

①

Research Report 1465

AD-A193 518

Evaluation of a Job Aid System for Combat Leaders: Rifle Platoon and Squad

Elisabeth B. Evensen and Robert B. Winn
Litton Computer Services, Litton Systems, Inc.

Margaret S. Salter
Army Research Institute

ARI Field Unit at Fort Benning, Georgia
Training Research Laboratory



U. S. Army

Research Institute for the Behavioral and Social Sciences

February 1988

Approved for public release; distribution unlimited.

DTIC
ELECTE
APR 19 1988
S D
9E

88 4 18 023

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

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

EDGAR M. JOHNSON
Technical Director

WM. DARRYL HENDERSON
COL, IN
Commanding

Research accomplished under contract
for the Department of the Army

Litton Computer Services
Litton Industries, Inc.

Technical review by

Stephen L. Goldberg
Patrick J. Valentine



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

NOTICES

~~DISTRIBUTION: Primary distribution of this report has been made by ARI. Please address correspondence concerning distribution of reports to: U.S. Army Research Institute for the Behavioral and Social Sciences, ATTN: PERI-PO1, 5001 Eisenhower Ave., Alexandria, Virginia 22333-5600.~~

FINAL DISPOSITION: This report may be destroyed when it is no longer needed. Please do not return it to the U.S. Army Research Institute for the Behavioral and Social Sciences.

NOTE: The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

ARI Research Report 1465

20. Abstract (continued)

tasks and tasks in skill levels 1-4 in the 11B and 11M Military Occupational Specialties (MOS). The CLG and a feedback form were distributed to over 1,100 active-duty and former active-duty soldiers with over 400 respondents returning their feedback forms.

Overall, respondents across all ranks within the Army who used and evaluated the CLG rated it favorably. The results strongly indicate that all respondents found the CLG to be quite useful and effective as a job aid for combat leaders. The evaluations suggest that most personnel who have seen and used the CLG are very much in favor of its production and distribution on an Army-wide basis. The findings from the evaluation further suggest that the CLG is presently, and will continue to be in the future, a viable and effective asset to combat leaders. Furthermore, the CLG is also anticipated to be an important tool for soldiers to use when engaged in, and preparing for, combat missions through training and combat proficiency drills.

Keywords:

4
FL 19

Research Report 1465

Evaluation of a Job Aid System for Combat Leaders: Rifle Platoon and Squad

Elisabeth B. Evensen and Robert B. Winn
Litton Computer Services, Litton Systems, Inc.

Margaret S. Salter
Army Research Institute

ARI Field Unit at Fort Benning, Georgia
Seward Smith, Chief

Training Research Laboratory
Jack H. Hiller, Director

U.S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES
5001 Eisenhower Avenue, Alexandria, Virginia 22333-5600

Office, Deputy Chief of Staff for Personnel
Department of the Army

February 1988

Army Project Number
2Q263744A795

Training and Simulation

Approved for public release; distribution unlimited.

FOREWORD

The research described in this report details the design, production, and evaluation of a modular job aid system, the Combat Leaders' Guide (CLG). The CLG, in pocket size and checklist format, is intended to assist the modern combat leader in performance of his job under conditions of great fatigue or stress. The CLG work was monitored by ARI's Fort Benning Field Unit, responding to the needs of the Infantry, under research task 3.4.2, Advanced Methods and Systems of Fighting Vehicle Training. Sponsorship was provided by the TRADOC Training Technology Agency (TTA), under a 1983 Memorandum of Understanding between ARI, TTA, and the US Army Infantry School.

Evaluation feedback forms returned by over 400 respondents indicate that the CLG was well received and deemed very useful by officers and NCOs representing a wide range of duty positions and experience. These responses provided information used in updating the Guide, and indicate that a CLG system would be an important asset to the combat leader, in any area, and in both active and reserve components. Personnel throughout the Infantry School and Center have been briefed both formally and informally on the CLG, and information has been distributed to CONUS and USAREUR units, to TRADOC schools, and to many National Guard units. Interest is high in this and related products which include an authoring guide, and the two CLGS, "Combat Leaders' Guide: Rifle Platoon and Squad and Combat Leaders' Guide: Platoon Leaders, Platoon Sergeants, and Squad Leaders."



