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BRANSON (ROBERT K) TALLAHASSEE FL

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EVALUATION OF THE TRAINER DEVELOPMENT PROGRAM (TRADEP) AT THE U--ETC(U)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The Trainer Development Program (TRADEP) of the U. S. Army Infantry School, Ft. Benning, GA was evaluated in order to determine the degree to which TRADEP accomplishes its appointed mission. Program plans and achievements were examined and compared to referenced standards. Those program elements studied included the Implementation Plan, System Management, Staffing, and the standard ISD processes. Recommendations were made in the areas of command support, staff and resources, and Technical and doctrinal questions. It was concluded that TRADEP should be made available to all TRADOC Schools.		

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FINAL REPORT

PART ONE:

EVALUATION OF THE TRAINER DEVELOPMENT PROGRAM (TRADEP)  
AT THE U.S. ARMY INFANTRY SCHOOL

PART TWO:

WORKSHOP IN INSTRUCTIONAL SYSTEMS DEVELOPMENT

Robert K. Branson

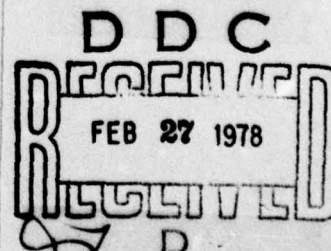
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PART ONE:  
EVALUATION OF THE TRAINER DEVELOPMENT PROGRAM (TRADEP)  
AT THE U.S. ARMY INFANTRY SCHOOL



## I. EXECUTIVE SUMMARY

### A. Purpose

A request was made by the Staff and Faculty Development Division (SFTD) of the U.S. Army Infantry School for Robert K. Branson and Associates to conduct an evaluation of SFTD, Trainer Development Program (TRADEP), and the TRADEP Implementation Plan. The evaluation was called for in the plan to occur after the workshop conducted 1-19 November 1976.

### B. Findings

The evaluation centered on the SFTD mission, TRADEP, and the Implementation Plan. Specific data, documents, and materials were analyzed and evaluated. Interviews were conducted with SFTD and Directorate of Evaluation (DEV) staff.

While several technical recommendations were made for improvements, it was found that TRADEP serves the USAIS well in preparing instructors. More than 73% of all USAIS instructors have completed at least 1 of the 7 TRADEP Routes.

Supervisors and managers have not directly benefited from TRADEP in that only about 10% of them have successfully completed a TRADEP Route.

The DEV has not conducted sufficient internal evaluation efforts to provide feedback data upon which TRADEP Routes or modules could be revised and improved.

Job analysis data at the 04-06 level under School Model '76 are not available. Data of this kind are required to design good instruction.



The draft regulation 351-100 (test) setting forth SFTD functions under School Model '76 has not been approved and implemented.

The TRADEP management system and the instructional modules are generally good and serve the students well.

C. Recommendations

1. Job analyses for 04-06 and 01-03 personnel working under School Model '76 should be conducted on a TRADOC-wide basis.
2. The draft regulation 351-100 should be revised and issued.
3. The DEV should conduct internal evaluation of academic departments and internal and external evaluation of SFTD and TRADEP.
4. Action should be taken to revise and make TRADEP available to other TRADOC schools, coordinated through TRADOC.
5. The USAIS SOP on Staff and Faculty should be more closely followed.
6. The TRADEP Implementation Plan should be brought back on schedule or it should be revised.
7. The SFTD should be assigned the role of developing instruction on new concepts and procedures such as OE, ITDT, SQT, etc.
8. TRADEP modules should be developed according to current media selection requirements so that alternatives are available to students.
9. The program should be reviewed annually.

D. Conclusions

TRADEP has improved in all dimensions since its inception.

The SFTD has accomplished its mission to a very high degree. Exceptions mentioned above should be corrected through planning, coordination, and continuing analysis. The SFTD should undertake an effort to obtain command support in getting SOPs followed and regulations revised and issued.

" The TRADEP at USAIS is probably the most advanced Staff and Faculty Training effort in the TRADOC system." Significant progress has been made, and the indications are that TRADEP will continue to improve.



## II. INTRODUCTION AND PURPOSE

Since 1973, the U.S. Army Infantry School (USAIS) has been in the process of designing, developing, and implementing the Trainer Development Program (TRADEP) as a direct step in the preparation of USAIS staff members to perform their assigned jobs. One element of this effort is the TRADEP Implementation Plan prepared by the Staff and Faculty Development Division (SFTD) which has been guiding development efforts since January of 1976. This Evaluation Report, a follow-up to the workshop, is specified in the Implementation Plan.

The workshop was planned during a two day site visit sponsored by Staff and Faculty Training Division. The workshop schedule and description are covered in Part II of this report.

Following the workshop, SFTD requested Robert K. Branson and selected associates to evaluate the plan and results of the Trainer Development Program (TRADEP). This was agreed and a two day visit was conducted on 19-20 April 1977. At that time, Dr. Robert K. Branson and Dr. Gail T. Rayner met with SFTD staff for extensive discussions, briefings, and progress reviews.

