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THE ROLE OF THE AFTER ACTION REVIEW LEADER IN
REALTRAIN: RESEARCH ON TRAINING NEEDS

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A critical component of the tactical engagement simulation (ES) training method is the After Action Review, where events that occurred during the ES exercise are reviewed chronologically.

This report describes a non-experimental approach to studying the role of the AAR leaders in tactical ES training. Using observational data, the research team was able to identify a consensually validated list of critical skills.

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20. (continued)

Knowledges and skills required by AAR leaders were classified in four knowledge/skill areas. Skill in preparation for the AAR during the simulated battle is typically reflected in the organization and effective conduct of the AAR.

An important skill needed to hold AARs is that of creating and maintaining a sanction-free atmosphere throughout the discussion. Engagement simulation makes it both possible and necessary for the AAR leader to do this. Assessed casualties, and the actions of those who inflicted and suffered casualties are the objective data about which the AAR is built. Given this information, the AAR leader focuses attention on casualties. His role is to draw reasons for casualties from participants. Many AAR leaders—accustomed to the role of critic/evaluator, find it difficult to assume this more permissive role. As a result, troops (who know what casualties they inflicted/suffered) are inclined either to argue with the leader or to "clam up." Thus, the learning benefit associated with active and free participation is not realized. In training Army leaders to conduct AARs, it must be stressed that leaders must conduct ARs in an open non-critical manner, letting the soldier and their leaders develop guides for effective behavior based on casualties.

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THE ROLE OF THE AFTER ACTION REVIEW LEADER IN REALTRAIN: RESEARCH ON TRAINING NEEDS

Introduction

REALTRAIN is a performance-based training method for Army combat arms units that has been developed by ARI over the past few years. REALTRAIN involves realistic simulation of combat engagements, using a system of exercise controllers who objectively assess the outcomes of weapons play and other actions. These assessments are made according to strict rules, designed to ensure that the outcomes identified—such as casualties—are credible to those in training.[1]

Controllers accompany vehicles/troops of opposing sides. In the event of a successful hit, controllers with firers communicate to controllers with targets who then declare casualties to vehicles and personnel. As the simulated engagement progresses, the two forces must cope with attrition, continuing their missions despite losses. Other than acting to ensure that the effects of the simulated combat actions are reflected in casualties, REALTRAIN controllers do not interfere in the exercise. Each side trains under free-play conditions.[2]

Overall supervision of the exercise is the responsibility of two Senior Controllers— one per side—who observe maneuvers, monitor communications and act to ensure that established rules of engagement are followed strictly and fairly. This central position in the communications structure also gives Senior Controllers a detailed knowledge of critical events occurring during the exercise. In addition, traffic on the exercise control radio net is monitored at a central NCS and a written record of the chronology of casualties and other outcomes is kept there.

The REALTRAIN method incorporates a post-engagement training phase called an After-Action Review (AAR). In the AAR, all members of the opposing forces are assembled to engage in a guided discussion of their collective experience during the exercise just completed. The AAR reconstructs the sequence of actions that occurred during the exercise. Those who became casualties are told by the opponents who took them out of action how they were detected and fired upon. This peer feedback, when integrated with a learner's own recollections of what led up to the moment he became a casualty, allows him to see what he did wrong and permits him to understand how effective unit performance depends on the coordinated actions of all unit members.

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[1] This paper will refer to casualties or opposition (kills, enemies) without stating the implied modifier, "simulated."

[2] For a more complete description of REALTRAIN rules and procedures, see Training Circular 71-5, *Tactical Training for Combined Arms Elements—REALTRAIN.* Fort Knox, Kentucky: U.S. Army Armor School, January 1975.

As a discussion guide, the control system records of casualties and other events are used during the AAR. To make sure these records are complete and accurate, the AAR leader debriefs the other controllers prior to the AAR.

This directed recall and verbalization of personal experiences within a unit performance frame of reference makes the AAR a powerful component of the REAL-TRAIN training approach, as would be expected from known principles of learning. Lessons learned are reinforced, comprehension is extended and guides as to how to perform better in the future are generated by the dialogue.

Responses of participants in REALTRAIN exercises indicate that they perceive the AAR to be a valuable learning opportunity. In questionnaire data from REALTRAIN participants during initial validation trials of the method, 87 percent reported that they gained something from the AAR; 45 percent said that they learned much from it.[3] In a field test of a version of REALTRAIN adapted for armored cavalry training, members of participating units were also asked to evaluate the AAR.[4] Here, 47 percent rated the AAR as "greatly increasing" tactical understanding. Thirty-six percent judged that they learned "a lot" from listening to descriptions of actions from other players.

Statement of the Problem

Experience to date has shown that the AAR enhances learning, and establishes motivation to learn more. But as with any other type of instruction, the AAR requires structure and guidance. Its effectiveness depends largely on how it is conducted.

The logical choice for the AAR leader is one of the Senior Controllers of the exercise. He will have been monitoring the exercise and be knowledgeable about actions taken by each side and the casualties and other outcomes which occurred.

Prior to the work reported here, no systematic study had been made of skills needed to conduct AARs. From unstructured observations, it appeared that the setting and conduct of the learner-oriented AAR involved some of the same kinds of skills that are required in an interviewer-interviewee situation. The AAR leader should conduct the AAR in such a way that it is, in fact, *a review* and not a critique. He should be able to stimulate participants to provide accounts of prior action without introducing bias or injecting evaluative cues.

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[3]R. T. Root, K.I. Epstein, F.H. Steinheiser, J.F. Hayes, S.E. Wood, R.H. Sulzen, G.G. Burgess, A. Mirabella, D.E. Erwin, and E. Johnson. *Initial Validation of REALTRAIN With Army Combat Units in Europe.* ARI Research Report 1191. October 1976.

[4]Unpublished data collected under ARI Contract DAHC 19-76-C-0049, "Refinement of Engagement Simulation Training Techniques for Combat Arms Units."

The skills needed also appeared to overlap with those exhibited by the chairman of a well-run meeting. The AAR leader as chairman must open the "meeting." He must define an agenda, and guide the group to follow the agenda. He must listen to what is said and see to it that everyone with something to say is heard. He must help the group develop major lessons learned as a product that represents views of all participants. He must then summarize and close the discussion on a positive note.

The AAR leader must assume other roles as well. Sometimes he needs to act as an informed source of doctrine, sometimes as a mediator of disagreements, and so on. To sum up the problem, the leader needs to be trained in skills that are related to a wide variety of specialized roles, many of which do not normally coincide with a role description of the military commander. A Senior Controller needs to learn what skills from other roles are useful to him in leading an AAR *and which are not,* and how application of these new skills helps troops to learn.

These common-sense characterizations of learning objectives had been articulated by knowledgeable observers prior to the research reported here. However, these unstructured observations had not been drawn together. An empirical study was therefore planned to define more precisely the objectives of an AAR leader training program.

The study objectives were subdivided into two content areas:

1. To define the conditions that an AAR leader should establish for effective conduct of the review.

2. To identify the essential elements of a skills repertoire that a leader should possess and exhibit in conducting the AAR.

Research Method

Empirical research on AAR leadership was conducted in three steps, as follows:

1. Naturalistic observation of a variety of AARs, including television tape-recording of a subsample. This was supplemented by collection of AAR evaluations from participants by questionnaire.

2. Systematic comparative review of observers' notes, TV records and the questionnaire data, by three members of the project team.

