants. Formal entry into BSEP depends on the commander's decision, made after coordination with the ACES Education Services Officer (ESO) and discussion with the soldier. A principal consideration in selecting participants should be that soliders are willing to learn and use basic educational skills productively in the Army.

a. BSEP I (which is conducted under the auspices of TRADOC during intitial training), provides soldiers with basic literacy instruction in reading and arithmetic through 5.0 grade level, as measured by the Adult Basic Learning Examination (ABLE). In addition, instruction will be provided soldiers lacking ability to speak, understand, or read Engiish as a second language (ESL). Referral into BSEP I is normally reserved for soldiers in initial training who score below a raw score of 19 in verbal and numerical concepts on the SelectABLE. However, troop commanders within the training base may refer soldiers having academic difficulties to the Army Education Center (AEC) for special counseling. If the counselor determines a need for BSEP I, the soldier will be permitted to enroll.

b. BSEP II provides foundation instruction to raise general educational competencies (principally language and computational skills) to a 9.0 grade level as measured by ABLE II. Soldiers are normally identified as potentially eligible for BSEP II instruction in three ways:

(1) *Referrals based on GT scores.* During inprocessing at permanent duty stations, soldiers who have a GT score of less than 90 are identified for referral within 60 days.

(2) *Unit commander referrals.* These are based on supervisor's assessment or on voluntary requests by soldiers.

(3) *SQT referrals.* Soldiers are referred who score less than minimum required for military occupational skill (MOS) verification on skill qualification test (SQT) as reported on the Individual Soldier's Report (ISR). Priority consideration will be given to those soldiers whose retention is in the best interests of the Army, as determined by the commander, but who are in jeopardy of being eliminated from active duty.

c. BSEP III provides functional instruction to raise specific educational competencies related to MOS task requirements, immediate job performance, or career growth. Instruction in BSEP III is beyond the scope of the foundation

(BSEP II) phase and will include development of specific educational skills needed for advancement beyond grade E–5, MOS skill level .2. Completion of BSEP II is not a prerequisite for participation in functional instruction; however, an adequate foundation in basic skills is always desirable. Although implementation guidance for BSEP III will not be issued until October 1978, commanders will continue using existing MOS-related skill development instruction currently provided through ACES.

d. BSEP program requirements. An AEC counselor evaluation will be given to the unit commander to include whether or not the soldier is eligible and motivated for BSEP. If enrolled, the soldier will receive specific remedial instruction during normal duty time. The schedule for enrollment and participation will be mutually arranged between the unit commander and the ESO. The flow chart in figure 1–2 shows each step of the process leading to BSEP II completion, i.e., scoring above 9.0 on four tests (vocabulary, reading, spelling, mathematics) of the alternate form of the ABLE Level II. These competency levels are needed by soldiers in MOS skill levels .10 and .20 to perform required tasks effectively.

1–5. Program implementation. *a.* BSEP II will be established on or about 1 July 1978 at all installations and communities having an AEC or subcenter. Local arrangements will be made for soldiers at remote activities. BSEP I will be implemented at all installations conducting advanced individual training (AIT), One-station unit training (OSUT), or two-station unit training (TSUT)–phase II, on or about 1 July 1978.

b. BSEP instruction will be based on the English language and educational needs of the soliders at specific installations or communities. Although the type and quantity of instruction will vary from one location to another, it must be consistent with the criteria in chapters 2 and 3 and the contracting specifications in chapter 4. This regulation requires that BSEP II be available to enlisted personnel in all commands.

c. Effective 1 July 1978, components of the Adult Basic Learning Examination (SelectABLE, ABLE I, ABLE II) will be used as the standard diagnostic instruments to identify the educational skills that must be reinforced by participation in BSEP's I and II. The English comprehension level (ECL) examination will be used as the standard measurement instrument to identify students' level of comprehension in listening and reading.

1–6. English as a second language (ESL). ESL instruction will be an integral part of BSEP and based on the course materials provided for this purpose by the Defense Language Institute, English Language Center (DLIELC). (See appendix and AR 350–20.) This instruction will be made available to all soldiers for whom English is not the first or native language and who score below 70 on the English comprehension level (ECL) examination. The appendix gives detailed information for ESO's.

1–7. Evaluation. A comprehensive evaluation will be conducted during BSEP's first 15 months of implementation (July 1978-September 1979). Data will be collected and reports submitted as outlined in chapters 2 and 5. The objective is to measure the effectiveness and benefits of BSEP, particularly in regard to soldiers' job performance and test scores as specified in chapter 5. Adjustments will be made to the program based on the results of this evaluation. To assist with the evaluation of BSEP, a copy of each subordinate installation/community DA Form 1821 (Army Continuing Education System (ACES) (RCS AG 331 (R2)) will be forwarded to HQDA DAAG–ED) WASH DC 20314, in conjunction with MACOM's quarterly consolidation beginning with 4th Quarter, Fiscal Year 1978.

1–8. High school completion program. Effective 1 July 1978, educational courses taught solely to provide soldiers the opportunity to meet State requirements for high school graduation (either diploma or equivalency certificate) will be conducted after normal duty hours. Participants will be authorized Army tuition assistance (75 percent). Counseling within BSEP will encourage nonhigh school graduates to take the GED Test to qualify for a State-issued GED high school equivalency certificate when diagnostic testing, coupled with off-duty attendance in high

school courses, as necessary, indicates probability of success. Nonhigh school graduates who are interested in achieving a diploma will be counseled on available opportunities and encouraged to participate in the Army-sponsored off-duty high school completion program.

1-9. Responsibilities. a. The Adjutant General has Army Staff responsibility for policy, implementation, and evaluation of BSEP.

b. CG, MILPERCEN, will establish procedures whereby local military personnel offices (MILPO) will provide installation and community ESO with—

(1) Listing of SQT results and,

(2) Listing of GT scores of all personnel assigned to that location.

c. CG, TRADOC, will—

(1) Conduct BSEP I during the intial entry training cycle and collect data for BSEP I evaluation.

(2) Identify and update the educational competencies needed by soldiers to become proficient in their MOS.

(3) Establish procedures which will permit use of the ISR containing SQT results by Education Center staff personnel to improve educational skills which, in turn, will increase MOS proficiency.

d. Commandant, DLIELC, in accordance with AR 350-20, will—

(1) Review, identify, and advise on suitable instructional materials for speaking, listening comprehension, reading, and writing skill builders for soldiers whose first language is other than English.

(2) Provide American Language Course instructional materials.

(3) Conduct, under the auspices of HQDA, evaluation of nonresident English language instruction. Additionally, at the request of HQDA (DAAG-EDA), DLIELC will conduct onsite visits to ensure quality control and provide technical guidance and assistance in coordination with MACOM directors of education.

e. MACOM commanders will—

(1) Integrate BSEP with educational pr grams and training directives.

(2) Allocate manpower resources and fund provided by HQDA in the program budge guidance (PBG) to support BSEP.

(3) Ensure uniform foundation (BSEP I instruction is available to enlisted personnel i their commands.

(4) Provide a summary report to HQD (DAAG-ED) WASH DC 20314 concerning im plementation of BSEP in conjunction with sub mission of DA Form 1821, in accordance wit chapter 5.

(5) Conduct a comprehensive evaluation o BSEP in accordance with chapter 5. Results o this evaluation are due to HQDA (DAAG-ED not later than 1 July 1979.

f. Installation and community commander will—

(1) Prepare and implement BSEP as part o master training schedules based on assessment of command requirements.

(2) Ensure adequate funds, facilities, per sonnel, and equipment are available and used fo BSEP (principally a MACOM function in overse commands).

(3) Arrange through the ESO for the de velopment of BSEP II instruction specification appropriate to unit mission, and through th contracting officer for the development of con tracts consistent with chapter 4. (Contracting with educational institutions in overse commands will be in accordance with MACOM directives.)

(4) Identify (through use of the AEC staff soldiers potentially eligible for BSEP II within 60 days after arrival at the permanent duty station.

(5) Provide professional education guidance and testing services, and MOS library and learning center facilities essential for BSEP.

(6) Evaluate BSEP in terms of enhancement of MOS proficiency and qualifications for advancement.

(7) Ensure that those ISR's containing SQT results for soldiers who fail to verify MOS are forwarded to the servicing AEC on a timely basis.

1-

g. Unit commanders will—

(1) Refer potentially eligible members of their command to servicing AEC for diagnostic testing and BSEP counseling.

(2) Ensure that personnel eligible for BSEP are scheduled with the AEC for instruction as appropriate.

1–10. Resources. *a.* BSEP will be operated within budgetary limits of Program Element 879732. Expenditures will be reported as follows: BSEP I—879732.11000; BSEP II—879732.13000; American Language Course—879732.40000; and BSEP III—879732.21 (pending change to AR 37–100–XX).

b. Equipment and instructional materials associated with specific MOS knowledge and skills, but not normally a part of AEC instructional materials, will be obtained on a temporary basis from participating units.

c. AEC facilities, including MOS libraries, learning centers, and other Army instructional material resources, will be used fully in the conduct of BSEP so that contract costs with civilian educational institutions may be minimized.

d. BSEP II instruction in educational skills will be contracted with accredited educational institutions in accordance with Army procurement regulations. Exceptions will be approved only at MACOM or higher level. BSEP I instruction may be conducted by contract with an educational institution, or by instruction obtained through nonpersonal services contracts, as specified in Army procurement procedures, on an as-needed basis. Chapter 4 contains specific information regarding BSEP contracts.

(Locate figures 1–1 and 1–2 fold-ins, at end of regulation and insert following this page.)

CHAPTER 2
BSEP I IMPLEMENTATION

(To be published)

CHAPTER 3
BSEP II IMPLEMENTATION

3–1. Purpose. This chapter outlines implementing procedures for the foundation phase of the BSEP, which is designated to raise educational competencies (principally language and computational skills) to a 9.0 grade level. This general competency level is needed by soldiers in MOS skill levels .10 and .20 to perform required tasks effectively. (MOS-specific competencies will be taught in BSEP III.)