At the conclusion of the introductory briefings and discussions, the outside evaluators were presented with the following questions:

1. Does the SFTD accomplish its missions?
  - a. If not, Why?
  - b. How can SFTD better accomplish its mission?
2. What obstacles does SFTD face in the implementation of a

systematic approach to training at USAIS?

3. What recommendations do you have for overcoming these obstacles?

This report will review available evidence to see the extent to which what has occurred resembled what was planned within the TRADEP. Specific recommendations will be made for technical improvements and general organizational recommendations will suggest changes in USAIS operating procedures.

Once this evidence has been reviewed, a mission analysis will be made in which the SFTD achievements will be compared to the mission and plan. Finally, general organizational recommendations will be made.

The report specifies and comments on what was observed during the period 19-20 April 1977 and represents TRADEP and SFTD, as viewed by the contractor at that time. No attempt has been made to track progress since the site visit.

In addition, the Implementation Plan called for a review and critique of USAIS Reg. 351-100 (test) which has been provided elsewhere.



### III. DISCUSSION

Each element of the SFTD and the TRADEP was reviewed to the extent deemed necessary by contractor personnel, consistent with the time available. Following is a report of the evaluation. For each program element, three specific points are covered. First, the procedures followed are explained. Then, the findings are discussed. Finally, the conclusions drawn from those findings are presented.

#### A. Plan

1. Procedure: The SFTD Implementation Plan for TRADEP was examined to discover whether the necessary elements were present. If a plan is to result in an outcome consistent with current TRADOC guidance on training and training management, it should contain the necessary elements which are prerequisite for being in compliance. The following questions were asked of the Implementation Plan:

- Does the Implementation Plan specify sufficient time and resources to perform an adequate Analysis of the jobs for which USAIS personnel are trained?
- Does the Implementation Plan specify sufficient resources and personnel for an adequate Design effort?
- Does the Implementation Plan Specify sufficient time and resources for adequate Development effort?
- Does the Implementation Plan specify sufficient time and resources for an adequate implementation of the TRADEP?
- Does the Implementation Plan specify sufficient resources for an adequate Internal and External Evaluation of TRADEP?

2. Findings: The Analysis Phase of TRADEP Implement Plan can be judged "adequate" as far as it goes. However, specifications for job analyses to be performed on actual job incumbents, particularly at the 04-05-06 levels were not found.

The plans and specifications for the Design Phase of the TRADEP Implementation Plan appear to be consistent with all current guidance.

The specifications for the Development Phase of the TRADEP Implementation Plan appear to be totally consistent with current guidance.

The specifications for the Evaluation (Control) Phase of the TRADEP Implementation Plan appear to be inconsistent with the guidance contained in TRADOC Pam 350-30, DA Pam 570-558, TRADOC Pam 71-8, and the 10-11 December 1975 Commanders Conference Report.

Current guidance and doctrine appear to require an independent evaluation agency to perform this function. Specifically, TRADOC Pam 350-30 requires both internal and external evaluation efforts. Here, two questions should be answered: Does the course (Route, module) teach what it is supposed to teach, and is that which is taught in the TRADEP directly relevant for the jobs the graduates will perform?

Further, the guidance in DA Pam 570-558 (School Model '76) outlines the evaluation (Control) function as the specific responsibility of the Directorate of Evaluation (DEV).

3. Conclusions: The Implementation Plan is generally quite good. It does not appear to be over-ambitious when compared to



the requirements in current guidance. Specific action should be initiated to broaden the plan to improve the job analysis effort and to elaborate the evaluation inputs expected from the DEV. Given the DEV inputs, specifications for revisions can then be made.

If it is still the intention of the TRADOC, as it was when the TRADEP was initiated, to make TRADEP available to other TRADOC Schools, then the job analysis plan recommended should be expanded to cover representative jobs in all TRADOC Schools.

#### B. Management of the System

A management system for a self-paced trainer development course should be flexible enough to handle the requirements of TRADOC Pam 350-30, other TRADOC initiatives, USAIS regulation 351-100 (test), and the USAIS SOP on Staff and Faculty. At a minimum, the system should permit varying student flow, with each student completing in a different amount of time, possibly taking alternate routes, and often using the alternative media or means to reach the same goals. It must also allow for revisions, additions or deletions of routes and modules without disrupting the system, employ a simple record keeping system, provide a means for data collection and analysis, and insure internal and external quality control.

1. Procedure: The management system of the TRADEP was examined by going through the necessary student activities in sequence to find out what difficulties the students had. The documentation and data collection system were examined for completeness and

clarity. The capacity of the system was examined and estimates were made of staff required to serve varying numbers of people. Since the management system of TRADEP is intended to manage students, a further look was taken to see how well the managers of SFTD were operating the management system.

2. Findings: The management system was able to handle the number of students normally using TRADEP at any given time. Further, it appeared to be sufficiently robust to handle additional students with a relatively small additional investment in materials.

The data collection system lacked specificity and completeness. Since the data collected from students is the fundamental source of information to improve the quality of the tracks and modules, it should be carefully collected and preserved. Because of some apparent confusion in the Freedom of Information Act, some of the data had been discarded.

The managers of TRADEP appeared to have the system well under control with the exception of data collection noted above. Because of priorities caused by new development requirements, substantial revision of very few existing modules has been undertaken.