3. Formulation of a list of critical AAR leader skills based on panel integration of information from the above sources.

Sample Selection

AARs had to be chosen as opportunities to observe them arose, since during the time the research was conducted, REALTRAIN was just beginning to be implemented. Only a limited number of units and training facilities were using the method. Within those constraints, every effort was made to include a variety of REALTRAIN users in the study sample. Specifically, attempts were made to include:

1. Exercises involving different types of units with different training agendas and objectives;

2. Exercises that were planned and supervised by Senior Controllers with different amounts and types of experience with REALTRAIN.

To achieve a satisfactory range of variation in the types of units and training environments sampled, AARs were observed in the following situations: (1) after REALTRAIN exercises conducted as part of a Basic NCO Course (BNCOC); (2) after REALTRAIN exercises with Armored Cavalry units; and (3) following SCOPES exercises for infantry rifle squads. This produced a final sample of 19 exercises and AARs as shown in Table 1.

TABLE 1: DESCRIPTION OF STUDY SAMPLE

Type Exercise[a]	No. AARs Observed	No. Different AAR Leaders	No. REALTRAIN Participants
BNCOC (Conventional Combined Arms)	6	2	180
Armored Cavalry	9	2	112
Light Infantry (SCOPES)	4	3	50
TOTALS	19	7	342

[a]All exercises involved opposing forces which ranged from squads/sections to platoon size (+) on each side. Except for the infantry exercises, the play of indirect fires (artillery or mortars) was included. Missions were normally attack *versus* defense, with occasional meeting engagements.

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One way of characterizing what was attempted in sampling the AARs to be studied, under the constraints already stated, is in terms of a goal of increasing the *ecological representativeness* of the sample.[5] This concept "concerns the extent to which the . . . situations compared . . . are representative of the population of situations to which the investigator wishes to generalize."[6] According to this author, when (as is often the case) the parameters of the population of situations is unknown, the researcher should at least study and describe a set of situations in which the potentially influential variables are allowed to vary together naturally. This was one goal of the sampling approach adopted, and is consistent with the concept of the observational approach and analytic methods discussed below.

Observational Procedures

Research team members observed and noted significant AAR leader behavior in all cases included in the sample. A structured form (see Appendix A) was developed as a guide for these observations. The initial version was later transformed to include some behavioral rating scales, but numerical ratings such as are shown on these revised observation forms were found to be difficult to implement. Each AAR is a unique event, and except for strictly objective data (such as duration), the assignment of numeric values on behavioral scales did not impress the observers as being either reliable or valid. The variations in leader experience, personality, nature of the exercise, quality of controller performance, and so on made the simple ratings seem grossly oversimplistic.

The rating items on these forms continued to be used, but mainly as observational cues or prompts. In addition to the ratings, observers made extensive notes on conditions present and on the leader's performance. These notes were more useful for later interpretations than the ratings.

In four cases (two Combined Arms exercises, two Light Infantry exercises), substantial portions of the AARs were recorded on videotape.

These observations were supplemented by questionnaire data collected from participants (see Table 1 for Ns). Sample questionnaires used are given in Appendix B. The content of questions was modified as the research progressed. This again reflects the difficulty of articulating simple performance dimensions on which conduct of the AAR can be assessed quantitatively. The modifications in successive questionnaire versions were based on the tendency of many initial items to elicit only equivocal, middle-of-the-road responses from participants. The more discriminating items were retained and are displayed in Appendix B.

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[5] R.E. Snow, "Representative and Quasi-Representative Designs for Research on Teaching," in *Rev. Ed. Research*, 44 (3), 1974, pp. 265-290.

[6] *Ibid.*, p. 272.

The research strategy adopted in this phase, as well as in the subsequent stage of data interpretation, was modeled after a non-experimental approach to psychological research described in a recent article by L.J. Cronbach.[7]

In that article, Cronbach critically reviews the application of experimental research methods in complex naturalistic social settings. The article puts special emphasis on studies of instructional processes. He observes that psychology as a science has continued to strive to establish general theories and behavioral "laws" through use of rigorously designed experiments and classical hypothesis testing, modeling its approach after the physical sciences. Cronbach offers the view that overcommitment to such a goal has impeded the development of psychological insights, especially concerning complex behaviors. He offers evidence that the *interactions* among the variables that influence all but the simplest behavioral processes are more substantial in their effects than is generally understood. As he states at one point in his paper, *"We need to reflect on what it means to establish empirical generalizations in a world in which most effects are interactive."*[8]

Cronbach proposes a research strategy for application to real problems in the real world. Within this approach, observations are made according to some guiding set of propositions, to be sure, but are not restricted in scope by a prior commitment to the collection of data only on the effects of a narrow range of treatment variables. Similarly, interpretation of data should be, according to Cronbach, "in context" rather than focused only on tests of significance. He sums up the essence of his concerns and recommendations as follows:

> "Let the author file descriptive information, at least in an archive, instead of reporting only those selected differences and correlations that are nominally 'greater than chance.' Descriptions encourage us to think constructively about results from quasi-replications, whereas the dichotomy significant/nonsignificant implies only a hopeless inconsistency . . .

> "Instead of making generalization the ruling consideration in our research, I suggest that we reverse our priorities. An observer collecting data in one particular situation is in a position to appraise a practice or proposition in that setting, observing effects in context. In trying to describe and account for what happened, he will give attention to whatever variables were controlled, but he will give equally careful attention to uncontrolled conditions, to personal characteristics, and to events that

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[7]L.J. Cronbach. "Beyond the Two Disciplines of Scientific Psychology," in *American Psychologist, 30* (2), 1975, pp. 116-123.

[8]*Ibid.,* p. 121 (emphasis added).

occurred during treatment and measurement. As he goes from situation to situation, his first task is to describe and interpret and effect anew in each locale, perhaps taking into account factors unique to that locale or series of events . . . As results accumulate, a person who seeks understanding will do his best to trace how the uncontrolled factors could have caused local departures from the modal effect. That is, generalization comes late, and the exception is taken as seriously as the rule . . . ."[9]

This study attempted to follow the broad principles set forth by Cronbach. The "effect" being studied was the evaluation of AARs as learning experiences by participants and by scientific observers. "Treatments" consisted of AAR conditions established by leaders (Objective 1), and behaviors of leaders during conduct of AARs that were rated as to their effectiveness (Objective 2).

To accomplish project objectives, observations and data were analyzed as described below.

Observations by Scientists

A preliminary review of the information collected was conducted to uncover the most general dimensions of variation that could be identified across the various events observed. The purpose here was to establish a relatively simple framework for a second-stage review, within which the AAR leaders' preparation for and conduct of the AAR could be evaluated.[10]

Having established that framework, a more critical look was taken at the observational data in order to identify those leader behaviors that resulted in participants indicating that an AAR was a valuable learning event, or simply that the AAR leader did a good job. Those AAR leader behaviors that produced positive reactions were taken to be desirable elements of a skills repertoire to be trained. Leader behaviors consistently associated with less positive reactions were taken to be undesirable, and thus to be avoided.

Responses by Troops to Questionnaires

Troops participating in various AAR- were asked to comment on leader behavior by questionnaire (Appendix B). Response frequencies were tabulated and summarized in charts as percentages. See Appendix C for these summaries.

[9]*Ibid.*, pp. 124-125.

[10]Both reviews were performed by three members of the project team, working as a panel and discussing the data to achieve consensus. Two panel members had had extensive military experience as well as research experience. The third member was a senior behavioral scientist with extensive experience in group process observation and analysis. Not all reviewers observed all exercises; however, all 19 were discussed by panel members.

Extraneous Factors

The initial review of observations of AARs by scientific observers suggested that three extraneous factors were influencing conduct of AARs and their evaluations independent of leader performance.