3–2. Referral procedures. Soldiers entering BSEP II are normally referred in three ways—

a. Referrals based on GT scores. Soldiers in-processing through the AEC at their permanent duty station who have less than a 90 GT score will be referred to an educational counselor for possible entry into BSEP II. Personnel listings, provided by the local MILPO, showing GT scores of all personnel assigned to the command will be used by counselors to help identify potentially eligible BSEP II participants.

b. Command referrals. Unit commanders will refer soldiers to the installation and community AEC for counseling on entry into BSEP. Command referrals may stem from supervisor assessments or from soldiers who recognize their own educational deficiencies and voluntarily request entry into BSEP.

c. SQT referrals. Soldiers scoring below the minimum required for verification of MOS will be referred by their commanders to AEC for counseling on possible educational deficiencies. The ISR given to the ESO will alert AEC staff of personnel in need of referral. ISR's will be analyzed by AEC staff to help determine possible educational deficiencies and the appropriate educational skills in need of reinforcement.

3–3. Initial counseling procedures. Education counselors will discuss with referred soldiers their educational background, problems encountered on the job, particularly in accomplishing MOS-related tasks, and specific educational needs and objectives. If the counselor identifies a possible foundation education deficiency, or if a soldier has a GT score of less than 90, the soldier will be given the reading and arithmetic tests of ABLE II. If measured below 9.0 grade level on either, the soldier will be counseled on enrollment into BSEP II. The vocabulary and spelling tests of ABLE II will then be given for diagnostic and placement purposes. Results will be analyzed by the counselor who will recommend instruction for that particular soldier. Soldiers with a 9.0 grade level or above will be counseled into an educational program that fits their needs.

3–4. Program enrollment. Eligible soldiers will be enrolled in BSEP II in accordance with specific instructional needs. BSEP will be integrated into master training schedules so that soldiers will be released to participate on a regularly scheduled basis. Instruction will be conducted during normal duty hours.

3–5. Priority of enrollment. Priorities of enrollment, listed below in descending order, will be used in scheduling soldiers who need foundation instructions:

a. Soldiers with high reenlistment potential.

b. Soldiers with high leadership and promotion potential.

c. Soldiers who need BSEP to meet current MOS and job requirements.

d. Soldiers desiring to raise the Armed Services Vocational Aptitude Battery (ASVAB) score to qualify for different MOS or Army school.

3–6. Program length and class size. *a.* Participant's progress will be monitored for all instruction. If the soldier has not completed the program after 240 classroom hours of instruction, an evaluation will be made (by the teacher in coordination with the ESO and unit commander) on continuation in the program. If a participant is progressing at a successful

achievement rate, continuation in the program may be authorized, if not, enrollment will be terminated.

b. Optimal classroom participation is 4 hours per day.

c. Class size will range from 10 to 20 students to make individualized instruction possible.

3–7. Completion criteria. Service members achieving a 9.0 grade level or above on each of the four tests of the alternate form of the ABLE II will have completed BSEP II. (Waiver: BSEP II participants who initially scored higher than 9.0 grade level on one or more of the four tests may be excused from retaking the alternate form of those specific tests.) The ASVAB will, as appropriate, be readministered to upgrade the soldier's GT score.

3–8. Counseling support. *a.* In addition to preenrollment counseling, service members enrolled in BSEP II will be counseled throughout the program. Any irregularities in attendance, discipline, or expected achievements in learning will be resolved through counseling, when possible. If irregularities continue, soldiers may be disenrolled and returned to their units with appropriate unsatisfactory report submitted to their unit commander.

b. After successful completion of BSEP II end-of-program testing, soldiers will again receive counseling on possible—

(1) Entry into off-duty High School Completion Program (if nonhigh-school graduate).

(2) Administration of the GED Test for a State-issued GED High School Equivalency Certificate (if nonhigh-school graduate).

(3) Participation in other career development education programs as appropriate.

3–9. DA Form 669. Eligibility for BSEP and actions taken regarding BSEP enrollment will be recorded on the soldier's DA Form 669, (Educational Development Record).

CHAPTER 4
GUIDANCE FOR DEVELOPMENT OF CONTRACT SPECIFICATIONS FOR BSEP II

4–1. **Purpose.** This chapter provides guidance in the development of specifications for contracts or memorandums of understanding (MOU) with educational institutions that offer foundation instruction (BSEP II). It is intended to serve as a basic framework for activities to use when coordinating with the contracting officer on BSEP II specifications.

4–2. **Scope.** The specifications must be in adequate detail to ensure that institutions submitting bids can accurately determine the resources of manpower and costs required to develop curriculums, conduct instruction, administer activities, evaluate student progress, and submit reports for a program of instruction that will achieve the BSEP II objectives.

4–3. **Applicability.** This guidance is applicable to all commands and installations that have a continuing need for BSEP II.

4–4. **Specifications.** The following elements, as applicable, will be included in the specifications for the BSEP II—

a. Program description. BSEP II (foundation) instruction reinforces and develops basic educational skills required in most military occupational specialties. Instruction will be designed to enable soldiers to master basic education skills at or above the 9.0 grade level as measured by—vocabulary, reading, spelling, and arithmetic tests of the Adult Basic Learning Examination Level II (ABLE II). Participants enrolled in the American Language Course are expected to achieve greater than a 70 standard score on the English comprehension level (ECL) examination after completion of foundation instruction. Mastery of instructional material outlined below, not measured by the ABLE II or the ECL examination will be determined by locally developing testing and evaluating procedures.

b. Program objective. The BSEP II (foundation instruction) objective is to reduce educational deficiencies that affect soldiers' abilities to perform military duties or to verify their MOS, or that impair professional development and career advancement.

c. Program content. BSEP II will include instruction to achieve these objectives—

(1) Basic reading skills needed to read to a minimum 9.0 grade level as measured by the ABLE II reading test and to apply these skills to job-related publications, (e.g., soldiers, technical, and field manuals). Instruction will include word attack skills, phonics, structural word analysis and recognition, and reading and listening comprehension. A portion of this instruction will also be devoted to selected readings in materials emphasizing fundamentals of teamwork and leadership, responsibilities of the citizen-soldier, foundations of American culture, and the role of a well-trained soldier in world affairs.

(2) Computational and related skills to include addition, subtraction, multiplication and division of whole numbers, fractions and decimals; use of percentages, mastery of the metric system in measuring weights, lengths, and capacity; computation of averages, measurement of lines and angles; interpretation of line, bar, and circular graphs; interpretation of tabular data; ability to make scale conversions, linear angular measurement, and determine grid coordinates as applied to map reading and other directional skills (e.g., compass reading); and use of arithmetic in consumer problems as encountered in personal budgeting, checkbook balancing, comparative shopping for food, housing, automobiles, loans, insurance, etc.

(3) Basic writing skills include basic rules for capitalization, punctuation, spelling, sentence and paragraph structure, and their application to military writing.

(4) Fundamentals of speaking and listening

skills needed for, but not limited to, giving and receiving commands, directions, instruction, etc., with emphasis on phonics-diction.

(5) Speaking and listening comprehension skills required by soldiers for whom English is a second language to perform effectively in the English-speaking Army. (DLIELC material will be used.)

d. Program design. The program will be designed principally as an adult education program to accommodate the needs of soldiers from 5.0 through 9.0 grade competency levels. Instruction will be sequenced in accordance with skill proficiency. Basic literacy to the 5.0 reading grade level (RGL) will be designed as an adjunct block of instruction when needed. Mastery of basic literary skills is essential for successful participation in other blocks of foundation instruction. With the exception of English as a second language, the program will be limited to 360 hours of classroom instruction. Modules of instruction will be developed in accordance with program content as stated in c above, and be compatible with the military training schedule. Each module will have criteria for entry and completion. If practicable, the criteria will be based on scores achieved on the ABLE II. Although instruction will normally be conducted in formal classroom groupings, the program will be individualized to respond to specific student deficiencies within a skill area and requirements appropriate to military students. As appropriate, use will be made of individualized instructional methods (e.g., learning laboratories, programed instruction, individual learning packets, and tutorial assistance).

e. Program materials. The educational institution will select or develop and print instructional material and will provide all materials required by students. The Government will provide the contractor necessary Army materials, such as field, technical, and soldiers' manuals, needed by the institution for program development and, in limited numbers, for instruction. The Army will provide the DLIELC materials.

f. Facilities, equipment, and service. Specifications will identify the Government facilities, equipment, and services that will be available to the educational institution to conduct the program.

g. Program scheduling. Scheduling for BSEP II instruction will be specified. Provisions will be made for curtailment of scheduled instruction due to military necessities.

h. Class size. Classes will normally have between 10 and 20 students. Exceptions can be made with MACOM approval to meet special situations.

i. Program administration.

(1) The Army will select students in accordance with provisions of this regulation.

(2) The installation Army Education Center (AEC) will initially identify the level of instruction required by the soldier enrolled in BSEP II. It will also identify the individual's level of achievement and deficiencies.

(3) The educational institution will develop administrative procedures to ensure that soldier's progress, absenteeism, or other problems are reported promptly to the AEC.

(4) After coordinating with the unit commander, the AEC will disenroll soldiers who fail to make progress, or who achieve the BSEP II objectives.

(5) The AEC will prescribe reports required of the institution.

(6) The institution will maintain on file, and available for review in its administrative offices on the installation, the program syllabus, curriculum, and instructors' lesson plans.

(7) The institution is responsible for employing qualified instructors, providing in-service training (e.g., certain instruction requires a basic knowledge of the military environment), and ensuring that substitute teachers are available to meet class requirements. Except in unusual circumstances, neither military personnel nor Government employees will be employed as instructors or administrators of the institution.

j. Program inspection. Program inspection will be based on review and examination of curriculum, syllabus student progress as measured by ABLE II, ECL examination and locally agreed upon tests, and evaluation of student learning as measured in soldiers' troop unit environment.