EDGAR M. JOHNSON
Technical Director

EVALUATION OF A JOB AID SYSTEM FOR COMBAT LEADERS: RIFLE PLATOON AND SQUAD

EXECUTIVE SUMMARY

Requirement:

Because of the ever-increasing complexity of the decisions that combat leaders must make under the stress of combat and the sophistication of modern weapons and equipment, there is a need to develop and produce a job aid system of Combat Leaders' Guides to help the leader accomplish his mission.

Procedure:

A prototype Combat Leaders' Guide: Rifle Platoon and Squad (CLG) was developed and produced using doctrinal materials relating to critical combat common tasks and tasks in skill levels 1-4 in the 11B and 11M Military Occupational Specialties (MOS). The CLG and a feedback form were distributed to various Forces Command (FORSCOM) infantry battalions (light and mechanized) that used the prototype CLG during their battalion Army Training and Evaluation Programs (ARTEPs), Field Training Exercises (FTXs), and National Training Center (NTC) rotations. All rifle company commanders, platoon leaders, platoon sergeants, and squad leaders in these units were equipped with CLGs. In addition, individuals in FORSCOM and Training and Doctrine Command (TRADOC), Observers/Controllers at NTC, and a number of former active-duty soldiers reviewed the CLG. Feedback forms were distributed to all individuals who evaluated the CLG along a variety of dimensions.

Findings:

Overall, respondents across all ranks within the Army who used and evaluated the CLG rated it very favorably. The results strongly indicate that all respondents found the CLG to be quite useful and effective as a job aid for combat leaders. Some differences occurred between ratings of individuals within different duty positions. However, if significant differences did occur, the differences tended to be rather small, such as differences between the ratings of "very positive" and "positive" categories. The results also indicated that soldiers who had more experience in the Army tended to rate the CLG somewhat more positively than soldiers with less experience.

Utilization of Findings:

The evaluations of the CLG by the respondents suggest that most personnel who have seen and used the CLG are very much in favor of its production and distribution on an Army-wide basis. The findings from the evaluation further suggest that the CLG is presently, and will continue to be in the future, a viable and effective asset to combat leaders. Furthermore, the CLG is also

anticipated to be an important tool for soldiers to use when engaged in, and preparing for, combat missions through training and combat proficiency drills.

EVALUATION OF A JOB AID SYSTEM FOR COMBAT LEADERS: RIFLE PLATOON AND SQUAD

CONTENTS

	Page
INTRODUCTION	1
Problem	1
Goal of the Present Research	1
Background	2
Managing Reduced Performance Capabilities	3
Memory Aids	3
Memory Aids Used in the Military	4
DEVELOPMENT OF THE <u>COMBAT LEADERS' GUIDE: RIFLE PLATOON AND SQUAD</u>	6
General Approach	6
Descriptive and Analytic Overview	7
Developing Task Lists	7
Valid Master Task List	8
Job Aiding the CLG	9
Tasks Selected for Job Aiding	9
METHOD	10
Objective of the Field Evaluation Plan	10
Respondents	10
Description of the Feedback Form	13
RESULTS	13
Description of Respondents	14
Part I - Section 1: Respondents' Attitudes Concerning the CLG	14
Section 2: Utilization of the CLG	16
Section 3: Confidence Ratings Concerning the CLG	17
Section 4: Usefulness of Field Aids Included in the CLG	19
Section 5: Targeted User Population for the CLG	21
Part II: Open-Ended Questions	22
DISCUSSION	29
SUMMARY AND CONCLUSIONS	33
REFERENCES	34
APPENDIX A. PERCENTAGES OF POSITIVE RESPONSES AND OVERALL MEAN RATINGS FOR ALL QUESTIONS ON THE FEEDBACK FORM	35
B. SPECIFIC RESPONDENT COMMENTS TO OPEN-ENDED QUESTIONS ON THE FEEDBACK FORM	70