- The purposes of the exercise for which the AAR was held. Some exercises were held for tactical training of operational units. Others were conducted primarily to train REALTRAIN controllers.

- The unit integrity of opposing forces. BNCOC exercises involve synthetic "units" constituted solely of NCOs for exercise purposes. In the other exercises, actual TO&E units were involved.

- The primary missions of the units or individual participants. The majority of the sample involved combat arms personnel. However, two exercises involved combat support units where a combat role is secondary to their primary missions.

These uncontrolled sources of variation were explicitly identified as contextual factors whose influences should be allowed for in making judgments about variations in both AAR leaders' behaviors and participant responses.

Working Hypotheses

Working hypotheses were established concerning the most significant sources of variation in the "treatment" of primary interest, leader skills in conduct of the AAR. These hypotheses were:

1. The primary source of differences in leader behavior will be the amount of prior experience with REALTRAIN and AAR conduct.

2. An important secondary source of variation will be the range of leader experience across training context and types of units.

   Of course, "low" values of *total* experience imply that diversity will also be "low," so these variations are not entirely unconfounded.

A classification of AAR leaders, in terms of amount and type of experience, is shown in Table 2.

TABLE 2: EXPERIENCE OF LEADERS OBSERVED

Amount of REALTRAIN Experience	Diversity of Experience	Leader Designation (Rank)	No. of AARs Observed
Very high	Very High	A (MAJ)	2
High	Low	B (MSG)	5
Low	Low	C (SFC)	1
Very High	Very High	D (MAJ)	8
High	High	E (SFC)	1
Very Low	Very Low	F (1 LT)	1
Very Low	Very Low	G (CW 2)	1

Table 2 shows the frequency of observations of leaders conducting AARs and leader experience. Leader B is the NCO at one of the BNCOC sites, while Leader D is an armor officer who had been extensively involved in the development and implementation of REALTRAIN. Leader A is an infantry officer; he is also involved in the development and implementation of REALTRAIN. Each of the other four AAR leaders was observed only on a single occasion.

Leaders B and D were observed conducting AARs during the several months in which data were collected. During this time, the version of the troop questionnaire shown in Appendix A was being refined. By the time Leaders A, C, and G were observed, data collection techniques and instruments had been sufficiently stabilized. These data, along with data on later observations of Leaders B and D, are the primary focus of our interpretations and recommendations. For Leaders A, B, and C, segments of the AARs were recorded on videotape. This permitted a more intensive investigation of the group process in these AARs by panel reviewers.

Results From Troop Questionnaires

The subset of AAR leaders selected for detailed examination can be classified by the sources of variation depicted in Table 2, and troop questionnaires were arrayed in relation to the classification schema. The three tables following show examples of relationships between leader experience and troop evaluations.

Table 3 shows the pattern of relationships for the question of troop perceptions of the learning value of the AAR.

TABLE 3: PERCENT OF EXERCISE PARTICIPANTS INDICATING THEY LEARNED A "GREAT DEAL" OR "SOME ADDITIONAL" INFORMATION FROM THE AAR (BY LEADER TYPE—Leader Code in Parentheses)

		Diversity of Leader Experience	
		High	Low
Amount of Ldr. Experience	High	100% (A) 88-96% (D)*	90 - 94% (B)*
	Low		100% (G) 51% (C)

*Range of frequencies over a number of AARs.

This table shows that troops tended to rate the learning value of AARs conducted by experienced leaders as higher than those where the leader lacked experience. The "perfect" rating of Leader G, a novice, may be partly attributed to the fact that the troops involved in the exercise were from a combat support unit for which tactical training was unusual. Their evaluations of the AAR were highly positive. Also, Leader G had had an opportunity to observe Leader A conducting AARs, and could thus model his behavior on an experienced performer's example.

Table 4 shows one measure of the AAR leader's ability to manage the discussion process effectively.

TABLE 4: PERCENT OF EXERCISE PARTICIPANTS INDICATING THAT AMOUNT OF GROUP DISCUSSION IN AAR WAS "SATISFACTORY" (BY LEADER TYPE) (Leader Codes in Parentheses)

		Diversity of Leader Experience	
		High	Low
Amount of Ldr. Experience	High	95% (A)	61 - 67% (B)
	Low		86% (G) 42% (C)

This table shows that greater AAR leader experience again is tied to more positive troop evaluations, although again Leader G makes a strong showing. Again, experience appears to pay off, but with the proviso that diversity of experience shows slightly more benefit for discussion-leading skills than sheer amount.

Finally, Table 5 shows explicitly the precentage of judgments by troops that the various leaders offered the *proper* amount of guidance during the AAR.

TABLE 5: PERCENT OF EXERCISE PARTICIPANTS INDICATING THAT AAR LEADER OFFERED THE PROPER AMOUNT OF GUIDANCE (BY LEADER TYPE)
(Leader Codes in Parentheses)

		Diversity of Leader Experience	
		High	Low
Amount of Ldr. Experience	High	78% (A)	54 - 66% (B)
	Low		90% (G) 29% (C)

Here, a pattern similar to that in the previous tables is seen. Leader A is evaluated quite positively as is the novice Leader G, with Leader B intermediate.

In summary, troops did make discriminations in evaluating conduct of AARs using the rating scales. Further, trends suggest that these discriminations are related to leader experience. The examples shown in these tables, and the more extensive data tabulations presented in Appendix C, add to evaluations by scientific observers to provide a means for defining knowledge and skill requirements of AAR leaders.

AAR Leader Knowledge and Skill Requirements

Observations of scientists can be summarized to specify and to illustrate knowledges and skills of AAR leaders. These knowledges and skills are classified into four areas listed below. Then, knowledges and skills in each area are depicted in greater detail, and illustrated by descriptions of effective and ineffective conduct of AARs. The first of the knowledge/skill areas follows from Objective 1, i.e., Leader Preparations for AARs. The second objective, which is subdivided into three subareas of knowledges and skills refers to the conduct of AARs. The four areas are:

a.   Preparing for the AAR.

b.   Setting the ground rules, and maintaining a sanction-free atmosphere.

c.   Influencing participant motivation through conduct of AAR dialogue.

d.   Attending to the need for integration and assimilation of exercise events in a tactical context, to increase understanding.

These areas are developed in detail below. It should be noted that some AAR leaders were not effective in all respects.

Preparations for the AAR

Knowledges/skills required for preparation of AARs may be subdivided into two areas:

- Ability to develop and record relevant information during the battle.

- During the controller debrief, ability to draw together a valid and coherent picture of what transpired, and to do so in a timely manner.

a.   **Preparations During Conduct of the Exercise and Controller Debrief**

(1) Effective behavior.

Effective AAR leader actions:

(a) During the controller debrief, it was noted that those leaders who later conducted AARs rated as effective, had kept up with the battle well, and had made notes as memory jogs as actions occurred. Thus, the leader who would conduct the AAR was already familiar with the general course of events, and used the controller debrief only to fill in gaps in his observations.

(b) One effective leader used the terrain map during the controller debrief. The use of this terrain map helped to resolve quickly disagreements concerning the action.

(c) Another leader is highly skilled in debriefing his controllers, especially the BNCOC cadre, and came to the AARs with a clear idea of what went on during the exercise, and an awareness of key learning points to be made. He used a large-scale detailed terrain sketch effectively to assist the reconstruction of the action.

(d) Effective leaders frequently held the AAR at an advantageous site where troops could refer the action to the terrain.

(2) Ineffective behavior.

Ineffective leader actions:

(a) One inexperienced leader, in a very lengthy controller debriefing, spent nearly all the time criticizing controller performance on the field. He made no serious effort, actually, to get the best data he could *after* the exercise, to allow himself to enter the AAR with a clear idea as to what had happened.