CHAPTER 5
BSEP EVALUATION

5–1. Purpose. BSEP's I and II will be field-tested from 1 July 1978 to 2 July 1979. This chapter sets forth general guidance for the conduct of the BSEP I evaluation. It establishes procedures and schedules for data collection in support of the BSEP II evaluation to be conducted by HQDA (DAAG–ED).

5–2. BSEP evaluation objectives. Evaluation objectives are to—

a. Determine the effectiveness of BSEP in improving soldiers' job-related educational competencies, immediate job performance, military skill qualifications, education level, and potential for advancement.

b. Facilitate a cost benefit analysis of BSEP.

c. Adjust or correct the program format as necessary.

d. Determine the best methods for instruction, testing, and counseling within BSEP.

e. Better define basic skill deficiencies of Army enlistees.

5–3. Evaluation methods. Evaluation of BSEP's I and II will include a variety of measurements and analyses. BSEP participants will be compared with nonparticipants using individual data. Summary data will be gathered and evaluated to isolate trends and refine policy and procedures. Commanders' comments and appraisals will be requested periodically. HQDA special BSEP surveys, under the control of MILPERCEN, are planned. There will also be a narrative input in the value of BSEP as perceived by commanders. The report will also contain statistics on the troop population eligible to participate.

5–4. Evaluation responsibilities. *a.* The Adjutant General (DAAG–ED) will—

(1) Evaluate BSEP II using data collected from DA Form 1821–1–R (BSEP II Data Code Sheet), figure 5–2, and other available data sources.

(2) In conjunction with HQ TRADOC, evaluate BSEP I using data collected as outlined in chapter 2 and other available data sources.

(3) In conjunction with DLIELC, evaluate the effectiveness of the English as a second language component of BSEP.

(4) Provide findings and guidance to MACOM on BSEP implementation.

(5) Coordinate with MILPERCEN to obtain special BSEP surveys.

b. CG, TRADOC, will collect and analyze data on the effectiveness of BSEP I conducted within the training base using data collection procedures outlined in chapter 2. An in-process review (IPR) outlining implementation status of BSEP I is due HQDA (DAAG–ED) WASH DC 20314, 15 January 1979. A final comprehensive evaluation report is due to HQDA (DAAG–ED), 2 July 1979. The July 1979 final report suspense is essential for the preparation of the FY 81 Budget and FY 82 Program Objective Memorandum (POM). It will contain, but is not limited to, a command appraisal on effectiveness of BSEP I and action being taken to improve BSEP. Requirements Control Symbol for BSEP I reports is RCS AG–8000.

c. MACOM's will—

(Provide HQDA (DAAG–ED), effective fourth quarter FY 78, installation DA Form 1821 reports as inclosures to consolidated MACOM submissions. Narrative comments will accompany the MACOM and installation submission as follows:

(*a*) Problems experienced in BSEP II implementation.

(*b*) Changes in soldiers' job performance as a result of BSEP II participation. (Those appraisals should be requested from unit and activity commanders and key NCO's.)

(*c*) Recommendations regarding BSEP II implementation and operation.

(3) Comments pertaining to BSEP I will be forwarded to Cdr, TRADOC, ATTN: ATAG–ED, Ft Monroe, VA 23651.

(2) Include with the quarterly DA Form 1821 reports the installations DA Form 1821–1–R. Instructions for completion of the DA Form 1821–1–R are contained in figure 5–1. Requirements Control Symbol for BSEP II reports is RCS AG–301. DA Form 1821–1–R will be reproduced locally on 8 × 10½ inch paper.

(Locate figures 5–1 and 5–2, fold-in illustrations, at the end of regulation and insert following this page.)

5–2

ESO CODES

Army Education Center	ESO Code
TRADOC	
HQ TRADOC, Ft Monroe, VA	A 001
Ft Eustis, VA	A 002
Ft Benning, GA	A 003
Ft Bliss, TX	A 004
US Disciplinary Barracks, Ft Leavenworth, KS	A 005
Ft Gordon, GA	A 006
Ft Sill, OK	A 007
William Beaumont AMC, El Paso, TX	A 009
Ft Jackson, SC	A 010
New Cumberland Army Depot, New Cumberland, PA	A 011
US Army Depot Tobyhanna, PA	A 012
Ft Belvoir, VA	A 013
Ft Benjamin Harrison, IN	A 014
Carlisle Barracks, Carlisle, PA	A 015
Ft Story, VA	A 016
Vint Hill Farms Station, Warrenton, VA (Insecm)	A 017
Fort Indiantown Gap, Annville, PA	A 018
Ft Knox, KY	A 019
Ft Leavenworth, KS	A 020
Ft Lee, VA	A 021
Ft McClellan, AL	A 022
Ft Monroe, VA	A 023
Ft Rucker, AL	A 024
Ft Dix, NJ	A 025
Ft Leonard Wood, MO	A 026
FORSCOM	
HQ, FORSCOM, Ft McPherson, GA	B 050
193d Infantry Brigade, Canal Zone	B 051
US Army Garrison, Ft Buchanan, Puerto Rico	B 052
4th Infantry Division (Mech) & Ft Carson, Ft Carson, CO	B 053
Ft Hamilton, Brooklyn, NY	B 054
Ft Sam Houston, TX	B 055
172d Infantry Brigade, AK	B 056
US Army Support Command, HI	B 057
XVIII Airborne Corps & Ft Bragg, Ft Bragg, NC	B 058
101st Airborne Division (AASLT) & Ft Campbell, KY	B 059
Ft Devens, MA	B 060
III Corps & Ft Hood, Ft Hood, TX	B 061
9th Infantry Division & Ft Lewis, Ft Lewis, WA	B 062
Ft George G Meade, MD	B 063
Presidio, San Francisco, CA	B 064
1st Infantry Division (Mech) & Ft Riley, Ft Riley, KS	B 065
Ft Sheridan, IL	B 066
Ft Stewart, GA	B 067
Ft Polk, LA	B 068
Ft Ord, CA	B 069

Army Education Center	ESO Code
DARCOM	
HQ, DARCOM, Alexandria, VA	C 100
Aberdeen Proving Ground, MD	C 101
US Army Support Center, Granite City, IL	C 102
Yuma Proving Ground, AZ	C 103
Dugway Proving Ground, Dugway, UT	C 104
Seneca Army Depot, Romulus, NY	C 105
Edgewood Arsenal, Edgewood, MD	C 106
White Sands Missile Range, NM	C 107
US Army TACOM Support Activity, Selfridge AB, MI	C 108
Sharpe Army Depot, Lathrop, CA	C 109
Ft Monmouth, NJ	C 110
Redstone Arsenal, AL	C 111
INSCOM	
Arlington Hall Station, Arlington, VA	D 125
ACC	
Ft Huachuca, AZ	E 129
Ft Richie, MD	E 130
MTMC	
Oakland Army Base, Oakland, CA	F 135
USMA, West Point, NY	
USMA, West Point, NY	G 140
USAJ	
HQ, US Army Japan	H 141
US Army Garrison, Camp Zama, Japan	H 142
US Army Garrison, Okinawa	H 143
KOREA	
HQ, Eighth US Army	J 145
2d Infantry Division, East Camp Casey	J 146
West Camp Casey	J 147
Camp Hovey	J 148
Camp Stanley	J 149
Camp Howze	J 150
Camp Greaves	J 151
US Army Garrison, Ames	J 152
US Army Garrison, Taegu	J 153
Camp Carroll Army Depot	J 154
US Army Garrison, Pusan	J 155
4th US Army Missile Command, Camp Page	J 156
Camp Long	J 157
1st Signal Brigade, Kimpo	J 158
US Army Garrison, Youngsan	J 159
I Corps Special Troops, Camp Red Cloud	J 160
Camp Humphreys	J 161
HQ 2d Infantry Division	J 162
East Camp Casey	J 163

Figure 5–1. ESO codes.