3. Conclusions: The TRADEP management system is adequate to handle anticipated needs with only minor modifications. Unexpected additional demand would create problems, but such a sharp increase is considered unlikely. Immediate action should be initiated to increase the precision of the data collection and



storage system so that data based revisions will be possible when necessary.

C. Staffing

Inferences drawn from current guidance and references suggest that SFTD should be a "model" of training management and implementation for the Academic Departments. If SFTD can realize the benefits of good instructional design and management, it should be possible in the future for the other departments to begin to realize these benefits as well.

1. Procedures: Staffing of the SFTD was compared to the requirements of the total system. Each function of SFTD was considered in trying to arrive at reasonable estimates of requirements. It was not possible in the time allowed for the analysis to obtain every detail of the operation of the SFTD. Further, no specific manpower survey was made which would meet the tests of the Resource Management procedures as outlined in DA Pam 570-558. The evaluation was made on the basis of what was estimated to be required by ISD efforts.

2. Findings: The TRADEP program has accommodated a maximum of 60 students at one time with current levels of staffing. Normal development activities must be curtailed during peak student loads. Mean time to complete is 18 days with a range from 9 to 25 days. This reduction in time to complete reflects a potential benefit of self-pacing which in the case of TRADEP has been well realized.

In 1976, 361 people completed one of the TRADEP routes. The

York and MacArthur routes are most often used.

Graduates by routes:

	<u>1976</u>	<u>1977 to Date</u>
York	153	53
MacArthur	67	31
Bradley	3	2
Pershing	2	0

There are currently 87 people in grades 04, 05, 06 assigned to the instructional departments. A total of 7 of these completed TRADEP.

Those they supervise, grades 01-02-03, show a current assignment of 135, with 98 having completed TRADEP in 1976 or 1977. Gross and conservative analysis of these numbers indicates that 73% of job incumbents and only 8% of their supervisors have completed TRADEP.

3. Conclusions: While it would be possible to accept the argument that management skills are generic and thus require no special training, it is far more likely that managers who have detailed knowledge of the tasks supervised will obtain superior results. What is unclear, of course, is the cause for the apparent discrepancy between these figures and the USAIS Staff and Faculty SOP which says: "All instructors and instructional supervisors through the grade of Colonel must have completed the Trainer Development Program (TRADEP)." (Page 1-8, paragraph 1.22).

The SFTD should immediately increase the percentage of 04-06



personnel who have completed TRADEP. Further, SFTD should not permit this percentage to reach such an unacceptably low level in the future. Increased knowledge and skill in systematic training appears to be critical in light of requirements set forth in DA Pam 570-558. Some percentage improvement is also called for in the 01-03 grades as well.

D. Processes

1. Analyze

In the process of analysis, careful attention must be paid to detailed procedures which have been demonstrated to be effective. Each step must be based on observed data and the compilation of selected questionnaire and doctrinal sources. Thus, there must be a clearly auditable line from the job data and setting priorities to the development of performance measures. Two simultaneous criteria must be satisfied:

- No instruction is produced which does not clearly originate in job data.
- Instruction of some kind must be provided for high priority tasks.

a. Procedures: Each route was examined to see whether there was a clear relationship between the instruction and the jobs to which the students would be sent. A comparison was made between the instruction and actual jobs as they now exist at USAIS and, at the same time, doctrinal changes were examined. The intent of the comparison was to seek any potential redundancies or gaps between what ought to be included and what was included or

planned. Modules within routes were also checked for the same kinds of purposes.

b. Findings: The most important finding was that the routes and modules were consistent with the intent of the doctrine contained in current guidance. The only recent job analyses found which could be evaluated was that conducted by INSGROUP prior to the issuance of School Model '76 and TRADOC Pam 350-30. Consequently, the incumbents and supervisors interviewed were not performing the jobs as required by current guidance. Most of the instruction is based on a modified "jury-of-experts" content development technique and is limited in value to the extent that the "experts" were well informed. Further, no clear evidence of a separate "Analysis" function (in DTD) as specified in School Model '76 was found. Thus, if the SFTD does not do the job analyses and cannot obtain analyses from the Directorate of Training Development (DTD), it would appear that a severe gap exists. For example, no instruction was provided for managers in the systematic analysis of performance problems.

c. Conclusions: As mentioned elsewhere, the job analyses for each of the major jobs for which TRADEP prepares students should be the basis of training design.

It may be that DTD should perform this function, but that decision lies outside the decision making authority of SFTD.

It is further suggested that these recommended job analyses be preceded with coordination with the Military Occupational Research Division of MILPERCEN.



Modules should be offered which instruct managers and instructional personnel in the proper techniques for analyzing performance problems as they occur in military settings. Research studies have revealed that many job performance problems are not caused by deficiencies in knowledge and skill, but are often due to other operational factors.

For example, when there is a discrepancy between what people are expected to do on the job and what they have been trained to do, either the job situation or training situation is in error. If supervision is in error, additional training of job incumbents will not eliminate the problem.

Some modules of this nature are available in the Criterion Referenced Instruction Workshops offered by Training Development Institute. Others may be found in the Managers Workshop which accompanies the TRADOC Pam 350-30.