(b) Comments from troops on the time involved in waiting for the AAR to be conducted stand as indirect evaluations of the ability to conduct controller debriefs efficiently and in a timely manner. The inexperienced AAR leaders took more time to conduct the controller debriefs than did the leaders experienced in conduct of controller debriefs. This was reflected in troop comments that they had to wait too long after the exercise for the AAR to be conducted.

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b. Setting the Ground Rules and Maintaining a Sanction-
    Free Atmosphere in Interactions with Respondents

As noted below, even effective leaders at times erred. This area breaks down into:

- Providing a clear and explicit statement of "ground rules" for the AAR.

- Formulation of questions/prompts to be neutral in tone, not critical.

- Attentive listening.

- Acceptance of participants' reports as valid.

(1) Effective behavior.

(a) While few AAR leaders in the sample under discussion were observed doing so, it is suggested that the AAR leader take two minutes at the beginning to explain the purpose of the AAR, how the course of action of the two sides is to be reviewed over time, and that the purpose is not to "chew anyone out." In other words, he should stress the sanction-free learning environment. These words become, then, a public commitment by the AAR leader to conduct the AAR as he stated he would.

(b) One of the more effective leaders consistently invited members of the group to tell what had happened in an open,friendly way that cued the respondent to express himself fully. The invitation was often quite direct. A typical prompt would be, "Why don't you tell us about what you were doing when you shot No. 37?" The leader listened attentively to replies and accepted the respondent's comments as given. Further prompts were used as needed to fill in details in the respondent's report. If necessary, the leader fed back a synthesis of key aspects of the respondent's perceptions. This feedback did not go beyond the information already given. He checked to see if the feedback was accepted as accurate by the speakers. Fairly frequently, he would invite a soldier who had been in the vicinity of an action to comment or add detail.

On only one occasion, this leader became critical rather than impartial. This occurred when he directly criticized a squad leader's behavior and drew a defensive, rationalizing response from the soldier. As an experienced AAR leader, he quickly recognized what he had done and immediately shifted back to a neutral mode of prompting, which put the man criticized at ease and led him back to giving an objective report of his actions.

(c) This same leader excelled in eliciting from the troops a detailed, coherent, and objective account of the action. Behaviors that observers singled out as contributing were:

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- Liberal use of open-ended prompting questions.

- Firm but friendly restriction of comments to the respondent's own experiences.

- Allowing troops to say, "I don't know," or otherwise indicate inability to contribute, without criticism or judgment.

- By word and manner, this leader invited group members to add to their peers' reports when these reports were incomplete.

(2) Ineffective behavior.

(a) This leader was ill-prepared to conduct the AAR. Thus, he brought to the AAR a sense of uneasiness and defensiveness that soon infected the discussion. Over *half* of his AAR time was taken up by his lecture on tactics. Much of the remaining time was consumed by arguments about general tactical principles.

The responses of soldiers, given these conditions, tended to be terse and guarded. As the session progressed, the leader had increasing difficulty in getting participants to even identify themselves by their REALTRAIN numbers.

(b) This AAR leader, though infrequently, criticized participants. This elicited a defensive reponse.

(c) It was obvious that this leader had "lost" the group at the end of his lengthy opening lecture. After that, it was not a question of his maintaining positive interest so much as managing the feelings of frustration that the troops evidenced by their aggressive, argumentative comments during the final phase of the AAR.

(d) Nearly every invitation for a personal report was issued in a challenging, peremptory manner. For example, "SGT Jones, I see here that No. 66 killed you. What about it?" A high proportion of individual reports were taken by the leader as occasions for additional tactical comment and criticism. The atmosphere that the leader induced during the review is vividly reflected in one soldier's comment, made after an argument with the leader. The soldier finally remarked, "Well, say it how you wanted it, not how it was."

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c. **Skills in Conduct of the Dialogue; Skills Directly Influencing Participant Motivation**

- Efficient management of the dialogue; giving adequate time to each speaker but avoiding lengthy war stories.

- Firm but friendly control of arguments and disagreements.

- Positive acknowledgement and reinforcement of good ideas or comments.

- Avoiding letting discussion wander; knowing when to stop.

(1) Effective behavior.

(a) The more effective leaders efficiently summarized their AARs and delineated the key learning experiences for the troops. They also recapped the action periodically during the AAR, to help the troops assimilate the tactical knowledge being gained.

(b) One leader had little experience as an AAR leader, however he was quite successful in gaining rapport with the troops and guiding the discussion without undue interference.

(c) This same leader kept the AAR discussion moving briskly without digression. He permitted or even encouraged others to initiate questions or comments if relevant. But, if a discussion "got ahead" of the point in the action being discussed, the leader notified the respondent that this was out of sequence and that it would be covered when the time came.

(d) This leader's willingness to listen attentively to what each person had to say not only contributed to reconstruction of the action as the troops experienced it, but also sustained the group's attention. While the person who "had the floor" at any given time might be reporting on events of which he had the most *direct* knowledge, this leader would accept *relevant* observations or comments from others.

(2) Ineffective behavior.

(a) One of the more experienced leaders was fairly successful in maintaining group interest and motivation by establishing an informal atmosphere during the AAR and inviting comments and discussion. However, this technique had some disadvantages in that it tended to elicit excessive amounts of detail.

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(b)   This same leader dwelt on individual reports extensively, with the result that the AAR became a discussion of unrelated individual episodes. Emphasis was not directed to the most salient features of the engagement.

(c)   This leader sometimes acted so as to detract from the objectivity of reports.

- He sometimes allowed participating troops to draw him into a discussion of *intentions*. When this happened, he tended to react by lecturing the respondent about why he should or should not have *wanted* or *planned* to perform in a certain way. For example, a participant at one point began talking about a plan of maneuver he had formulated for his squad. The AAR leader made a lengthy speech criticizing the plan *as such* rather than prompting the individual to continue describing what he, in fact, had done. This drew a negative, argumentative response from the soldier.

- In some instances, he reacted to a clear report by continuing to press for further information, not only about the speaker's own actions but those of others. This consumed group time and had questionable training value.

(d)   The lack of unit cohesion induced by the school environment in which this leader operated appeared to result in a waning of enthusiasm over time. Successive AARs had a   repetitive quality, so that when reactions to his second session were compared with the first one, troop interest appeared to be somewhat lower the second time. This should not occur if the AAR leader is conducting AARs in a context of varied training and varied trining objectives across a series of exercises for an intact unit.

(e)   One of the inexperienced leaders was not sufficiently familiar with the action. This led to frequent interruptions of the AAR by controllers attempting to provide needed clarification. Although he had a high quality terrain sketch, he asked no one except unit leaders to relate their actions to the sketch.

d.   **Knowledges and Skills of Integrating and Assimilating Experiences**

- Ability to identify and cite cause-effect relationships between related tactical events.

- Ability to infer general tactical principles from participant accounts of events, and to convey these effectively.

- Ability to summarize important lessons to be learned from the exercises and tactical principles illustrated.

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(1) Effective behavior.

    (a) One of the more skillful AAR leaders was able to relate
mistakes made earlier in the exercise to outcomes, for example selection of route
that did not offer effective cover/concealment with subsequent casualties to vehicles
when this route was taken.

    (b) The two most effective leaders efficiently summarized their
AARs and delineated the key learning principles of the troops. They also recapped
the action periodically during the AAR and delineated key lessons to be learned by
troops and leaders.