5–3

ESO CODES—Continued

Army Education Center	ESO Code
MDW	
HQ, MDW, Ft McNair, WASH, DC	K 180
Ft Myer, VA	K 181
Pentagon, WASH, DC	K 182
HSC	
US Army Health Services Command, Ft Sam Houston, TX	L 190
Walter Reed Army Medical Center, WASH, DC	L 191
Fitzsimons Army Medical Center, Denver, CO	L 192
US Army Garrison, Ft Detrick, Frederick, MD	L 193
USAREUR	
Bremerhaven Post, Bremerhaven	M 201
Wobeck Det, BSC USA SAFF, Schoeningen	M 202
HQ USAREUR Language Lab, Heidelberg	M 203
Kapaun Barracks, Vogelweh, Kaiserslautern	M 204
North Point, Schoenborn	M 205
Patton Barracks, Heidelberg	M 206
Army Depot, Miesau	M 207
Smiley Barracks, Karlsruhe	M 208
552nd Artillery Group, Soegel	M 209
294th Artillery Group, Flensburg	M 210
US Army Hospital, Heidelberg	M 211
Kleber Kaserne, Kaiserslautern	M 212
Tompkins Barracks, Schwetzingen	M 213
US Army Hospital, Landstuhl	M 214
Gerszewski Barracks, Karlsruhe	M 215
Neureut Kaserne, Karlsruhe	M 216
Sullivan Barracks, Mannheim	M 217
Vincenza Military Post, Vincenza, Italy	M 218
8th Log Command, Camp Darby, Livorne, Italy	M 219
AFSOUTH, Camp Bagnoli, Naples, Italy	M 220
TUSLOG Det 67, Cakmakli, Turkey	M 221
Artillery Kaserne, Neckarsulm	M 222
Storck Barracks, Illesheim	M 223
Army Depot, Germersheim	M 224
Taylor Barracks, Mannheim	M 225
AEC, Rotterdam, Holland	M 226
Verona-Bascomantico, Italy	M 227
Embassy Annex, Rome, Italy	M 228
TUSLOG Det 4, Sinop, Turkey	M 229
552th Artillery Group, Athens-Eleusis, Greece	M 230
Rheinland Kaserne, Ettlingen	M 231
Coleman Barracks, Mannheim-Sandhofen	M 232
Kreuzberg Kaserne, Zweibruecken	M 233
Spinelli Barracks, Mannheim	M 234
Husterhoen Kaserne, Pirmasens	M 235
Lauterhoen Kaserne, Worms	M 236
Polley Kaserne, Bad Kreuznach	M 237
ED Smith Barracks, Baumholder	M 238
Neuarrecke Installation	M 239
USAREUR Stockade, Mannheim-Sandhofen	M 240
Turley Barracks, Mannheim	M 241
Hammond Barracks, Mannheim-Seckenheim	M 242
Army Depot, Pirschbach	M 243
Ernest Ludwig Kaserne, Darmstadt	M 244
Muenster Kaserne, Muenster	M 245
Anderson Barracks, Dexheim	M 246
Strassburg Kaserne, Idar-Oberstein	M 247
Spangdalen Air Base	M 248
Cambrai-Fritsch Kaserne, Darmstadt	M 249
Schloss Kaserne, Butzbach	M 250
Fliegerhorst Kaserne, Hanau	M 251
Coleman Kaserne, Geinhausen	M 252
Lee Barracks, Mainz	M 253
McCully Barracks, Wackernheim	M 254
Camp Eschborn, Eschborn	M 255
USA 97th General Hospital, Frankfurt	M 256
Prum Military Post	M 257
Bitburg Air Base	M 258
Babenhausen Kaserne, Babenhausen	M 259
Kelley Barracks, Darmstadt	M 260
Annex A, Frankfurt	M 261
Camp King, Oberursel	M 262
McNair Kaserne, Hoechst	M 263
Drake Edwards Kaserne, Frankfurt	M 264
Down Barracks, Fulda	M 265
Gibbs Kaserne, Frankfurt	M 266
McPheeters Barracks, Bad Hersfeld	M 267
Army Depot, Giessen	M 268
AEC, Hohenfels	M 269
AEC, Rimbach	M 270
Badenerhof Kaserne, Heilbronn	M 271
McGraw Kaserne, Munich	M 272
Nelson Barracks, Neu Ulm	M 273
5th Artillery Group, Bueren	M 274
Ray Barracks, Friedberg	M 275
Fiorri Kaserne, Aschaffenburg	M 276
Ready Barracks, Aschaffenburg	M 277
Sheridan Kaserne, Augsburg	M 278
Reese Barracks, Augsburg	M 279
Flint Kaserne, Bad Toelz	M 280
18th USASA Field Station, Bad Aibling	M 281
William O'Darby Kaserne, Feurth	M 282
Merrell Barracks, Nuernberg	M 283
Monteith Barracks, Feurth	M 284
Ferris Barracks, Erlangen	M 285
Nuernberg Stockade	M 286
570th Artillery Group, Handorf/Muenster	M 287
Rivers, Barracks, Giessen	M 288
Ayers Kaserne, Kirchgoens	M 289
Cooke Barracks, Goeppingen	M 290
7th Army Training Area, Grafenwoehr	M 291
7th ATC, Vilseck	M 292
Ponds Barracks, Amberg	M 293
Smith Kaserne, Aschaffenburg	M 294
Graves Kaserne, Aschaffenburg	M 295
Flak Kaserne, Augsburg	M 296
Gablingen Kaserne, Augsburg	M 297
Pioneer Kaserne, Hanau	M 298
Butler Kaserne, Hanau	M 299
Armstrong Barracks, Buedingen	M 300
Army Air Field, Flintsen	M 301
Camp Pieri, Wiesbaden	M 302
Hindenburg Kaserne, Ansbach	M 303

ESO CODES—Continued

Army Education Center	ESO Code
Jaeger Kaserne, Aschaffenburg	M 304
Larson Barracks, Kitzingen	M 305
Sheridan Barracks, Garmisch	M 306
Warner Kaserne, Bamberg	M 307
Bismarck Kaserne, Schwaebisch-Gmuend	M 308
Christensen Barracks, Bindlach	M 309
Katterbach Post	M 310
McKee Barracks, Crailsheim	M 311
Harvey Barracks, Kitzingen	M 312
McNair Barracks, Berlin	M 313
Peden Barracks, Wertheim	M 314
Daley Barracks, Bad Kissingen	M 315
Grenadier Kaserne, Stuttgart	M 316
Ludendorff Kaserne, Kornwestheim	M 317
Nellingen Barracks, Nellingen	M 318
Echterdingen Airfield	M 319
Krabbenloch Kaserne, Ludwigsburg	M 320
Panzer Kaserne, Boeblingen	M 321
Andrew Barracks, Berlin	M 322
US Army Hospital, Berlin	M 323
Heimstedt Support Det, Heimstedt	M 324
HQ Berlin Compound	M 325
SHAPE AEC, NATO/SHAPE Spt Gp (US), Casteau, Belgium	M 326

Army Education Center	ESO Code
AFCENT Support Activity, Brunssum, Holland	M 327
US Army Depot, Burtonwood (UK)	M 328
NATO Support Activity, Brussels, Belgium	M 329
Emergy Barracks, Weurzburg	M 330
Dolan Barracks, Schwaebisch Hall	M 331
Wildflecken Post	M 332
Pioneer Kaserne, Regensburg	M 333
Wharton Barracks, Heilbronn	M 334
Wiley Barracks, Neu Ulm	M 335
Artillery Kaserne, Guenzburg	M 336
Johnson Barracks, Fuerth	M 337
Nuernberg Hospital	M 338
Ledwards Barracks, Schweinfurt	M 339
Conn Barracks, Schweinfurt	M 340
Patch Barracks, Vaihingen	M 341
US Army Hospital, Bad Cannstatt	M 342
Wilkins Barracks, Kornwestheim	M 343
Kelley Barracks, Stuttgart	M 344
Flak Kaserne, Ludwigsburg	M 345
O'Brien Barracks, Schwabach	M 346
Pinder Barracks, Zindorf	M 347
Herzo Base	M 348
Coffey Barracks, Ludwigsburg	M 349
Leighton Barracks, Wuerzburg	M 350

5–5

APPENDIX E

DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
Fort Monroe, Virginia 23651

TRADOC Regulation
No 621-1

25 February 1980

Education
BASIC SKILLS EDUCATION PROGRAM CURRICULUM DEVELOPMENT PROJECT

Supplementation of this regulation is prohibited unless specifically approved by HQ TRADOC.

1. Purpose. This regulation prescribes the policies and procedures for redesigning the Basic Skills Education Program (BSEP) as described in HQDA letter, DAAG-ED, Implementation of Army Continuing Education Policy and Recommendations Plan, 18 Jan 80 (app A).

2. Applicability. These policies and procedures are applicable to the TRADOC staff and are provided to training and school center commanders for planning.

3. Concept. The existing Basic Skills Education Program, a major component of the Army Continuing Education System (ACES), will be redesigned during the next 5 years. The redesigned BSEP will provide soldiers educational skills needed to be awarded an MOS and to progress through an Army career in that specialty. The redesigned BSEP will be taught in two phases and will include four subprograms with supporting minimum competency tests and curriculum to provide soldiers the opportunity to develop the following skills--

a. MOS baseline.

b. Learning strategy.

c. Military life coping.

d. English-as-a-Second-Language.

(See appendix B for definitions.)

4. General.

a. The BSEP Curriculum Development Project will be developed with contractor assistance and include a learning analysis of each MOS authorized a density of 200 or more to identify the baseline skills needed in order to be trained in the MOS. Where these skills are common to more than one, MOS clusters will be developed. A standardized training package will be prepared for each BSEP skill to be taught. The training package will consist of diagnostic tests; training modules that are user oriented and designed for use by individuals or in group-paced training sessions; soldier guides; trainer guides; trainer training guides, if needed; a management plan for the implementation of the package and, as identified, assessment tests. To the extent possible, current Army training literature will be used for instructional purposes.

b. The first phase of the redesigned program (BSEP I) will be integrated with initial entry training. The English-as-a-Second Language (E-S-L) skills, when needed, will be taught before basic training to include the appropriate part of OSUT. MOS baseline skills will be taught concurrently with advanced individual training and the relevant part of OSUT. Ideally, baseline skill development will be integrated with MOS training. BSEP I will concentrate on, but not be limited to, the critical MOS tasks taught during initial entry training.

c. The second phase of the redesigned program (BSEP II) will be designed for post-IET delivery in either individually- or group-paced instruction, as appropriate. It will focus on sustaining skills and those prerequisite competencies necessary to successfully progress to skill level 20 or grade E5 within an MOS.

d. BSEP III will be redesigned by HQDA to encourage soldiers to develop the post-secondary, MOS, leadership, supervisory, and managerial skills needed to progress beyond grade E5. It will focus on the educational needs of the career soldier. When developed, BSEP III will be renamed the "Advanced Skill Education Program" (ASEP).

e. During FY 80 the Development Project will concentrate on the MOS taught at Forts Eustis, Gordon and Rucker and the integration of E-S-L skills with entry training in coordination with the staff at Fort Benning.

5. Responsibilities.

a. The Deputy Chief of Staff for Training will--

(1) Accomplish the tasks and objectives assigned to Commander, TRADOC, by the Chief of Staff, US Army (app A).

(2) Present quarterly progress summaries to the CofS, TRADOC, and the HQDA - Army Personnel Systems Committee; first presentation during March 1980.

(3) Establish a BSEP Curriculum Development Steering Group of representatives from TDI, DCST, DCSRM, and DCSPAL to monitor and coordinate this project and provide advice and assistance in accomplishing the project objectives.