CONTENTS (Continued)

	Page
APPENDIX C. <u>COMBAT LEADERS' GUIDE: RIFLE PLATOON AND SQUAD</u>	
<u>FEEDBACK FORM</u>	89

LIST OF TABLES

Table 1. Breakdown of respondents' duty position in the Army	11
2. Breakdown of respondents' rank in the Army	12
3. Percentages of positive responses and overall mean rating for CLG attitude questions	15
4. Percentages of positive responses and overall mean rating for CLG utilization	17
5. Percentages of positive responses and overall mean rating for confidence concerning the CLG	18
6. Mean ratings and standard deviations for CLG confidence ratings	19
7. Percentages of positive responses and overall mean rating for CLG field aids	20
8. Mean ratings and standard deviations for CLG field aids	21
9. Respondents' ratings of targeted CLG user population	22
10. "How did you carry the CLG when you were not using it?"	23
11. "Does the CLG need a carrying case?"	23
12. "What tasks should be added?"	24
13. "Is there anything left out (missing or incomplete information, errors) of the tasks within any of the sections?"	25
14. "How did you like the format the tasks are written in?"	25
15. "Are there any other situations where you would use the CLG...?"	26
16. "Identify any good features in the CLG sections."	27
17. "Identify any bad features in the CLG sections."	27
18. "Would you make any other changes or additions to the CLG?"	28

CONTENTS (Continued)

	Page
Table 19. "If you are a combat veteran, do you feel that the CLG would have been an asset in combat?"	29
A-1. Positive response percentages for attitude questions by duty position	36
A-2. Positive response percentages for CLG utilization by duty position	40
A-3. Positive response percentages for usefulness of CLG field aids and book items by duty position	41
A-4. Positive response percentages for confidence concerning the CLG by duty position	43
A-5. Positive response percentages for ease of use of CLG field aids by duty position	45
A-6. Overall mean rating and standard deviation for attitude questions	46
A-7. Overall mean rating and standard deviation for CLG utilization	47
A-8. Overall mean rating and standard deviation for usefulness of CLG field aids and book items	48
A-9. Overall mean rating and standard deviation for confidence concerning CLG	49
A-10. Overall mean rating and standard deviation for ease of use of CLG field aids	49
A-11. Positive response percentages for attitude questions by rank	50
A-12. Positive response percentages for CLG utilization by rank	55
A-13. Positive response percentages for usefulness of CLG field aids and book items by rank	57
A-14. Positive response percentages for confidence concerning CLG by rank	60
A-15. Positive response percentages for ease of use of CLG field aids by rank	63
A-16. Respondents' percentages of targeted CLG user population by duty position	65

CONTENTS (Continued)

	Page
Table A-17. Respondents' percentages of targeted CLG user population by rank	67

EVALUATION OF A JOB AID SYSTEM FOR COMBAT LEADERS:
RIFLE PLATOON AND SQUAD

INTRODUCTION

Problem

Battle in Central Europe against forces of the Warsaw Pact has been called the most demanding mission that the U.S. Army could be assigned, but anywhere in the world a continuous mission may be required. In any such conflict, combat operations are expected to continue around the clock at the same level of high intensity for extended periods with soldiers being required to fight without let up for long periods of time. Given these conditions, soldiers' resources can dwindle rapidly. Thus, the modern combat commander is faced with many complex decisions which must be made under conditions of great stress. However, while the combat leader's job has increased in level of difficulty, no effective, standardized job aids have been available to assist the leader in accomplishing his combat mission.

Since the stress of combat can only result in making the use of job aids essential, it is important to develop strategies and tactics for countering the degradation that stress has on soldier performance. The purpose of this research was to obtain a complete understanding of what the combat leader needs to assist him in job performance, and then to devise and produce a personalized, modular job performance aid system to most efficiently and effectively accomplish that goal.