    (c) Even in a relatively brief AAR lasting about 15 minutes, this
leader broke the rapid pace of the discussion of individual casualty-producing actions
three times, to review and summarize the action. Alternation between review of in-
dividual casualties, and summaries of the unit's actions up to a given point in the
exercise appeared to be a major factor in sustaining interest and attention.

(2) Ineffective behavior.

    (a) The novice leaders were not attuned to the need to summarize
and synthesize. Their AARs simply trailed off after all individual events had been
discussed.

    (b) With both novice AAR leaders, the action sequence had not
been summarized in a logical, understandable way, but rather as an aggregate of episodes
without clear definition of gaps in performance or training needs.

Summary

Knowledges and skills required by AAR leaders have been classified above
in four knowledge/skill areas. Skill in preparation for the AAR both during the battle
and during the controller debrief is typically reflected in the organization and effective
conduct of the AAR.

An important skill needed to hold AARs not now called for by the traditional
role of Army leaders, is that of creating and maintaining a sanction-free atmosphere
throughout the discussion. The REALTRAIN method makes it both possible and
necessary for the AAR leader to do this. Assessed casualties, and the actions of those
who inflicted and suffered casualties are the objective data about which the AAR is built.

Given this information, the interlocator focuses attention on casualties and reasons. He does not need to make evaluations himself as the ARTEP evaluator must. His role—by contrast to that called for in the ARTEP critique—is to draw reasons from casualties from participants. Many AAR leaders—accustomed to the role of critic/ evaluator, find it difficult to assume this more permissive role. As a result, troops (who *know* what casualties they inflicted/suffered) are inclined either to argue with the leader or to "clam up." Thus, the learning benefit associated with active and free participation is not realized. In training Army leaders to conduct AARs, it must be stressed that leaders must conduct AARs in an open non-critical manner, letting the soldiers and their leaders develop guides for effective behavior based on casualties. In training AAR leaders, this should be stressed repeatedly for Army leaders are accustomed to a more authoritarian way of acting.

This report has described a non-experimental approach to training diagnosis through research, as applied to the role of REALTRAIN AAR leadership. By interpreting observational data in context, the research team was able to identify a consensually validated list of critical skills, which served as the basis for generating an AAR leader training manual.

APPENDIX A

RESEARCH OBSERVATION FORM

II. The AAR

(Note start-stop times here)

_____ Hrs-Start AAR
_____ Hrs-End AAR

1. The AAR situation should be set up so that everyone can see and hear the discussions. Rate the situation you observed on how well it did this.

1	2	3	4	5	6	7
Very poor						Very good

2. Did the AAR leader use a terrain sketch, sand table or other representation of the exercise area?

☐ Yes
☐ No

If "Yes," how useful was this representation to the troops, as a discussion aid?

1	2	3	4	5	6	7
Little or No Value as an Aid						Added a Lot to Learning

Describe briefly how it was used.

3.a. How effectively did the AAR bring out the events surrounding enemy sightings, so that those who were sighted were able to recall and discuss their behaviors at the time they were spotted?

1	2	3	4	5	6	7
Minimally Effective						Very Effectively

b. How frequently were controllers called upon to add to the AAR discussion of sightings?

1	2	3	4	5	6	7
Seldom or Never						Frequently

c. Other comments on how sightings or other reports fit into the AAR process.

4. Part of the AAR leader's role is to prompt the troops to discuss their experiences in a way that brings out what they did right or what they did wrong *in their own words.*

   a. How much did the leader intervene to stimulate discussion?
      (Note: Don't count simply reading items from the NCS sheet.)

1	2	3	4	5	6	7
He Intervened Frequently						Little or No Intervention

   b. What was the nature of his prompting—direct specific questions, or more open-ended type of invitation of discussion?

1	2	3	4	5	6	7
Nearly All Direct Questions						Nearly All Open-Ended

   c. How frequently did the leader invite people who were not directly involved in an action episode to join the discussion?

1	2	3	4	5	6	7
Very Often Asked Others to Comment					Seldom or Never Asked Others to Comment	

   d. How did the troops respond to leader comments or questions (prompts)?

1	2	3	4	5	6	7
The Troops Were "Turned On"					The Troops Were "Turned Off"	

5. To what extent did the AAR reveal and review:

a. Each unit leader's overall plan?

1	2	3	4	5	6	7
Very little						Ample Coverage

b. Unit section plans or schemes of maneuver?

1	2	3	4	5	6	7
Very little						Ample Coverage

c. Deviations from plans?

1	2	3	4	5	6	7
Very little						Ample Coverage

d. Relation of action to mission accomplishment?

1	2	3	4	5	6	7
Very little						Ample Coverage

6. Please rate your overall impression of how much the controller debrief contributed to the AAR.

1	2	3	4	5	6	7
Little/No Contribution						Major Contribution

7. Add here any comments or observations on the entire process.

APPENDIX B

PARTICIPANT QUESTIONNAIRE

PARTICIPANT QUESTIONNAIRE

1. How much do you feel you learned from this AAR that you did not learn in the exercise?

    ☐ a. A great deal
    ☐ b. Some additional information
    ☐ c. Very little
    ☐ d. Nothing

2. When considering the way that this AAR was conducted, I felt that:

    ☐ a. There was too much group discussion
    ☐ b. I was satisfied with the amount of group discussion
    ☐ c. There was not enough group discussion

3. When considering the way that this AAR was conducted, I felt that:

    ☐ a. The AAR leader provided too many answers and judgments.
    ☐ b. The AAR leader provided just the right amount of guidance to the discussion.
    ☐ c. The AAR leader did not play a large enough part in the AAR.

4. I thought that the waiting time between the end of the problem and the start of this AAR was:

    ☐ a. Too long.
    ☐ b. About right.

5. I thought that the length of time the AAR lasted was:

    ☐ a. Too long.
    ☐ b. About right.
    ☐ c. Too short.

6. Considering the subject areas covered during the AAR, I felt that it:

    ☐ a. Was boring most of the time.
    ☐ b. Was boring sometimes but held my interest at other times.
    ☐ c. Generally held my interest throughout.

7. Overall, I think that the SCOPES/REALTRAIN method is:

- [ ] a. An improvement over other Army tactical training methods that I am familiar with.
- [ ] b. About the same as any other Army tactical training methods that I am familiar with.
- [ ] c. Is not as good as other Army tactical training methods that I am familiar with.

8. Comments:

APPENDIX C

QUESTIONNAIRE DATA TABULATIONS

Table C-1

Percentages of Participant Responses to AAR-Related Questions,

by Site and Exercise

Question	Response	Site 1				Site 2	
		AAR Leader Identification*				AAR Leader Ident.	
		B	C	B	B	A	G
		n=31	n=36	n=36	n=34	n=19	n=21
1. Amt. Learned	Great Deal	24%	8%	57%	32%	50%	45%
from AAR not	Some	66	43	37	41	50	55
Learned in the	Very Little	7	19	0	12	0	0
Exercise	Nothing	3	30	6	15	0	0
2. Amount of	Too Much	14	36	22	18	5	0
Group Discus-	Satisfactory	61	42	66	67	95	86
sion in AAR	Not Enough	25	22	14	15	0	14
3. AAR Leader Conduct of	Over Interference	21	53 }	19 }	15 }	11 }	5
Instruction	Too Many Answers & Information	18	15				
	Right Amt. of Guidance	54	29	66	65	78	90
	Lack of Leader Participation	7	3	17	17	11	5
	No Response				3		
4. Wait Time Be-	Too Long	36	46	23	18	5	19
tween Problem and AAR	About Right	64	54	77	82	95	81

*The following key identifies the leaders of the various discussions:

    A = Widely-experienced AAR leader (Major).
    B = Thoroughly experienced BNCOC AAR leader (MSG).
    C = Novice BNCOC AAR leader (SPC).
    G = Novice SCOPES AAR leader (CW2).