## 2. Design

Each TRADEP route is divided into modules which address one or more of the job task requirements in an Army school. From these modules seven routes have been designed to fill the needs of various jobs. The program accommodates individual competencies by testing, by providing each student with a monitor, and coordinating each student's program with the instructional department to which he will be assigned.

A complete module should contain all the instruction and directions the student needs to complete it such as: relationship of the module to job tasks, objectives, conditions,

standards, pretest, prerequisite requirements, specific reading, listening, or viewing assignments, completion time estimates, sources of remedial or enrichment materials assistance, practice exercises, student self-evaluation tests, and posttests.

a. Procedures: Selected modules were examined to see whether they contained all of the necessary elements to provide instruction according to the specified method. The elements of each selected module were further evaluated to indicate whether they were done in a way consistent with current guidance and doctrine. Finally, these modules were checked for internal consistency in an attempt to track directly from the initial task statements through the complete instructional package.

b. Findings: TRADEP is being expanded with routes for specialists such as job analysts currently under development. Each is covered by a pretest and two alternate posttests. Modules can be exempted by passing the pretest.

The pretest is followed by a practice exercise and then the posttest. If the student fails the posttest, he must go to his monitor for remedial instruction. He then takes an alternate posttest. A team monitor's guide contains the answer key and scoring instructions for the exercises as well as suggested remedial instruction.

The TRADEP modules contain all the essential elements described earlier, but the physical locations of some of them are separate. Each student has a copy of the objectives in a student guidance package titled Trainer Development Program Learning Objectives.



The instructional material is in the learning center, while the tests and practice exercises are kept by the monitors.

A description of the assumed and actual entry level of the students is not documented, but the knowledge of it has been used to develop the modules.

Because personnel turnover is always probable, a written description of the target population should be provided for institutional memory.

c. Conclusions: Except for the missing job analysis data cited earlier, the Design of SFTD/TRADEP instruction appears to be well within the expectations of current guidance and doctrine.

The state-of-the art in videodisc technology is on the verge of having useful operational units available in the very near term. SFTD should follow this technology to the extent possible in order to insure that modules now being designed will be compatible with future videodisc specifications.

### 3. Develop

The Army does not lack for systematic guidance and procedures in the development of modern training. Within the last three years, TRADOC has published TRADOC Pam 350-30 which contains extensive guidance on alternative forms of instruction. The Training Mangement (now Development) Institute has conducted a long series of workshops on Criterion Referenced Instruction (CRI). CRI is concerned principally with the design and development of instruction.

Instructional development is an orderly and systematic process



which leaves as little to chance as possible. Materials are written or otherwise prepared and then are tried out on members of the student population. Following this tryout, the materials are revised until they meet the expected training standards or, in some instances, consume the time or resource budget set aside for that purpose.

a. Procedures: SFTD development procedures were examined to see the degree to which they are consistent with the state-of-the-art instructional development techniques. Each step was compared to a set of specifications to identify any discrepancies that might have been present. Both products and processes were studied in this endeavor.

b. Findings: The key finding was that the development effort appeared to follow a sound empirical approach. Modules and parts of modules have been tried on students prior to their use in TRADEP and have been revised as required.

Compared to a totally multi-track multi-media system, TRADEP development fell clearly behind the state-of-the-art. While the Plan calls for a developmental effort over the long-term to include more than one alternative instructional package for each module, it would appear that current efforts are lagging behind the planned time schedule.

The preponderance of instruction is print. Media selection decisions were not made based on guidance.

c. Conclusions: As resources become available, SFTD should begin a development and revision cycle which would include the

upgrading of all existing instructional materials which do not perform at the level required. This development should be compatible with new generation devices for instructional delivery such as videodiscs.

After the complete seven-route system is up and operating on a first iteration level, the development efforts should be redirected to the upgrading of existing materials. A specific effort should be mounted to try to get the Implementation Plan back on schedule.

Lesson and module development should be described in sufficient detail in an MFR to document the following:

- Rationale of lesson—why it was needed
- Method of validation and revision and any problems
- Its interface with other lessons and modules
- Other relevant factors

#### 4. Implement

Implementation refers to the use of the instruction which has been developed as students are managed by the instructional management plan. Good management plans are flexible, multi-tracked, and provide a means to cause the savings and benefits potentially available in self-paced instruction.

a. Procedures: The entire TRADEP management plan was reviewed to insure that it was sufficiently flexible to allow individual students to proceed in an efficient manner. Documents and record keeping systems were examined to see if the student's progress was accurately reflected in the record. Time-to-complete



ranges were studied for selected routes to insure that there were no artificial time constraints which could make any potential savings unachievable.

b. Findings: Available evidence reviewed indicated that the TRADEP Managmeent Plan was generally adequate to meet current and projected needs. The plan is robust, in that each of the several routes can be expanded or reduced with virtually no structural change in the system as a whole.

The documents used to keep track of the students were complete and contained sufficient data to manage the student through the system. These data were not coded and retained so that the materials could be revised as required when their priority was established.

Vitually all students were able to complete the assigned tasks within the 25 day time limit. Probably because there was ample provision for extra instruction and retesting in those areas where performance was inadequate upon first testing.

c. Conclusions: Care should be taken to retain all student time and performance records. Time records will provide a basis for keeping adequate supplies and personnel available and will give an indication of which modules could profit from revision. Performance records provide the single most important basis for revisions.