Goal of the Present Research

The present research was designed to build a personalized, paper-based, modular job aid system of Combat Leaders' Guides which would lead to an improvement in the mechanized (Bradley Fighting Vehicle) and light infantry platoon and squad leader's performance in combat. It is important to note that some of the material needed for the CLG did not exist in any identifiable form. While the CLG investigation relied heavily upon the reorganization and prioritization of existing materials, quite a lot of new material was also used to develop the necessary job aids. Thus, the Combat Leaders' Guide -- Rifle Platoon and Squad (CLG) was developed as a prototype to fill a critical gap in the job aids currently available to the combat leader.

The primary goal was to obtain a complete understanding of what the combat leader needs to assist him in job performance, and then to devise, produce, and evaluate the job aids which would accomplish that goal most efficiently and effectively. The secondary goal was to develop and produce a system of CLGs applicable to all combat leaders. The current effort resulted in the development of a CLG for two levels of command, rifle platoon leader and squad leader.

This endeavor resulted in a standardized, but modular and highly flexible job aid system with a single format being established for all CLG tasks. Each job aid in the CLG was: prepared in pocket style, trim size of 4 x 5 3/4 inches, vertical format, maximum printing area of 3 3/8 x 5 1/4 inches, and maximum work area of 3 3/8 x 5 1/4 inches. The inclusion of navigational job aids (grid coordinate scales and a protractor) and a calculator were evaluated during the field evaluation phase to determine their utility and user acceptance.

Background

Continuous combat has been found to depress certain critical human abilities (FM 22-9). When these abilities are reduced, the performance of combat tasks is degraded, resulting in tasks no longer being performed as quickly or as well as required. After 48 hours, a total loss of sleep becomes very damaging.

Even during the first night of combat, perception is reduced and the normal wake/sleep cycles are upset. Combat is also accompanied by stress induced by threat to life, noise, time pressure, vibration, exposure, temperature extremes, and the criticality of decisions to be made. As operations continue, every soldier will begin to exhibit signs of decreasing effectiveness. Some of the effects of adverse conditions such as low light level, factors limiting visibility, and stress can result in faulty memory, encoding/decoding difficulties, decreased vigilance, reduced attention, and slowed comprehension.

There can be no doubt that the adverse conditions associated with a continuous mode of ground combat operations will degrade the fighting performance of individual soldiers, teams, and units. However, adverse factors are not respecters of military rank and role. If commanders and staffs at all levels perform continuously and without rest, they are likely to become more degraded than their troops.

Experimentation (FM 26-2; FM 22-9), from a command/control approach to degradation, has shown that there is a progressive decline in the performance of the critical abilities required for combat tasks by leaders over time. The types of activity most dependent on reasoning, i.e. thinking, problem solving, or decision making, suffer most. The effectiveness of an Army in combat depends ultimately on the performance of every one of its members. When leaders begin to fail, the organization disintegrates due to a lack of effective control and direction. No fighting organization can endure when primary objectives are no longer being coordinated. Therefore, it stands to reason that a priority for fighting units is to protect their leadership since that is what the Army can least afford to lose.

When a leader is lost in combat, others will take over the leadership functions and attempt to carry out the mission effectively. Combat activities degrade roughly in proportion to their dependence on leadership guidance. "Command and Control" constitutes a major portion of leadership, yet this is the type of activity which is projected to degrade most rapidly

(FM 22-9; FM 26-2). When all soldiers in a unit have been in continuous operations for the same length of time, their performances are likely to degrade roughly to the same degree. Therefore, relieving one leader, and replacing him with another does not provide a solution to the problem. The true problem is how to maintain leaders in good condition so that they can exercise their leadership functions effectively. While leadership must be protected most, the effectiveness of others must also be protected. Thus, it is important to identify and cope with the adverse conditions of continuous operations; and to develop strategies and tactics to compensate for the degradation of performance, for developing the requisite capabilities in soldiers, and for preparing soldiers to fight continuously.