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Question	Response	Site 1				Site 2	
		AAR Leader Identification*				AAR Leader Ident.	
		B $n = 31$	C $n = 36$	B $n = 36$	B $n = 34$	A $n = 19$	G $n = 21$
5. Overall Opinion of Exercise	Better Than Expected	25%	11%	(Question omitted for these groups.)			
	About As Expected	43	41				
	Below Expectation	32	49				
6. Statements							
a. I learned many things from hearing others speak at the AAR	Agree	78	65	(Questions omitted for these groups.)			
	Disagree	22	35				
b. When I had been a casualty, I felt uncomfortable discussing it before the group.	Agree	16	7				
	Disagree	81	93				
c. I felt my contribution to the AAR was welcomed.	Agree	81	69				
	Disagree	19	31				
d. I can't honestly say I learned anything new from the AAR.	Agree	19	33				
	Disagree	81	67				

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Table C-1 (Concl.)

Percentages of Participant Responses to AAR-Related Questions,

by Site and Exercise

Question	Response	Site 1 AAR Leader Identification*				Site 2 AAR Leader Ident.	
		B n = 31	C n = 36	B n = 36	B n = 34	A n = 19	G n = 21
6. Questions							
e. I got a much bet-ter understand-ing of where I fit into the ex-ercise during the AAR.	Agree	82	62	(Questions omitted for these groups.)			
	Disagree	18	38				
f. AARs were bor-ing most of the time.	Agree	22	41				
	Disagree	78	59				
g. the AAR pro-vided me a good overall picture of how my whole unit acted during the exercise.	Agree	22	65				
	Disagree	78	35				

Additional Questions	Response			B n = 36	B n = 35	A n = 11	G n = 21
h. Length of AAR	Too Long			20	6	11	0
	About Right			57	82	78	57
	Too Short			23	12	11	43
i. Quality of AAR	Mostly Boring			5	12	0	0
	Boring Sometimes			36	32	22	14
	Held Interest			58	56	78	86
j. Comparison of SCOPES / REALTRAIN with Other Training	Improvement			82	82	90	86
	Same			15	6	5	10
	Not as Good			3	12	5	4

Figure C-1. Amount Learned from AAR Not Learned in the Exercise
(Participant Questionnaire—Answers in Percentages)

How much do you feel you learned from this AAR that you did not learn in the exercise?
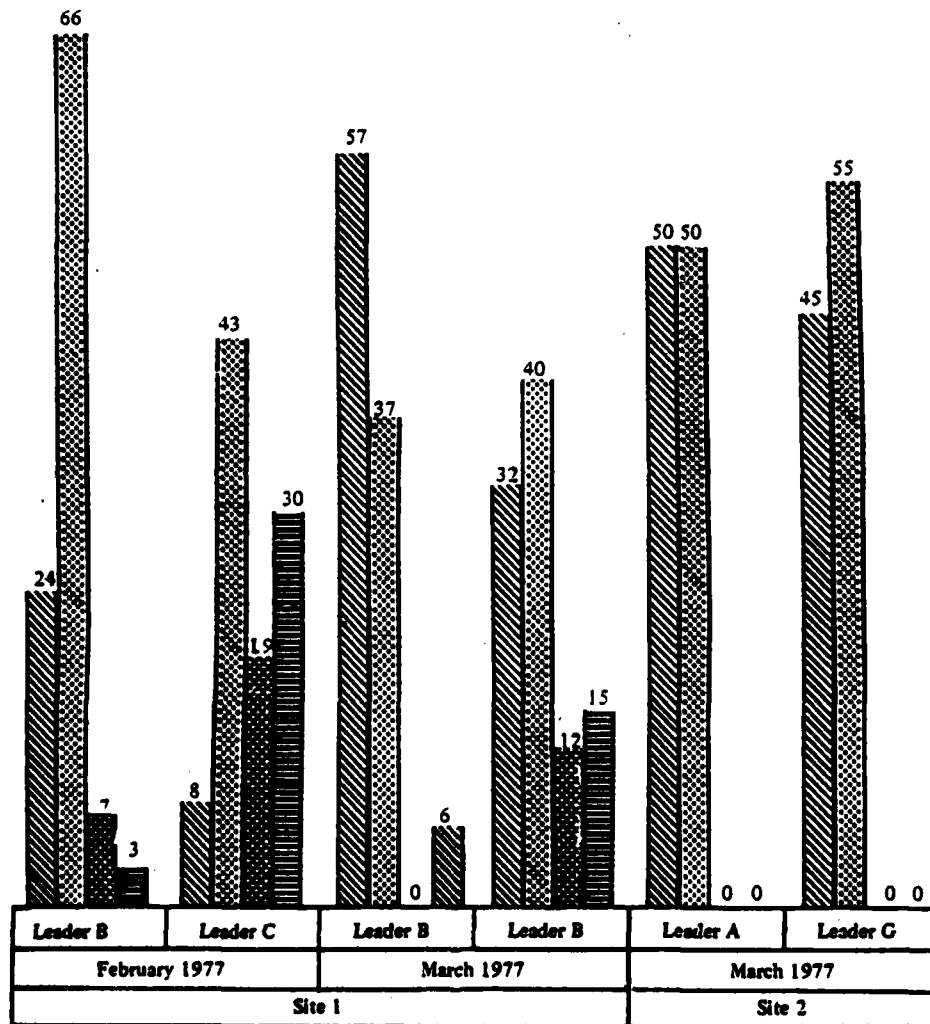*A great deal. Some additional information. Very little. Nothing.*

Leader B	Leader C	Leader B	Leader B	Leader A	Leader G
February 1977		March 1977		March 1977	
Site 1				Site 2	

Figure C-2. Amount of Group Discussion in AAR
(Participant Questionnaire—Answers in Percentages)

When considering the way that this AAR was conducted, I felt that:

NNN *There was too much group discussion.*
[::::] *I was satisfied with the amount of group discussion.*
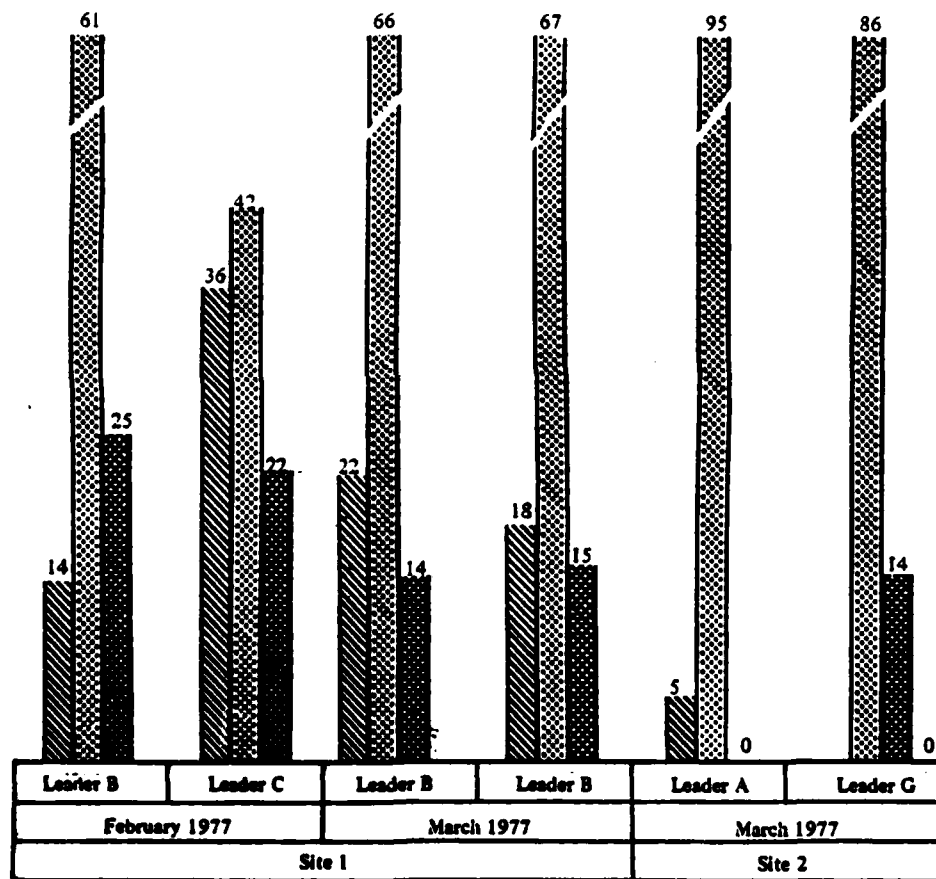**▨▨** *There was not enough group discussion.*