##### 5. Control

Past (TRADOC Reg 350-100-1) doctrine as well as current (TRADOC Pam 350-30) guidance have stressed the importance of



management control of internal operations and external results of the training system. Careful Job Analysis and Task Selection procedures contribute directly to the validity of training. That is, training is based directly on doctrine and actual job requirements. Internal and External evaluation assess the extent to which training is effective and efficient.

In DA Pam 570-558, specific assignments are made for the Control function to be centered in DEV. While SFTD is clearly responsible to see that proper instructional development and management techniques are adhered to in TRADEP, it cannot assess the degree to which the training has projected payoff for the instructional departments.

a. Procedures: Specific requests were made of the SFTD to provide copies of the internal and external evaluation plans and results. Copies of the test instruments and questionnaires were requested. The intent was to review the process, progress, product, and performance of TRADEP routes and modules.

b. Findings: The processes followed by the SFTD in the preparation and conduct of instruction have been examined in detail earlier. The process of evaluation and quality control followed by the SFTD varied. That is, the learning materials were developed according to the guidance contained in current TRADOC publications. However, the specifications for internal and external evaluation as required, for example, in TRADOC Pam 350-30, have not been followed.

The internal evaluation plan prepared by the DEV was examined

and compared to the guidance contained in TRADOC Pam 350-30. The plan appeared to contain virtually all of the procedures called for in the guidance. However, the data that should be (or should have been) collected were not available for review. No evidence was found that internal evaluation procedures were being followed. No report was made available detailing a DEV evaluation of the SFTD either internally or externally.

Progress being made by the SFTD is lagging the time schedule in the Implementation Plan mentioned earlier in this report.

The SFTD prepared and adapted modules used in the TRADEP generally adhere to the current TRADOC guidance on "performance oriented training" and "performance testing." Excessive use of inappropriate information type pencil and paper tests was not found.

The products used in the TRADEP have been discussed earlier.

There is a heavy emphasis on evaluation of artistic factors for live instruction.

Particularly noticeable is the platform instructor rating forms and checklists. Many items found on these forms are not ratable by those asked to do so. Fundamental to effective use of these instruments is the requirement that those doing the rating are competent to do so and that the items are properly constructed. Thus, care should be taken to insure that questionnaire items are reliable and that ratings based on halo effects, errors of standards, etc. are avoided.

e.g., do all people who rate a person agree on what "Good command of the English language" means? Is this a ratable factor?



These items might better identify only negative factors:  
e.g., "made annoying grammatical errors."

Some student performance data have been discarded or intentionally destroyed.

Questionnaires used to extract follow-up data from prior TRADEP students have not been constructed to the specifications or standards available in current guidance. The method of construction did not apparently involve empirical methods.

A review of some evaluation procedures of SFTD and DEV revealed that they depend heavily on rating forms, checklists, and questionnaires. Preliminary examinations of these forms indicate that many concepts and practices in proper rating form and checklist development are not being used. Questionnaires can be designed to specifications and the scale items used as presented, the reliability of the information collected should increase.

The phrasing of both the statements and the "criteria" used are confusing in the TRADEP follow-up questionnaire. Nevertheless, the results reflect little or no management emphasis on application of the skills learned in TRADEP development.

c. Conclusions: Not surprisingly, the Control function is the least well developed of all the SFTD functions studied. This is in part due to the requirements of School Model '76 which calls for an interaction between the DEV and the training conducted at the school.

It would appear to be of the most immediate importance to have the DEV conduct an evaluation of the internal course materials and



results of TRADEP, and, more importantly, to conduct an external evaluation to see to what extent the training received is translated directly to job performance by the graduates. The "Analyst" route, which has been recently developed, should prepare individuals in the Directorate of Training Developments (DTD) to conduct proper analyses. One aspect of the external evaluation of TRADEP should be whether those analysts have been adequately trained. The same procedure should be followed for the other routes in TRADEP.

Accordingly, SFTD evaluation efforts should then be limited to those required to develop adequate instructional materials. Those procedures are detailed in Block III.5 of TRADOC Pam 350-30. However, should the DTD reveal any significant discrepancies in their evaluation, then SFTD would be obliged to undertake whatever revision appeared to be required.

Although it is clearly an SFTD function, based on School Model '76 to train DEV staff, some DEV jobs are so technical that some external recruiting will be necessary to achieve the necessary level of expertise. Based on this assumption, the SFTD should schedule the development of an Evaluator Route for the TRADEP.

All student performance data that are scorable should be classified, coded, and retained. Privacy Act requirements should be met by blind coding of answer sheets. These data are the most valuable resource in revision.

Each year, at least three sessions should be held with TRADEP graduates who have been on the job for six (6) months. The

sessions should be held with 5-6 people in each group and there should be two (2) groups. Care should be taken to assure random selection. The sessions should be limited to two hours and most should be complete in an hour.

The discussion should center around items on the evaluation questionnaires which show up less favorably than desirable. Graduates should be asked for their ideas and suggestions. The sessions should be tape recorded to preserve the data until all of the ideas have been extracted.