Managing Reduced Performance Capabilities

The U.S. Army must anticipate the progressive degradation of leaders' performance and anticipate the appropriate adjustments that stress has on performance demands. Furthermore, it is important that the Army find techniques and develop procedures for supporting leaders' abilities which are critical for the successful performance of important tasks. To some extent, the effects of progressive performance degradation can be offset by two complementary techniques: system modifications and performance supports (FM 22-9). System modifications involve three categories: (1) physical, e.g., changing the pattern of storing various types of ammunition at a gun position; (2) informational, e.g., making changes to reduce mental demands when a soldier is selecting and processing relevant information; and (3) procedural, e.g., selecting tasks which must be performed when stress is high and scheduling them so that they are performed when stress is low.

Performance supports help leaders accomplish their tasks successfully when their initial performance capabilities are degraded. Many kinds of performance supports or job aids already exist and are in common use. Computers, or even hand-held calculators, can be used to support numerical operations and human thinking which are very vulnerable to degradation in continuous operations. However, high technology is not necessarily required for performance supports; many types of performance supports can be of a rudimentary nature such as check sheets, worksheets, and note pads. For example, a tired leader may use a check sheet to remember all the critical steps or the various parts of an operations order.

Memory Aids

Memory aids are devices or strategies that are deliberately used to enhance memory and facilitate recall (Harris, 1980; Intons-Peterson & Fournier, 1986). Memory aids have been used extensively and can be classified into two general types (Harris, 1980). The first type is internal to the person and involves reliance upon memory itself, such as mental rehearsing and mental retracing. The second type involves the use of tangible, physical aids such as checklists or writing on calendars. Job aids are included in this second type of memory aid and correspond to a variety of techniques that individuals may use as memory prompts.

Research (Harris, 1980; Intons-Peterson & Fournier, 1986; Kreutzer, Leonard, & Flavell, 1975) suggests that individuals will frequently use external memory aids for remembering things in the future rather than internal memory aids because external aids will increase the likelihood of accurate remembering. Kreutzer et al. (1975) found that subjects in their study produced more external than internal memory aids when asked what things they would do to remember to bring something to school the next day. Both Harris (1980) and Intons-Peterson & Fournier (1986) contend that when individuals are asked to indicate how often they use external and internal memory aids, individuals indicate that, in general, they use external memory aids significantly more often than internal ones.

Intons-Peterson and Fournier (1986) conducted a study in which they explored whether external aids enhanced the effectiveness of encoding and recall of information, and how effectively external aids functioned as retrieval cues. Their results suggest that improvement in the recall of information from past to future remembering was greater for external aids than for internal aids. Furthermore, the authors found that when subjects rated the memory aids that they would use in a situation in terms of dependability, ease of use, accuracy, and preference, external memory aids were rated significantly more dependable, easier to use, more accurate, and more preferred than internal memory aids.

The authors' findings also imply that external memory aids tend to be used in a wider range of situations that imply action than in situations that imply lesser amounts of action. Furthermore, Intons-Peterson and Fournier demonstrated that the mere preparation of external memory aids, or the effects of the absence of a prepared external memory aid, can still enhance memory effectiveness even when the individual does not have access to the external memory aid. Their research suggests that, under a variety of conditions, external memory aids may influence the contents of an individual's memory, a role typically attributed to internal aids, even when the external aids are not used.

Memory Aids Used in the Military

The above research points to the importance of the use of external memory aids as external memory storage devices, and the role that they play in an individual's daily life. An external memory aid may play an even more significant role when leaders are in combat, such as when leaders are asked to make complex decisions while their decision making capabilities are in a progressive state of degradation.

Therefore, it was important to develop a job aid system which was flexible enough to be suited to each leaders' unique mission, situation, equipment, or organization. The CLG, the focus of this project, was designed to be a performance support to organize the planning process of the combat leader's mission into step by step guidelines.