Leader B	Leader C	Leader B	Leader B	Leader A	Leader G
February 1977		March 1977		March 1977	
Site 1				Site 2	

Figure C-3. AAR Leader Conduct of Instruction

(Participant Questionnaire – Answers in Percentages)

When considering the way that this AAR was conducted, I felt that:

The AAR provided too many answers and judgments.

The AAR leader provided just the right amount of guidance to the discussion.

The AAR leader did not play a large enough part in the AAR.

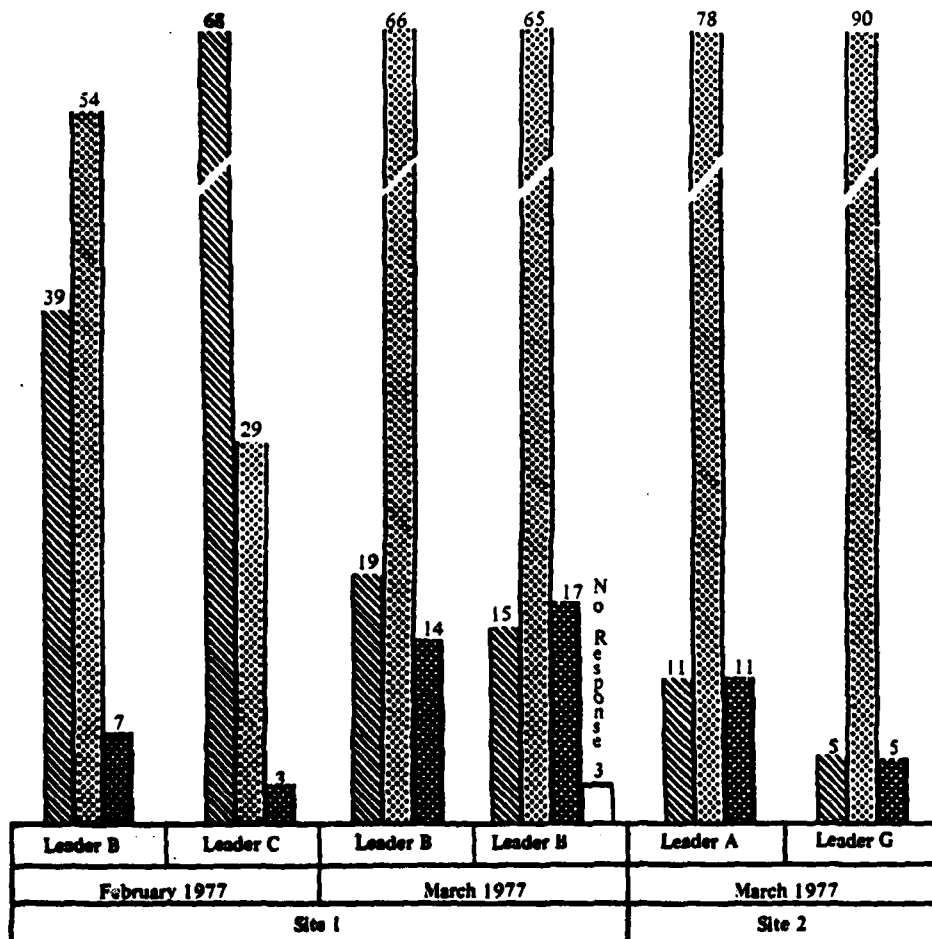| Leader B	Leader C	Leader B	Leader B	Leader A	Leader G
February 1977		March 1977		March 1977	
Site 1				Site 2	

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Figure C-4. Wait Time Between Problem and AAR
(Participant Questionnaire – Answers in Percentages)

I thought that the waiting time between the end of the problem and the start of the AAR was:
        ☒ *Too long.*
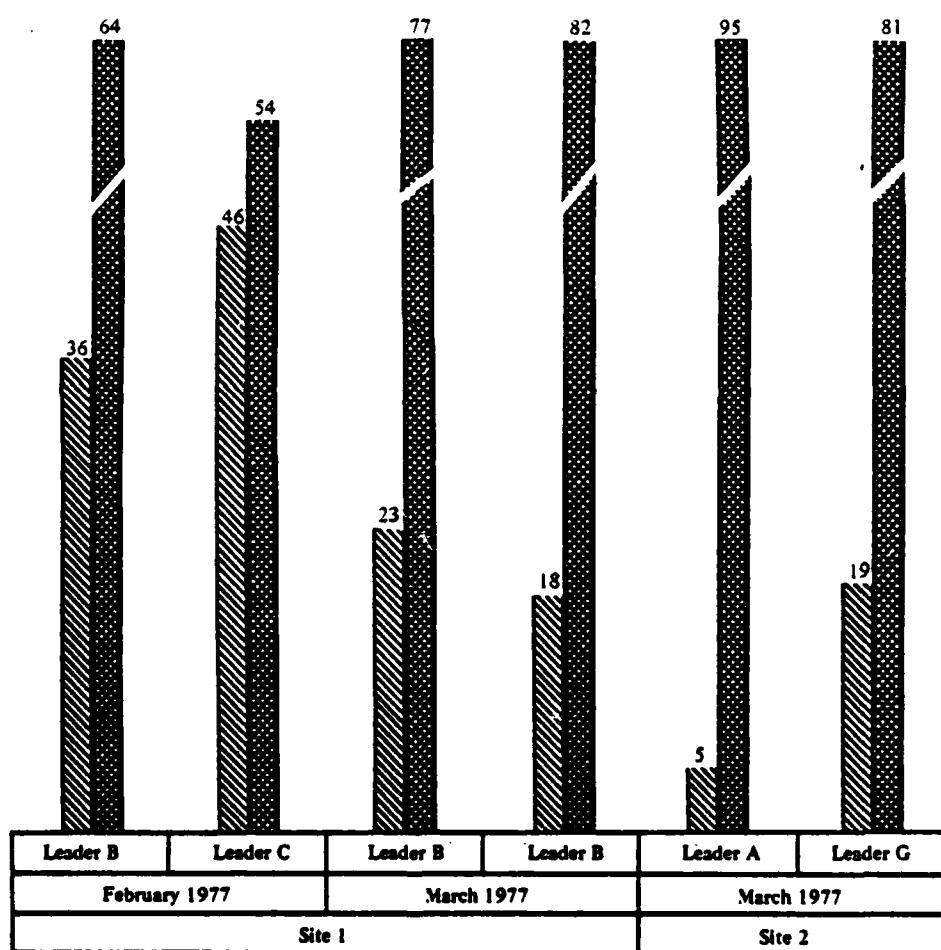   **▒** *About right.*