(4) Review the effect of the BSEP Curriculum Development Project on program 8T accounts, e.g., increase/decrease in training loads, military manyears supported (MMYS), and other base operations support.

b. The Deputy Chief of Staff for Personnel, Administration and Logistics will--

(1) Continue to provide staff supervision of the existing Basic Skills Education Program. As MOS specific diagnostic tests and curricula are developed, phase them into BSEP at the appropriate training centers.

(2) Provide a member-representative (COL) to the BSEP Steering Group.

(3) Participate in the quarterly progress summaries of current status and future plans, as necessary.

c. The Deputy Chief of Staff for Resource Management will--

(1) Establish an audit-trail procedure to account for the Program 8(0) funds and manpower allocated to TRADOC by HQDA for the BSEP Curriculum Development Project.

(2) Participate in the quarterly progress summaries of current status and future plans, as necessary.

(3) Provide a representative (COL) to the BSEP Steering Group.

d. The training and school center commanders will—

(1) Continue existing BSEP I and II programs but refine, where possible, curricula contracts to focus on skill relevant military literature (e.g., FM, TM, SM) rather than standard civilian texts.

(2) Schedule E-S-L instruction either before or during initial phase of IET. Incorporate media-assisted training materials into E-S-L as these are made available. (The first of these is "Pre-Basic Rifle Marksmanship" to be distributed during early 1980.)

(3) Appoint BSEP Project officer/coordinator to provide interface with the Training Development Institute and HQ TRADOC.

(4) Insure that revisions/renewals to current BSEP contracts include provisions for introduction of new BSEP materials and methods of training as these become available.

6. Priorities.

a. Among subprograms:

(1) MOS baseline skills.

(2) English-as-a-Second Language skills.

(3) Military life coping skills.

(4) Learning strategy skills.

b. Among participants:

(1) Initial entry training (BSEP I).

(2) Grade E4 and below (BSEP II).

(3) Grade E5 and above.

7. Resources. Resources to support this developmental effort have been allocated by HQDA to TRADOC. The manpower and funds are tentatively apportioned as shown at appendix C which also reflects the relative level of effort by fiscal year. When received, the manpower and funds will not be diverted to any other purpose without the specific approval of this headquarters (DCST and DCSRM).

APPENDIX A

DEPARTMENT OF THE ARMY

OFFICE OF THE ADJUTANT GENERAL AND THE ADJUTANT GENERAL CENTER
WASHINGTON, D.C. 20314

REPLY TO ATTENTION OF:

DAAG-ED (18 Jan 80) Expires 18 January 1985 18 January 1980

SUBJECT: Implementation of Army Continuing Education Policy and Recommendations Plan

SEE DISTRIBUTION

1. PURPOSE: This letter establishes a plan delineating courses of action, responsible agencies and milestones required to implement ASA(M&RA) recommendations to improve the Army Continuing Education System (ACES).

2. REFERENCES:

a. Department of the Army Memorandum, subject: Army Continuing Education Policy and Recommendations, dated 7 August 1979.

b. Chief of Staff Memorandum, subject: Army Continuing Education Policy and Recommendations Study, dated 29 August 1979.

3. MISSION: To fulfill the Army responsibility of developing and conserving its human resources by providing on-duty job-related education programs and off-duty educational opportunities for personal and professional development.

4. BACKGROUND: In April 1979, the Secretary of the Army directed the Under Secretary and Assistant Secretary of the Army for Manpower and Reserve Affairs to review ACES and its interface with other Services, government agencies, and the civilian academic community. TAG was tasked to provide a report which detailed the history and present state of voluntary education within the Army. The report covered the administration of ACES and its interface with outside agencies, counselors, the Basic Skills Education Program (BSEP), the Army High School Completion Program (HSCP), post-secondary programs, Servicemen's Opportunity Colleges (SOC) and non-resident Foreign Language Programs, skill recognition programs, skill development programs, tuition assistance, the Veterans' Education Assistance Program (VEAP), Department of Defense Dependent Schools and CONUS dependent schools. Problem areas were identified and discussed in the report.

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The major areas of concern were maintaining an effective professional work force while personnel resources were being progressively reduced at the installation level, inadequate quantity and quality of education center facilities at the installation level, the evaluation of education programs on the installations, and the impact of the termination of the GI Bill on the recruiting effort.

As a result of this report, Dr. Dueitt, Deputy for Human Systems and Resources of OASA(M&RA), prepared a comprehensive assessment of ACES culminating in thirteen recommendations designed to broaden and improve the ACES' potential for serving both the individual and the Army. These recommendations were accepted in a joint Secretary of the Army / Chief of Staff Memorandum (Ref a). That memorandum tasked the Assistant Secretary of the Army for Manpower and Reserve Affairs and the Army Staff to develop a plan which would implement the recommendations.

5. DEVELOPMENT: The DCSPER convened a task force containing representatives from HQDA and TRADOC and charged them with the responsibility for development of this plan. The task force divided into two groups; one group at TRADOC developed plans, resources and milestones which:

a. Outline strategies for gaining Army-wide acceptance of reading, writing, speaking, and computing as "critical tasks" for soldier training.

b. Propose cost-effective methods to teach learning strategies and life-coping skills as an integral part of training.

c. Provide a functional (job-related) approach to basic skills development instead of the general approach.

d. Expand opportunities for participation in job-related programs in reading, writing, speaking and computing, especially during initial training.

e. Develop Army specific reading tests for the diagnosis of basic skill deficiencies as opposed to relying on general reading grade level tests.

A second group at HQDA developed plans, resources and milestones to:

a. Improve Army capability in basic skills research, development and demonstration.

b. Attract Departments of Labor and Health, Education and Welfare funds for developing educational projects of common interest.

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c. Involve top Army leaders in communicating educational needs and concerns to the civilian community.

d. Work with education associations, accrediting agencies and Office of the Secretary of Defense to improve the quality of high school and college courses offered on military installations.

e. Develop a career development plan to insure that the best quality education personnel are recruited, retained, and promoted.

f. Increase educational opportunities for soldiers and dependents through expansion of the SOC, skill-related education, apprenticeship programs, transcript registry, etc.

g. Generate support to retain an expanded version of Veterans' Education Assistance Program (VEAP) or other educational incentives.

The plan, with detailed breakout of resource requirements, has been briefed to and approved by the Army Personnel Systems Committee (APSC) and the Joint Select Committee, both chaired by the VCSA.

6. EXECUTION:

a. Commander, TRADOC, will develop an Army-specific, job related BSEP in four major areas:

(1) MOS baseline skills

(2) Military life-coping skills

(3) Learning strategies

(4) English-as-a-Second Language

b. Commander, TRADOC will develop a milestone/status briefing for implementing BSEP I and II improvements and present to APSC during second quarter FY 80.

c. DCSOPS, in conjunction with DCSPER/TAG, will provide appropriate policy and guidance related to Learning Center operations and will serve as the executive agency to develop courses of actions to improve learning centers and to formulate resource requirements.

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d. DCSOPS, in conjunction with DCSPER/TAG, will review roles of training and education to assure they are complementary and not competitive, develop and publish Army policy on integration of BSEP into training.

e. DCSPER has ARSTAF responsibility for the overall implementation of the Army Continuing Education Policy and Recommendations Plan and will:

(1) Task Army Research Institute to establish an Educational Research Division.

(2) Monitor and assure satisfactory progress of the Army Staff and TRADOC on all implementing actions.

(3) Provide periodic progress reports on the phased implementation of the plan to the Army Policy Council (APC).

(4) In concert with the COA and OPA&E ensure approved resource requirements are provided to appropriate commands and agencies to meet milestone schedule of this plan.

7. RESPONSIBILITIES: Detailed listing of agency responsibilities and milestones is at Inclosure 1.

8. IMPLEMENTING INSTRUCTIONS:

a. This plan is effective upon receipt.

b. Recommended changes to this plan will be submitted to Headquarters, Department of the Army, ATTN: DAAG-ED, Washington, D. C. 20314.

BY ORDER OF THE SECRETARY OF THE ARMY:

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ROBERT M. JOYCE
Brigadier General, USA
Acting The Adjutant General

A. ASA(M&RA) RECOMMENDATIONS	A. IMPLEMENTING PLAN ACTIONS	AGENCIES (P) PRIMARY	START DATE	REQUIRED COMPLETION DATE
1. Formulize the policy statement and develop strategies for gaining Army-wide acceptance of reading, writing, speaking, and computing as "critical tasks" for soldier training.	1. Provide for immediate revision of BSEP.			
	a. Revise AR 621-45 & 621-5 as required.	TAGO	Jan 80	Jun 80
	b. Provide revised guidance to field on MOS baseline and ESL curriculum development.	TAGO (P), TRADOC and ARI	Jan 80	Jun 80
2. Find ways to teach learning strategies and life-coping skills as an integral part of training, perhaps as concurrent training.	c. Provide guidance on inclusion of life-coping skills and learning strategy skills.	TAGO (P) and TRADOC	Jan 80	Jun 80
3. Develop a functional (job-related) approach to basic skills development instead of the general approach.	d. Provide guidance to field on contract refinements to reinforce MOS needs.	TAGO (P), ASA, TRADOC	Ongoing	Jun 80
4. Expand soldier opportunities for participation in functional basic skills, especially during initial training.	e. Identify available state of the art functional BSEP materials and provide to the field.	TAGO (P), DAS and ARI	Ongoing	Jul 80
5. Improve the diagnosis of basic skill deficiencies by developing Army-specific reading grade level as a screening device for enrollment of soldiers.	2. Coordinate with Departments of Labor, and Education on development and conduct of pre-service ESL and literacy programs.	TAGO (P) and TRADOC	Ongoing	Ongoing
	3. Develop Army-specific functional BSEP curriculum.	TRADOC (P), TAGO and ARI		
	a. Establish management structures for BSEP development.	TRADOC (P), ARI and TAGO	Jan 80	Feb 80