External memory aids have been used extensively in the military in the form of job aids such as Graphic Training Aids (GTA), checklists,

worksheets, and job performance aids. A job performance aid can be defined as a "characterized set of directions on when to do some action and how to perform the action used in the actual performance of the tasks on the job" (Harless, 1984, p. 12). Harless suggests that job aids should be developed because they: (1) are more reliable and cause less error than memory, (2) may reduce the amount of formal training and are less costly, (3) can be prepared quicker than comparable recall training, and (4) may allow less experienced performers to perform the same tasks as more experienced performers.

Many of the job aids in the military take the form of reminder notes which allow soldiers to write down what they want to remember on pocket-size sheets of paper which soldiers can carry with them into combat, on ARTEPs (Army Training and Evaluation Program), and various types of FTXs (field training exercises). Ryan-Jones (1979) developed a job aid for M151A1, A2 truck operators to improve their performances. Each soldier inspected a truck using either the job performance aid or the truck operator's technical manual. Each soldier's performance was assessed in terms of the percent of faults found by the soldier in relation to the actual number of faults on the vehicle. The results indicated that soldiers who used the job performance aid had significantly better performance, in terms of the percent of faults found (29.8% versus 10.2%), than soldiers who used the technical manual.

Dunaway (1987) developed a job aid for the Bradley Fighting Vehicle (BFV) platoon leader to organize the planning process of the platoon into step by step guidelines that were easy to use. He advocates making the job aid as "user friendly" as possible to enhance its effectiveness and to facilitate the document becoming a working document. He suggests that it is not a good idea to reduce standard-sized books too much or the print will become difficult to read, especially when platoon leaders are inexperienced and hampered by fatigue. He also suggests that it is best to develop job aids as "memory joggers" which "key the user's mind to any details, sequences, or concepts that may have been lost ... " (Dunaway, 1987, p. 13). Thus, job aids such as the BFV Battle Book job aid can be designed in a variety of ways to streamline their efficiency and effectiveness. Most importantly, the job aid should be kept as simple as possible, so that any soldier in the unit can use it without too much training, and should be flexible enough to accept changing information on a regular basis.

Job aids have been developed in many forms in the military, however, none of these aids were considered fully appropriate for the modern combat leader's use in combat. The available aids had no commonality of form, size, or level of specificity. Many of the existing GTAs were developed by taking information from a standard size field manual and reducing the size of print, size of sketches, or size of the page to a pocket version -- with little thought given to the presentation of the critical items in a form fully usable by combat leaders under combat conditions. In general, they represented a collection of good information needed by the combat leader, but the information was not presented in any manner of standardized or usable form.

The CLG was developed as a job performance aid to standardize the information which is available to the combat leader, and to assist him in accomplishing his mission. It was designed and developed to be used by leaders in a variety of combat situations. First, if a soldier is in a situation in which a premium is placed upon highly accurate memory, or when internal memory aids cannot be trusted to yield a high level of accuracy, using a memory aid to check off the steps required when disarming a mine may help the soldier's performance. Secondly, if the information to be remembered is difficult, external aids can be used to prompt important aspects of the activity, such as using a long list of symptoms when soldiers are attending to the wounded. Thirdly and most importantly, the CLG, as an external memory aid can be used when a leader's memory is already at its maximum load. This situation may occur when a soldier's full attention is already allocated to a number of other activities such as those required when fighting in combat, and one doesn't want to risk increasing the already existing high amount of stress and memory load on the leader.

The memory research literature cited earlier has important implications for the use of a job aid such as the CLG in the Army. If external memory aids are believed to be more dependable and accurate, then when soldiers in combat are required to remember an enormous amount of information, a job aid such as the CLG may be the best medium to facilitate the recall of critical combat tasks. Furthermore, it can serve to reduce some of the effects of fatigue and stress operating on the leader in a combat environment. Thus, the CLG's effectiveness may not be limited solely as an external memory storage device, but may actually facilitate more accurate memory recall when it is used as a "memory jogger."