Leader B	Leader C	Leader B	Leader B	Leader A	Leader G
February 1977		March 1977		March 1977	
Site 1				Site 2	

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Figure C-5. Length of Time of AAR
(Participant Questionnaire—Answers in Percentages)

I thought that the length of time the AAR lasted was:
  Too long.
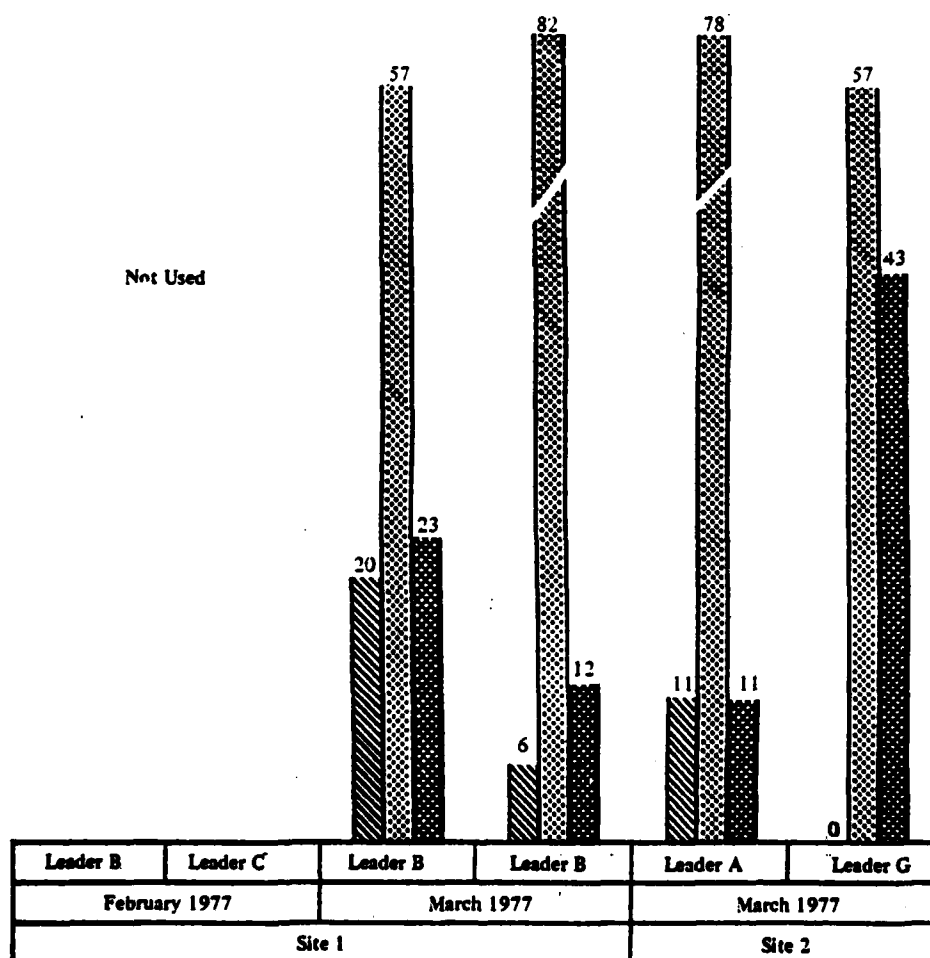 **About right.**
  Too short.

Figure C-6. Level of Interest in AAR
(Participant Questionnaire—Answers in Percentages)

Considering the subject areas covered during the AAR, I felt that it:
   Was boring most of the time.
   Was boring but held my interest at other times.
   Generally held my interest.

				78	86

Not Used

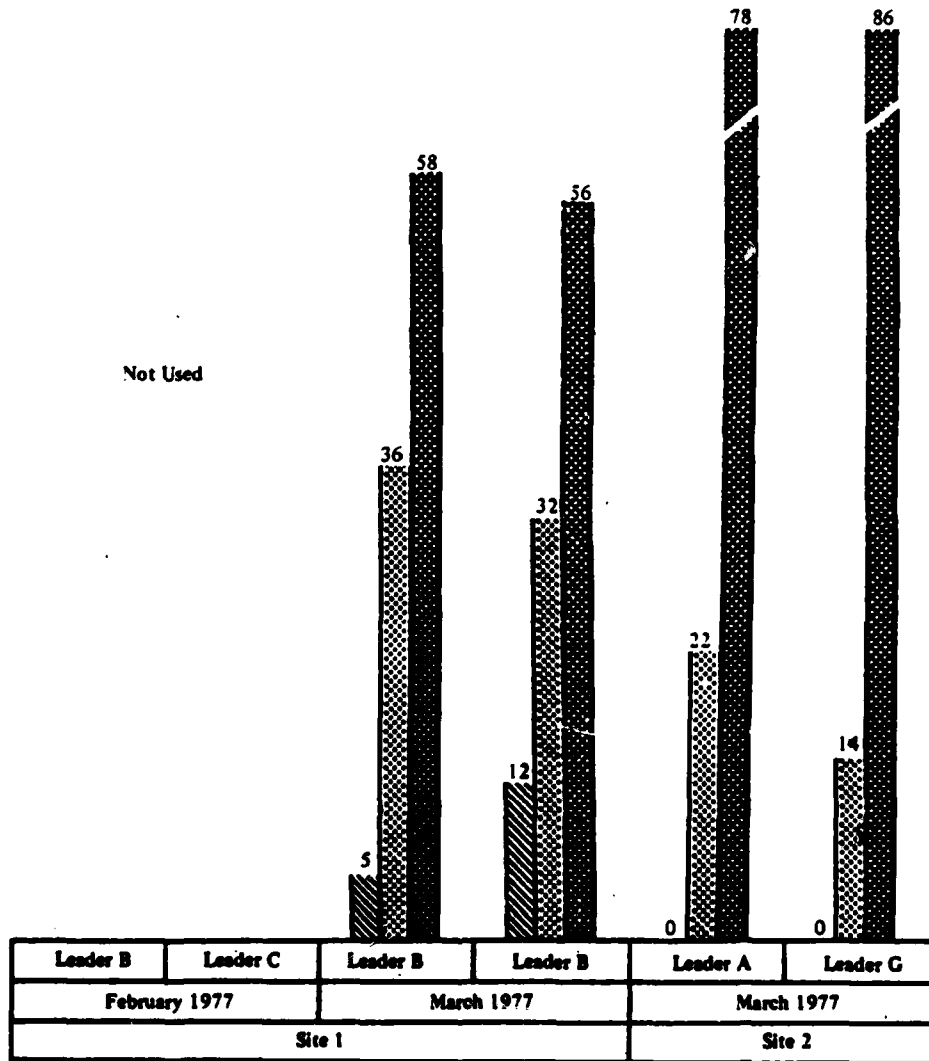| Leader B	Leader C	Leader B	Leader B	Leader A	Leader G
February 1977		March 1977		March 1977	
Site 1				Site 2	

Figure C-7. Overall Evaluation of SCOPES/REALTRAIN
(Participant Questionnaire—Answers in Percentages)

Overall. I think that the SCOPES/REALTRAIN method is:
  ▧*An improvement over other Army tactical*
    training methods. that I am familiar with.
  ▨*About the same. as any other methods.*
  ▪*Not as good as any other methods.*

Not Used

Leader B	Leader C	Leader B	Leader B	Leader A	Leader G
February 1977		March 1977		March 1977	
Site 1				Site 2	

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