Construction of good questionnaires is difficult. Where possible, formats known to work should be used. Block I.2 of TRADOC Pam 350-30 presents ratable task factors based on formats validated in an extensive research program in the Air Force.

e.g., "Percent time spent performing."

"Presents platform instruction" (Task statement)

1. Very much below average time spent
2. Below average time
3. Slightly below average time
4. About average time
5. Slightly above average time
6. Above average time
7. Very much above average time

(Notice that low time corresponds with the low scale value.)

"Rehearses platform instruction." (Task statement)

1. Very much below average time spent
2. Below average time

3. Slightly below average time
4. About average time
5. Slightly above average time
6. Above average time
7. Very much above average time



#### IV. SFTD MISSION ANALYSIS

##### A. General Observations

The mission of SFTD as defined in DA Pam 570-558 is as follows:

1. Develop, conduct, and administer staff and faculty development courses and to develop policies and procedures relating to the operation of those courses;
2. To promulgate the latest TRADOC guidance, doctrine, philosophy, and other innovative techniques to be employed in training, the development of training, and training support.

The analysis of SFTD materials, procedures, and evaluation techniques presented earlier in this report revealed positive evidence that the defined mission was being accomplished to a high degree.

In particular, reference is made to section III. D. of this report in which specific mission elements are addressed.

This part of the report addresses questions 1 and 2 of the evaluation request presented in section II.

By analyzing the mission assigned to SFTD in DA Pam 570-558 and seeing the recommended location of the faculty training function under the Education Advisor, it seems clear that the intent was to charge SFTD with being an internal "change agent." Ordinarily, a change agent finds new ideas, procedures, and approaches to traditional problems and initiates action to bring these new ideas into an organization. One role of an Education Advisor is to introduce new ideas from the education and industrial communities to the benefit of the school.

Since there is no Education Advisor at USAIS, SFTD should take the complete responsibility for introducing and training new doctrine, philosophy, and procedures which can improve instruction at USAIS and bring it into closer congruence with advanced training concepts. Failure to maintain a continuous flow of new ideas into the USAIS will result in a gradual degradation of instructional quality and effectiveness.

For example, TRADOC Pam 71-8 sets forth many sound ideas for analyzing training results. These ideas are totally consistent with the guidance provided in TRADOC Pam 350-30. Yet, there is little evidence at USAIS that sound internal evaluation practices are being followed. Managers and evaluators must be informed about these recent developments, and the only provision made in the School Model '76 for them to be informed is through training conducted by SFTD.

Reference to TRADOC Pam 71-8 raises other serious questions about the function and responsibility of the SFTD. For example, in the very near future the impact of AR 1000-2, Integrated Technical Documentation and Training (ITDT) will begin to be felt. The guidance which specifies the preparation of materials under this regulation is in Draft Mil 632XX. The SFTD was unable to identify the cognizant division in USAIS whose responsibility would be to initiate training requirements in this area. Virtually certain to be affected would be the TEC program, preparation of any job performance aids, and any revisions to TMs planned as a part of any equipment upgrading effort. Should the SFTD be



responsible for providing instruction in this area as a part of a change agent's role?

In addition to the regular assignment, a recent MFR indicated that SFTD would be charged with promulgating Organizational Effectiveness (OE) within USAIS. Estimates indicate that four (4) man months will be required just to receive instruction in OE. To design, develop, and conduct OE training will be an additional burden which could require additional qualified people.

Clarification of SFTD missions, as well as those of the rest of the school, appear to have been detailed in the USAIS Draft Reg 351-100 (test). So far as could be determined, this regulation has not been tested in actual use following initial staffing. In the absence of an approved version of this regulation, the SFTD will not be able to clarify its role and mission as should be done. Further, the implementation plan for this regulation appears to be clearly behind schedule.

One responsibility of the SFTD is that of training managers who are charged with analysis, design, development, implementation, and control of systematic training. Analysis of the existing staff at the USAIS indicates that there is an extensive shortage of managers trained in systematic instruction.

Analysis of documents prepared early in the TRADEP design effort indicated that it was then the intention of the TRADOC to have TRADEP serve the SFTD needs of other schools in the system. Meetings were held at the USAIS and at the USACATB for the purpose of coordinating the design effort with other schools.



The Army's recent move to the use of Skill Qualification Tests (SQTs) would suggest that there will be an immediate and continuing need for instruction in the development, validation, and administration of SQTs. Modules on this topic were not available.

B. Current TRACOC Guidance  
and the SFTD Mission

Current TRADOC guidance and philosophy appear to be best expressed in the documents outlining School Model '76, TRADOC Pam 350-30, the CRI Workshop materials, the transcript of the 10-11 December 1975 Commander's Conference, and were well summarized by MG Gorman at the USAIS manager's seminar in October 1975, comments which have been retained on videotape at the USAIS.