b. Develop and award contracts for six MOS-specific baseline skills programs in 05C, 31M, and 67 N/U/V/Y courses. Deliverables include validated tests, validated materials, student guide, management plan and trainer training program.	TRADOC (P), ARI and TAGO	Feb 80	Jan 82	TRADOC Reg 621-1
c. Develop and award a contract to identify baseline training requirements for all MOS that have an authorized density greater than 200 in skill level 10 and 20 duty positions. Perform learning analysis upon these training requirements and identify appropriate MOS clusters for developing training materials.	TRADOC (P), ARI and TAGO	Feb 80	Oct 81	
d. Perform word frequency and criticality analysis for MOS, identified in 3c above.	TRADOC (P) and TAGO	Ongoing	Feb 81	
e. Develop and award a contract for pre-basic training ESL program. Deliverables include needs and learning analysis, validated tests, validated materials, student guide, trainer guide, trainer training program, and management plan.	TRADOC (P), DLI-ELC, TAGO and ARI ODCSOPS	Feb 80	Oct 81	
f. Develop and award contract to conduct a needs analysis of Army life-coping skills training requirements. This will identify specific life-coping skills of special concern, initiate a collection of baseline data and provide a list of commercially available materials.	TRADOC (P), DACH-PE, DAPE-HRD, TAGO and ARI	Feb 80	Jul 81	

g. Develop and award a contract to identify Army learning strategy skills training requirements, perform a learning analysis upon these requirements and provide a list of commercially available materials.	TRADOC (P), TAGO and ARI	Feb 80	Oct 81
h. Develop and award contract for sustaining ESL program. Deliverables include validated tests, validated materials, student guide, trainer guide (when needed), management plan and trainer training program.	TRADOC (P), DLI-ELC, FORSCOM, USARPAC, EUSA TAGO and ARI ODCSOPS	Oct 80	Apr 83
i. Develop and award contract for a series of Army life-coping skills programs. Deliverables include learning analysis, validated tests, validated materials, student guide, trainer guide (when needed), and management plan.	TRADOC (P), DACH-PE, DAPE-HRD, TAGO and ARI	May 81	Mar 84
j. Develop and award five ± contracts for clustered MOS-specific baseline skills programs for -10 and -20 skill levels. Deliverables include validated tests, validated materials, student guide, trainer guide (as needed), trainer training program (as needed) and management plan.	TRADOC (P), ARI and TAGO	Aug 81	Apr 85
k. Develop and award contract for pre-enlistment ESL program. Deliverables include validated tests, validated materials, student guide, trainer guide, management plan and trainer training program.	TRADOC (P), DLI-ELC, TAGO and ARI ODCSOPS	Sep 81	Mar 84

l. Develop and award a contract to develop and evaluate a series of learning strategy skills programs suitable for a variety of Army career requirements. Deliverables include validated tests, validated materials, student guide, trainer guide (when needed), management plan and data.	TRADOC (P), ARI and TAGO	Aug 81	May 84
m. Provide contractual products helpful in program revision--	TRADOC	As received	
- Word frequency & criticality analysis. - Baseline skills learning analysis and clusters. - Military life-coping skills needs and analysis. - Learning strategy needs analysis. - Lists of commercially available materials.			
n. Field BSEP curriculum materials.	MACOMS	As received	
4. Evaluate cost-effectiveness of functional BSEP.			
a. Conduct pre-basic training ESL evaluation.	ARI (P), TRADOC and TAGO	Feb 82	Dec 82
b. Conduct initial MOS base-line evaluation in 6 MOS courses.	ARI (P), TRADOC and TAGO	Jan 82	Jan 83
c. Conduct evaluation of ESL sustaining program.	ARI (P), USAREUR, EUSA, FORSCOM, TRADOC, TAGO, DLI-ELC, ODCSOPS	Jun 83	Jul 84
d. Conduct evaluation of life-coping skills.	ARI (P), TRADOC and TAGO	May 84	Jun 85
e. Conduct overall evaluation of total BSEP program.	ARI (P) TRADOC, TAGO and MACOMS	Ongoing	Sep 86

5. Program Army approved resources to complete actions one through four above as follows:			
a. Transfer $4.1M from FY 80 VEAP (PE 879732) to HQ TRADOC (PE 879732) to fulfill contract requirements.	ODCSPER (P) DOMA, TAGO TRADOC	Jan 80	Jan 80
b. Provide 5 civilian spaces in FY 80 to TRADOC (PE 814772) and transfer $.08M from VEAP (PE 879732) to salaries. Provide 3 civilian spaces in FY 80 to TRADOC (PE 879732) and transfer $.05M from VEAP (PE 879732) to salaries.	ODCSPER (P) TAGO, TRADOC DOMA	Jan 80	Jan 80
c. Reconfirm requirement and identify candidate source of funds to provide for the $2.3M unfunded requirement at HQ TRADOC (PE 879732) to fulfill contract requirements for FY 81. Transfer $4.4M from FY 81 VEAP (PE 879732) to HQ TRADOC (PE 879732) to fulfill contract requirements.	ODCSPER (P) DAB TAGO TRADOC DOMA	Jan 81	Jan 81
d. Reconfirm requirement and provide 5 civilian spaces in FY 81 to TRADOC (PE 814772) and transfer $.2M from FY 81 VEAP (PE 879732) for salaries.	ODCSPER (P) TAGO TRADOC DOMA	Oct 80	Oct 80
e. Reconfirm requirement and provide 7 civilian spaces in FY 81: to TRADOC (PE 879732) and transfer $.2M from FY 81 VEAP (PE 879732) for salaries.	ODCSPER (P) TAGO TRADOC DOMA	Sep 80	Sep 80
6. Program in FY 82-FY 86 POM Cycle, $14.6M FY 82 and $7.7M FY 81 to PE 879732 to fulfill HQ TRADOC contract requirements.	TAGO (P) ODCSPER TRADOC, PAED	Jan 80	Jan 80
7. Program in FY 82-FY 86 POM Cycle, each year, 24 civilian spaces for TRADOC: and $.7M for salaries.	TAGO (P) ODCSPER TRADOC PAED	Jan 80	Jan 80

A. ASA(M&RA) RECOMMENDATIONS	B. IMPLEMENTING PLAN ACTIONS	AGENCIES (P) PRIMARY	START DATE	REQUIRED COMPLETION DATE
Improve Army capability in basic skills research, development and demonstration. ARI should be designated as the Army's coordinator of applicable educational research findings and given the mission to strengthen the Army's technology base in such areas as functional literacy, adult learning strategies, motivation of marginal soldiers, and conservation of the Army's human resources.	1. Develop a 5 year master plan for education research and development. This master plan should be focused, but not limited to, the development of the in-house knowledge base and contract base required for future development of BSEP I & II, Advanced Skills Education Program (ASEP), and ACES. Investment strategy for R&D should be delineated by budget year, in one year increments, and should be updated in January of each calendar year to coincide with the budget cycle.	ARI (P), ODCSPER, TAGO, TRADOC, FORSCOM, DASG, and USAREUR	Feb 80	Annual Update Jan.
	2. Establish an educational research division at ARI. This division is to function as the Army's educational research and development element. Role of ARI educational division is to include three functions: (1) Information and dissemination. (2) Evaluation support for TRADOC. (3) Research and development. a. The information and dissemination of knowledge and techniques will be consistent with the state of the art in educational research and practices to include such activities as: (1) Creating and maintaining a knowledge base of educational development within the civilian and military sectors.	ARI (P), ODCSPER and TAGO	Apr 80	Ongoing

(2) Recommending innovative cost-effective educational methods for adoption into ACES programs.

(3) Providing technical assistance on educational program developments to Army staff elements as necessary.

(4) Evaluation of research utilization techniques.

b. Develop evaluation techniques required to support curriculum development. This effort will include such areas as reading, computation, listening, speaking, learning strategies and military life-coping skills. These techniques will be utilized by TRADOC to evaluate curriculum. The role of ARI evaluation of curriculum development process will include:

ARI (P), TRADOC and TAGO

Apr 80

Ongoing

(1) Third party evaluation for TRADOC-developed curriculums.

(2) Research of new multi-disciplinary evaluation techniques to measure the "quality" of such curriculum.

(3) Development of Army specific screening, diagnostic and achievement tests to support TRADOC developed curriculum.

(4) Development of a test facility ("test bed") where the cost and effectiveness of competing educational alternatives would be established.

c. Perform research and development ranging from basic through engineering development, on such issues as:	ARI (P), TRADOC, FORSCOM, DASC, USC and USAREUR	FY 80	FY 85	TRADOC Reg 621-1
(1) Levels of reading, computation, listening, speaking, learning strategies and life-coping skills needed by all soldiers. For example: a second generation learning strategies curriculum.				
(2) Development and evaluation of cost-effective, technology based methods and delivery systems to teach basic skills (research and development ranging from basic through engineering development).				
(3) Extend AF/Navy R&D on technical documentation.				
(4) Investigate motivation of marginal soldiers, for example: game-based learning approaches.				
(5) Revision of functional literacy approaches.				

3. Program Army approved resources to complete actions one and two above as follows:			
a. Provide $.5M RDT&E funds to HQDA PERI-OK to fulfill contract requirements.	ARI (P) ODCSRDA, TAGO TAGO, ODCSPER	Jan 80	Jan 80
b. Divert 5 civilian spaces in FY 80 from other ARI activities to HQDA PERI-OK.	ARI (P) ODCSPER TAGO	Jan 80	Jan 80
c. Provide one military space FY 80 to HQDA PERI-OK.	ODCSPER (P) ARI	Jan 80	Jan 80
d. Reconfirm requirement and identify candidate sources of funds to provide for $2.5M unfunded requirements to ARI (PE 2Q263743A794) to fulfill contract needs for FY 81.	ODCSPER (P) ODCSRDA ARI DAB	Jan 81	Jan 81
e. Provide 5 civilian spaces in FY 81 to HQDA PERI-OK and transfer $.3M from RDT&E FY 81 funds for salaries.	ARI (P) ODCSPER, TAGO ODCSRDA	Jan 81	Jan 81
f. Reconfirm requirement and provide one military and 4 civilian spaces in FY 81 and program $.2M RDT&E FY 81 funds for civilian salaries.	ODCSPER (P) ARI, TAGO ODCSRDA	Sep 80	Sep 80
4. Program in FY 82-FY 86 POM Cycle $2.7M in FY 82, $3.7M in FY 83, $2.7M in FY 84, $1.9M in FY 85 and $1.9M in FY 86 to fulfill contract requirements.	ARI (P) ODCSPER ODCSRDA PAED	Jan 80	Jan 80
5. Program in FY 82-FY 86 POM Cycle, each year, 2 military and 18 civilian spaces and $1.1M for civilian salaries.	ODCSPER (P) ARI ODCSRDA PAED	Jan 80	Jan 80

C. ASA(M&RA) RECOMMENDATIONS	C. IMPLEMENTING PLAN ACTIONS	AGENCIES (P) PRIMARY	START DATE	REQUIRED COMPLETION DATE
Persuade HEW and Labor to let the Army be a test bed for a variety of educational research and development efforts. We should seek HEW and Labor funding of projects on the intergenerational transfer of literacy from military parents to their dependents, sex-role sterotypes and non-traditional job training, bilingual (English-Spanish) adult vocational -traditional job training, early childhood education in military day care centers, effects of military quality of life on adolescent educational development, etc.	1. Establish a temporary 8 month liaison position, Grade 04/05, to coordinate with DOED/DOL on programs that are available and their applicability to Army needs.	TAGO	Jan 80	Jul 80
	2. Develop and propose programs to DOED/DOL which will foster their sponsorship of R&D programs in such areas as pre-entry education, English-as-a-Second Language, adult education, and attracting and retaining women in non-traditional jobs/skills.	TAGO (P), ODCSPER, ODCSOPS, ARI TRADOC, FORSCOM, HSC and DARCOM ODCSOPS	Jul 80	Ongoing
	3. Obtain placement of representatives on Federal Interagency Committee on Education (FICE).	TAGO (P), ASA(M&RA)	Mar 80	Apr 80
	4. Prepare a letter for the Secretary of the Army to forward to the Secretaries of DOED and Labor informing them of the Army's desire to implement additional education R&D efforts to support the needs of the Army.	TAGO	Aug 80	Aug 80
	5. Forward a letter to DOED/DOL requesting that they host a semi-annual conference with other services to exchange information and explore additional projects.	TAGO	Feb 80	Feb 80
	6. Provide one military space in FY 80 to DAAG-ED.	ODCSPER (P) TAGO	Jan 80	Jan 80

D. ASA(M&RA) RECOMMENDATIONS	D. IMPLEMENTING PLAN ACTIONS	AGENCIES (P) PRIMARY	START DATE	REQUIRED COMPLETION DATE
Have top Army officials communicate education needs and concerns to the civilian education community through keynote addresses, articles, and interviews. For example, an invitation has been extended to the Secretary of the Army or Chief of Staff of the Army to address the 1980 annual convention of the International Reading Association.	1. Develop information package on Army education. The package should include a description of ACES, speech outlines and material on specific education programs. Distribution of the package will be to MACOM's, with special distribution to Recruiting Command, ROTC Regional Headquarters, Chief of Public Affairs, Professors of Military Science, and Education Services Directors and Officers. The package to be updated at least annually. Commanders will be advised of the availability of the package through the Chief of Staff Weekly Summary and public affairs channels.	TAGO (P) and OCPA	Feb 80	ANNUAL UPDATE
	2. Monitor convention dates of major education associations and, where appropriate, coordinate Army attendance. Recommend and arrange speaking engagements for top Army officials.	TAGO (P) and ASA(M&RA)	Feb 80	Ongoing
	3. Review the senior speaker's program and submit inserts on Army education when appropriate.	TAGO (P) and OCPA	Feb 80	Ongoing
	4. Encourage Army educators to publish in publications read by the civilian academic community.	TAGO (P) and MACOMS	Feb 80	Ongoing
	5. Maintain continuing liaison with DOED, DOL and other federal agencies which deal with education.	TAGO	Feb 80	Ongoing

6. Provide to DAAG-ED 1 civilian space in FY 80 and transfer $.01M from VEAP (PE 879732) FY 80 to OA 911 (PE 951212) for salary.	ODCSPER (P) TACO DOMA	Jan 80	Jan 80	TRADOC Reg 621-1
7. Reconfirm requirement and provide to DAAG-ED 1 civilian space in FY 81 and transfer $.03M from VEAP (PE 879732) FY 81 to OA 911 (PE 951212) for salary.	ODCSPER (P) TACO DOMA	Sep 80	Sep 80	
8. Program for DAAG-ED in FY 82-FY 86 POM Cycle, each year, one civilian space and $.03M for salary.	TACO (P) ODCSPER PAED	Jan 80	Jan 80	

K. ASA(M&RA) RECOMMENDATIONS	K. IMPLEMENTING PLAN ACTIONS	AGENCIES (P) PRIMARY	START DATE	REQUIRED COMPLETION DATE
Work with education associations, accrediting agencies, and OSD to improve the quality of high school and college courses offered on military installations. Also, Education Services Officers and Procurement Officers should be taught new strategies for writing contracts to ensure better contracting performance. Alternatives to low bid education contracts might also be considered. In addition, ASA(M&RA) and OTAG have given guidance to the Inspector General on how to "trouble shoot" for inferior education programs during inspection visits.	1. Expand evaluation branch in the Education Directorate. The expanded function will be to define and establish criteria for quality education and perform evaluations of education programs on installations.	TAGO	Mar 80	Ongoing
	2. Develop standards of quality for college programs offered on military installations. Contract with COPA in FY 81 to evaluate installations using standard criteria and provide recommendations for improvement.	TAGO	Ongoing	Dec 81
	3. Develop, staff and publish a DA Pamphlet providing sample formats and "how to" guidance for ESO to use in contracting and developing memoranda of understanding.	TAGO (P) OASA(RDA)	Ongoing	Jul 80
	4. Establish a requirement and develop training course(s) for ESO in the area of contracts and memoranda of understanding with education institutions.	TRADOC (P), ODCSPER and TAGO	Mar 80	Ongoing
	5. Develop and produce a film which will facilitate an understanding of education services procurement. This film will be available to ESO procurement personnel and the DAIG.	TAGO (P), ODCSPER, OASA(RDA) and TRADOC	Feb 80	Aug 80
	6. Conduct a comprehensive review of contractual procedures as they relate to ACES. This review will establish alternatives that will permit the award of the contract on a basis of other than simple low bid.	TAGO (P), OASA(M&RA), OASA(RDA), OJAG, DASG, TRADOC, FORSCOM and USAREUR	Ongoing	Jul 80

7. Develop, staff and provide input to revise AR 621-5 and AR 621-45, which will provide more definitive guidance for the ESO to follow in working with purchasing and contracting officers.	TAGO (P) ASA(M&RA) OASA(RDA), DASG TRADOC, FORSCOM USAREUR	Feb 80	Jul 80
8. Develop and coordinate with the DAIG criteria for evaluation of education quality at Army Installations.	TAGO (P) DAIG	Mar 80	Jul 80
9. Provide to DAAG-ED 3 civilian spaces in FY 80 and transfer $.04M from VEAP (PE 879732) FY 80 to OA 911 (PE 951212) for salaries.	ODCSPER (P) TAGO DOMA	Jan 80	Jan 80
10. Reconfirm requirement and provide to DAAG-ED 3 civilian spaces in FY 81: and transfer $.08M from VEAP (PE 879732) FY 81 to OA 911 (PE 951212) for salaries.	ODCSPER TAGO DOMA	Sep 80	Sep 80
11. Program for DAAG-ED in FY 82-FY 86 POM Cycle, each year, 3 civilian spaces: and $.08M for salaries.	TAGO (P) ODCSPER PAED	Jan 80	Jan 80

TRADOC Reg 621-1

F. ASA(M&RA) RECOMMENDATIONS	E. IMPLEMENTING PLAN ACTIONS	AGENCIES (P) PRIMARY	START DATE	REQUIRED COMPLETION DATE
Devise a better career development plan to ensure that the best quality education personnel are recruited, retained, and promoted.	1. Establish a career management office within the Education Directorate to focus on the professional development of E&T career program members. Primary duties would be to develop/conduct inservice training programs, standardize the E&T intern program, provide a more clearly defined mobility plan for overseas and CONUS careerists and determine program needs.	TAGO (P), ODCSPER and TRADOC	Feb 80	Aug 80
	2. Develop, coordinate, and implement minimum standards of career progression. These standards will include both experience and education requirements. This will provide a standard that the careerists can use to prepare for different positions within the Education and Training Career field. This program will facilitate the cross-over of qualified personnel among ACES, the service schools and New Equipment Training. These standards will increase the probability that individuals referred for placement have the experience and training necessary to perform the functions required within the Education and Training career fields.	TAGO (P) and ODCSPER(DCP)	Feb 80	Aug 80
	3. Develop an E&T career intern management program to provide a broadly trained manpower pool. TAGCEN will convene an ad hoc committee to establish eligibility requirements for initial intake, recommend requirements for standardized training program, establish intern training sites and establish evaluation of intern training (15)	TAGO (P) and ODCSPER(DCP)	Mar 80	Ongoing