Briefly, in the 10-11 December 1975 Commanders Conference transcript, the following points were made to emphasize TRADOC philosophy about training:

- Training development should be improved
- Training effectiveness analysis provides data to evaluate and plan training
- Self-pacing offers potential benefits
- Modernization of instruction should occur
- Training should be exportable to Reserve and National Guard
- Minimize entry training to real world job needs
- Adequate job analysis is critical
- Much training should be done on-the-job
- Training should be performance oriented

Principally, the SFTD mission is to provide training for

USAIS and to promulgate TRADOC guidance and philosophy. It would appear that if this mission is accomplished, results should be observable in all SFTD instruction and should be widespread throughout the USAIS.

Accordingly, the contractor reviewed SFTD internal instruction and reported the results in Section III. D. of this report.

While at the USAIS, contractor staff asked to see evidence of SFTD effectiveness in courses not managed by them. Here, effectiveness was defined as the existence of courses based on modern training technology and current TRADOC philosophy which were offered by other departments in the school. The SFTD could not produce acceptable evidence that such courses existed at USAIS and contractor staff did not have sufficient time to conduct an independent search. While it appears that the SFTD can design and develop TRADEP modules which are generally in compliance with current guidance, it has been unable to influence other USAIS departments to do the same.

The general problems or obstacles listed here and in the Discussion section may be generally classified into three categories:

1. Command Support and Organization
2. Staff and Resources
3. Technical and Doctrinal questions

In the following section, each of these areas will be addressed specifically and recommendations will be made toward the taking of corrective action.



### C. Recommendations

1. The first recommendations will indicate where changes in command support and school organization could make important improvements.

a. The draft regulation 351-100 should be completely tested and implemented at the earliest possible time. This step will clarify SFTD's role and authority.

b. The DEV should be required to conduct internal and external evaluation of the SFTD (as a part of its regular evaluation of all courses), the graduates, and the effects of SFTD training on the graduates and the receiving departments. Good data-based decisions cannot be made in the absence of thorough evaluation reports. In the absence of hard and auditable data produced by DEV, SFTD will always be in the position of trying to solve problems no one else believes exist.

c. It is important to establish within the USAIS who is responsible for introducing new and changing topics and methods of instruction. SFTD should have this responsibility. Immediate plans should be made for developing materials for instruction in ITDT, SQT, Analyzing Training Effectiveness, Performance Analysis, and other current topics as required.

d. Conduct a TRADOC-wide job analysis on the instructor, designer, developer, manager, and other jobs which are directly required for the implementation of modern systematic training.

e. Closer adherence to the requirements in the USAIS SOP on Staff and Faculty. A significant percentage of all 04-06 personnel has not completed any TRADEP route.



f. Action should be initiated to begin the process of modifying the TRADEP so that it could serve the SFTD needs of the other TRADOC schools. This probably could be best accomplished through a contractor effort.

2. The second set of recommendations are concerned with staff and resources within the SFTD.

a. The TRADEP Implementation Plan should be revised and the time schedule made more consistent with available resources. Priorities established should reflect the training needs of the entire USAIS. If necessary resources cannot be made available, then a slower rate of development should be planned.

b. Several new training requirements have been identified during the past year which should have direct impact on the USAIS. These new requirements should be reflected in the current TRADEP Implementation Plan.

c. When the SFTD is given the responsibility to become the internal USAIS change agent, sufficient staff resources should be provided for the initial developmental effort. Because of the flexibility and power of the TRADEP management system, there should be little difficulty in adding new modules as they are developed.

3. The third set of recommendations address technical and doctrinal questions which should receive attention from SFTD.

a. Improve the TRADEP record keeping and data storage system. Much valuable data are being lost.

b. When the job analyses for the various routes are conducted, the approach should be coordinated with the Military Occupational Research Division of the MILPERCEN.

c. Modules on Analyzing Performance Problems, similar to these contained in the CRI workshops should be made a part of the Analyst, Designer, and 04-06 training routes.

d. More attention should be paid to documenting the entry level of TRADEP students. Analysis of this data through time may permit some revisions and potential time savings.

e. Media selection decisions procedures should be established. TRADOC Pam 350-30 contains one approach to media. Additional non-print media would very likely have positive benefits.

f. The development and use of all questionnaires should be subject to careful planning and validation. Many questionnaires used for evaluation of students and of courses contained items which are not reliably ratable by available personnel.

g. Regular follow-up sessions with TRADEP graduates should be held in order to obtain first hand feedback for the improvement of the routes and modules.

#### D. Conclusions

TRADEP has improved in all dimensions since its inception. Outwardly, it is more attractively packaged, better organized, has more audiovisual modules, more dual tracks, and more copies available. Functionally, it also has much better defined objectives. The task statements, conditions, and standards are a closer approximation of the job tasks. It also is considerably broader. Much of the impetus for making the improvements was the analysis of student performance data.



The SFTD is well on the way, as evidenced by the Implementation Plan, to achieving its mission. Existing and past efforts are clear evidence that much progress has been made and future requirements are anticipated.

Removal of the indicated obstacles to SFTD work efforts should improve their ability to respond to all appropriate staff and faculty training requirements in the USALS.

While it was beyond the scope of this contract to evaluate SFTD efforts in all TRADOC schools, contractor staff has visited a number of them in the past year. Comparisons of TRADEP with SFTD efforts in these schools indicates that no other TRADOC school has a more advanced, more complete, or more effective approach.