progress to ensure the best quality education personnel are retained. TAGCEN Education Directorate will be responsible for developing appropriate training plans, establishing intake requirements, monitoring the two year training period and permanent placement.			
4. Reestablish 145 GS-1710 counselor positions. The Army establish one counselor for 1,250 soldiers in order to provide 1.5 hours of counseling service to each soldier annually. The original allocation of 628 professional counselor spaces authorized in 1974 have been reduced at the installations to 477. Recent counselor workloads, i.e., BSEP and VEAP, require the restoration of these spaces if the program is to maintain uniformity and continuity. The above spaces will be restored in three increments, FY 82--50 spaces, FY 83--50, FY 84--45. TAGCEN in conjunction with ODCSPER (DCP) will establish appropriate policy requiring DA approval prior to downgrading or eliminating E&T career positions.	TAGO (P), TRADOC ODCSPER(DCP)	Sep 81	FY 84
5. TAGO convene AD HOC committee consisting of representative from appropriate GS-1700 series in conjunction with CPO representatives, to develop recommendations to be submitted to the functional chief, to revise career selection procedures and to improve the retention and professional development of the program members. These procedures will delinate criteria to allow the	TAGO (P), TRADOC ODCSPER(DCP)	Feb 80	Aug 80

selection of the best qualified personnel to fill projected career field requirements. Included in the forecasting will be careeristswho are returning to CONUS from overseas assignments.			
6. Provide 3 civilian spaces in FY 80 to DAAG-ED and transfer $.05M from VEAP (PE 879732) to OA 911 (PE 951212) for salaries.	ODCSPER (P) TAGO DOMA	Jan 80	Jan 80
7. Reconfirm requirement and provide 3 civilian spaces in FY 81 to DAAG-ED: and transfer $.1M from VEAP (PE 879732) FY 81 to OA 911 (PE 951212) for salaries.	ODCSPER (P) TAGO DOMA	Sep 80	Sep 80
8. Program for DAAG-ED in FY 82-86 POM Cycle, each year, 3 civilian spaces and $.1M for salaries.	TAGO (P) ODCSPER PAED	Jan 80	Jan 80
9. Program in FY 82-FY 86 POM Cycle counseling spaces and salaries: FY 82, 50 spaces and $.5M, FY 83, 100 spaces and $1.5M, FY 84, 145 spaces and $2.5M, FY 85 and FY 86, 145 spaces and $2.9M	TAGO (P) ODCSPER PAED	Jan 80	Jan 80

G. ASA(M&RA) RECOMMENDATION	G. IMPLEMENTING PLAN ACTIONS	AGENCIES (P) PRIMARY	START DATE	REQUIRED COMPLETION DATE
Increase education opportunities for soldiers and their family members through expansion of the SOC, skill related education, apprenticeship programs, etc. Also, states should be asked to include higher education opportunities for military personnel and family members in their state wide plans for education.	1. Expand the SOCAD Program beyond the 54 two-year colleges and 20 four-year colleges that offered Associate Degree Programs. Include additional military skills for college credits.	TAGO (P) and DASG	Ongoing	FY 81
	2. Establish memoranda of understanding with SOC which will address state residence requirements, transfer of credits, and further evaluation of non-traditional experiences for credit.	TAGO (P), DASG, ACE	Feb 80	May 80
	3. Direct installation ESO's to identify, on an annual basis, the educational needs of military members serving within a state. Develop the educational needs for the military members and submit to the state education commissions for inclusion in the state-wide plan for education.	TAGO (P) and MACOM's	Feb 80	Annual Update
	4. Direct installation ESO's to coordinate with other service installations, and ask that they identify educational needs for their servicemembers. Make a joint service effort in presenting the educational needs of the service to the state education commissions.	TAGO (P) and MACOMs	Feb 80	Annual Update

5. Education Evaluation Branch annually review agreements with selected SOC educational institutions to assure that the SOC concept is being complied with.	TAGO	Ongoing	FY 82
6. Increase participation in the Army Apprenticeship Program.	TAGO (P) DASG	Ongoing	FY 82
7. Provide 1 civilian space in FY 80 to DAAG-ED and transfer $.01M from VEAP (PE 879732) FY 80 to OA 911 (PE 951212) for salary.	ODCSPER (P) TAGO DOMA	Jan 80	Jan 80
8. Reconfirm requirement and provide 1 civilian space in FY 81 to DAAG-ED and transfer $.03M from VEAP (PE 879732) FY 81 to ED CTR OPS to OA 911 (PE 951212) for salary.	ODCSPER (P) TAGO DOMA	Sep 80	Sep 80
9. Program for DAAG-ED in FY 82-86 POM Cycle, each year, one civilian space and .03M for salary.	TAGO (P) ODCSPER PAED	Jan 80	Jan 80

H. ASA(M&RA) RECOMMENDATION	H. IMPLEMENTING PLAN ACTIONS	AGENCIES (P) PRIMARY	START DATE	REQUIRED COMPLETION DATE
Try to generate support to retain an expanded version of VEAP or to restore the GI Bill.	1. Prepare Army position to amend the initial 5 year test of VEAP and ask for extension of three years so that VEAP can be properly evaluated, both by VA and DOD. (Dec 1984). This will be furnished as Army input to ongoing OSD(MRA&L) enlistment study group.	TAGO	Nov 79	Mar 80
	2. Decision to seek support for reinstating the GI Bill be deferred until after the MEPCOM, HumRRO, and ODCSPER studies and tests have been evaluated.	TAGO	Ongoing	FY 84
	3. Modify current enlistment regulation, AR 601-210, allowing veterans who pursue full-time education and acquire a degree or certificate of completion under VEAP to return to active duty at their former enlisted grades.	ODCSPER	Feb 80	May 80

DCSPER Reg 621-1

I. ASA(M&RA) RECOMMENDATION	I. IMPLEMENTING PLAN ACTIONS	AGENCIES (P) PRIMARY	START DATE	REQUIRED COMPLETION DATE
Enrich Learning Centers by infusing basic skills education into other military training as recommended by the Battelle Study and upgrade both education and training facilities.	1. Assume proponency for unit oriented Learning Centers.	ODCSOPS	ASAP	N/A
	2. Provide policy and guidance to MACOMs on establishing Learning Centers.	ODCSOPS (P) TAGO TRADOC, ATSC	ASAP	Apr 80
	3. Upgrade Learning Centers with unprogrammed resources diverted at commanders discretion.	ODCSOPS (P) MACOMs Installation Units	Apr 80	FY 82
	4. Determination and inclusion in command PARRs of Resources required to meet DA Policy and Guidance.	MACOMs Installations Units	Apr 80	Jan 81
	5. Incorporate identified Resource Requirements in FY 83-87 POM and defend in remainder of PPBS.	ODCSOPS	Jan 81	FY 87
	6. Upgrade Learning Centers with programmed resources.	MACOMs, Installations	FY 83	FY 87

APPENDIX B

FUNCTIONAL BASIC SKILLS EDUCATION PROGRAM SUBPROGRAM DEFINITIONS

B-1. MOS Baseline skills -- Those prerequisite competencies without which a soldier cannot be efficiently trained or perform adequately on the job. These are the reading, writing, arithmetic, and listening skills normally acquired during elementary school. These fundamental skills are assumed to be possessed by all enlistees at the time of enlistment--the initial entry training programs are based on this presumption. For example, a soldier to be trained as a Cavalry Scout (19D10) is assumed to be able to recognize whole numbers; add or subtract 3-digit numbers; and know what angles are and how to measure them. These baseline skills are required for the soldier to learn (be taught) how to convert a grid azimuth to a magnetic azimuth--an element of the critical task of land navigation. The MOS baseline skills may vary by MOS and MOS skill level.

B-2. Learning strategy skills -- Ways that help acquire, process, retrieve and apply information; learning how to learn. These are reading, listening, and communication techniques that facilitate the learning process. They permit the individual to develop into efficient independent learners. They emphasize the ability to think logically and apply previous learning from many sources. These skills are probably common to all MOS but vary by MOS skill level and grade.

B-3. Military life coping skills -- Those competencies that enable the soldier to adapt, adjust, or otherwise successfully deal with the demands associated with Army life. These are developed in seven broad functional areas: (1) knowledge of the military system; (2) coping with personal problems; (3) coping with family problems; (4) health education; (5) financial affairs; (6) dealing with others; and (7) civic responsibilities. These skills are normally acquired from many sources and are progressively learned throughout military service. They are common to all MOS but vary by grade.

B-4. English-as-a-Second-Language skills -- The understanding of the language and culture needed to be an effective soldier in the US Army. The emphasis is on developing skills in reading and speaking the English language and understanding the idioms peculiar to Army training and service. Equal emphasis is placed on understanding the American culture and acquiring the non-linguistic skills needed to be an effective American soldier.

APPENDIX C

TENTATIVE ALLOCATION OF RESOURCES SUPPORTING THE BSEP REFINEMENT PROJECT

C-1. Concept. The developmental contracts supporting this project will be negotiated and awarded by HQ TRADOC (DCST-TDI). The projected funds for these contracts will be retained at the headquarters. However, funds will be allocated to center commanders to support the data and information gathering needs of the contractors and to support the salary costs of the BSEP curricula project managers. These funds will be identified separately from funds supporting current education center operations and existing BSEP instruction.

C-2. Funds. The funds tentatively allocated for this project are:

(millions)

FY 80 - $ 4.2
FY 81 - 7.0
FY 82 - 15.3
FY 83 - 8.4
FY 84 - .74
FY 85 - .74

C-3. Manpower.

a. The full-time, permanent civilian manpower spaces tentatively allocated to this project are:

	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
HQ TRADOC (TDI)	5	5	5	5	5	5
School & Training Centers	3	7	19	19	19	19
TOTAL	8	12	24	24	24	24

b. Spaces will be allocated by this headquarters (DCSRM) as the workload is defined.

c. Job descriptions for these spaces will be provided by the Training Development Institute.

The proponent of this regulation is the Office of Deputy Chief of Staff for Personnel, Administation, and Logistics. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications) through channels to the Cdr, TRADOC, ATTN: ATPL-AG, Fort Monroe, Virginia 23651.

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