## V. DEVELOPMENT HISTORY

In 1971 the Board for Dynamic Training recommended a major change in Army training. Extended resident school programs of instruction were to be partially replaced by performance oriented training in field units. Considerations such as cost effectiveness, a smaller peace time Army, and readiness created changes in both training doctrine and training practices. The changes dictated a revised system for training instructors and developers of instruction.

Concurrently, a contract was initiated between the Combat Arms Training Board (CATB) and Florida State University (FSU) to design an instructional systems development model. Under the terms of Task VI of this contract, INSGROUP, Inc. was asked to assist the Faculty Development Division (FDD) at Ft. Benning to review the Basic Instructor Training Course (BITC). The outcome of the analysis of BITC, the new requirements, and the USAIS's proponency for training management was termed a Trainer Development Course (TRADEP). After the management system was complete and the objectives for one track (MacArthur) drafted, the USAIS hosted a TRADEP conference to get inputs from the other TRADOC schools.

The USAIS and INSGROUP, Inc. continued to revise, develop, and implement both the system and the instructional materials. After SFTD personnel reviewed training in Instructional Systems Development (ISD) and Criterion Referenced Instruction (CRI), both were integrated into TRADEP.

The TRADEP package has been exported intact to the Panama Canal Zone and many modules are being tried in other Army schools. TRADEP readily adapted to the requirements of School Model '76. New TRADOC initiatives such as Organizational Effectiveness (OE) training are being developed and integrated into the system.

The plans for the immediate future include a restudy of the TOW Trainer Course and a new training package for it, and development of a second, yet to be identified, pilot course.

PART TWO:

WORKSHOP IN INSTRUCTIONAL SYSTEMS DEVELOPMENT



## I. THE WORKSHOP

### A. Introduction

The purpose of the workshop was to train selected USAIS personnel in Instructional Systems Development and related techniques as specified in School Model '76. The workshop was conducted during the period of 1-19 November 1976 at Bryan Hall and Building 4 at the USAIS.

All those who attended met the minimum acceptable performance requirements of the workshop and some individuals did outstanding work. The workshop staff was constantly available for evaluating student products and for extra instruction.

### B. Exercise Evaluation

#### Student Attitudes

Student opinions of exercises in each module were collected. The instrument used consisted of five items on how well the exercise matched the job task, difficulty level, the student's perception of how well he could do the job and judge the product, and how well their time was spent on the exercise.

A brief summary of the items and majority responses follows:

1. "The exercises matched the job task" very well or reasonably well for all exercises.

2. "(Degree of difficulty) The exercises were" just about right except for module 11 which was a bit too easy.

3. "After doing the exercise, I feel that I could do this job" very well or reasonably well for all except module 9 to which some responded "passably well."

4. "In terms of what I learned from the exercise, the amount of time involved was pretty high or just about right" except for module 9 to which some responded not very high.

5. "(Judging products) I feel I can evaluate ISD products" very well—usually.

See Figure 1 for a sample copy of the instrument used to assess student attitudes.

### Student Products

The management system of ISD insures that all students produce something. Most products were very good, some exemplary. The job chosen had too few tasks so that the products covered a very narrow slice of instruction.

### C. Workshop Staff

Dr. Robert K. Branson

Dr. William H. Crawford

Dr. Gail T. Rayner

Mr. Robert W. King

Dr. Barry M. Wagner

Mr. Gerald Puterbaugh

Dr. Janet Winner

Dr. Darlene Heinrich

Dr. Walter W. Wager

### D. List of Speakers

Dr. Robert K. Branson

Dr. Barry M. Wagner

Dr. Robert M. Morgan

Dr. Janet Winner

Mr. B. Michael Berger

Dr. Walter W. Wager

Dr. Helmut Hawkins

Dr. Gail T. Rayner

LTC. Alex E. Williams

Major Wayne Brown

Mr. Robert King

Mr. William Crawford

Dr. Darlene Heinrich



Figure 1

Please give us your opinion of the Module 4 Exercises by checking the appropriate item for each statement. Refer to your exercises while filling this out.

	Exercise	
	1	3
1. The exercises matched the job task:		
1. Very well	_____	_____
2. Reasonably well	_____	_____
3. Fairly well	_____	_____
4. Not too well	_____	_____
5. Not well at all	_____	_____
2. (Degree of difficulty) The exercises were:		
1. Too difficult	_____	_____
2. A bit too difficult	_____	_____
3. Just about right	_____	_____
4. A bit too easy	_____	_____
5. Too easy	_____	_____
3. After doing the exercise, I feel that I could do this job!		
1. Very well	_____	_____
2. Reasonably well	_____	_____
3. Passably	_____	_____
4. Not too well	_____	_____
5. Poorly	_____	_____
4. In terms of what I learned from the exercise, the amount of time involved was:		
1. Too much	_____	_____
2. Pretty high	_____	_____
3. Just about right	_____	_____
4. Not very high	_____	_____
5. Negligible	_____	_____
5. (Judging products) I feel I can evaluate ISD products:		
1. Very well—usually	_____	_____
2. Occasionally	_____	_____
3. Poorly—seldom	_____	_____

Please make any additional comments on the back of this page, particularly any suggestions for adaptation to the Infantry School. Thank you.