DEVELOPMENT OF THE COMBAT LEADERS' GUIDE: RIFLE PLATOON AND SQUAD

General Approach

Previously cited research indicates that modern combat leaders are faced with many complex decisions which must be made under conditions of great stress. Subsequently, it was hypothesized that an improvement in mechanized and light infantry platoon and squad leaders' performance in combat could be obtained through the development of a personalized, modular job performance aid system. TRADOC Training Technology Agency (TTA) provided funds to the Army Research Institute (ARI) Fort Benning Field Unit to produce a job aid system of a CLG.

This task required a standardization of the format of currently available procedural and graphical job aids, determined by an analysis of platoon and squad leaders' critical combat task requirements. This analysis involved reviewing all available material (job aids, manuals, training programs, all existing task lists, etc.) and constructing an initial list of all tasks which could be considered for job aiding. The general approach to developing a job aid system of CLGs was to:

- 1) Conduct a job and task analysis of both the platoon and squad leaders' positions for Mechanized and Light Infantry, and

construct a master list of all tasks which could be considered for job aiding.

- 2) Determine on the basis of certain criteria which of those tasks could be job aided and which tasks, due to certain constraints, would not be able to be job aided.
- 3) Develop a format for the job aids so that they could be personalized to individual taste or job assignment.
- 4) Develop and implement a field evaluation plan to verify the CLG for content validity and user acceptability.

Descriptive and Analytic Overview

Currently available job aids, manuals, training programs, and existing task lists from United States and allied armed forces were reviewed. An initial listing of all tasks which should be considered for mechanized and light infantry job aiding was constructed. This initial task list was augmented or modified by surveying combat veterans and personnel with tactical experience. The compilation process included observations of various types of tactical exercises and evaluations where leaders were exercising leadership, decision, and resource management skills.

This extensive literature review was performed to determine: the expected performance of soldiers for the respective tasks, deficiencies in that performance, the causes of those deficiencies, and ways to influence that performance. Subsequently, a determination of those skill areas that were in need of job performance aid support was made. The review resulted in additional tasks being identified which did not appear in any existing task lists or literature.

The conceptual, information formatting, and layout principles which were to be used in producing the prototype CLG were defined. The intent was to design the CLG as a modular system so that it could be personalized to individual need, job assignment, mission requirement, equipment availability, and area of operation. The development of the prototype CLG progressed from the initial concept of a unit-specific (equipment-specific) configuration to that of one generalized system of job performance aids. These job aids supported the critical combat tasks of all leaders who, regardless of branch, must satisfactorily perform them to assure mission accomplishment and survival in combat.

Developing Task Lists

The rationale for selecting tasks for training by the U.S. Army is such that tasks selected for training are considered to be the most critical tasks that a soldier must master as the Army cannot afford to train a soldier for every task he may have to perform. More importantly, the Army cannot afford to field soldiers who are not trained in the essential tasks that they must master for their jobs. Therefore, the Army must select tasks for

training that are the most critical tasks that a soldier must master to become an expert on his or her job. Service schools within the Army select tasks for training by developing task inventories for all Military Occupational Specialities (MOS) for which they are the proponent, and then developing a task inventory for a specific MOS.

The first step of the development of the task list for the CLG involved constructing an initial list of every task (listed by task number in ascending order) in the 11B and 11M MOS in skill levels 1 through 4. This involved analyzing critical combat tasks within the specific MOS to determine which of these tasks could be job aided and which tasks needed to be trained to training-to-recall (memory) only.

After the documents were selected, the second step involved selecting documents that contained task lists of individual critical combat tasks of MOS 11B and 11M that were: (1) approved and published at the highest level possible; (2) readily comparable with other task lists; (3) as current a document as possible, or in lieu of that, close to being published; and (4) tasks for which the job incumbents under study were held responsible for maintaining proficiency by their superiors.

The third step involved constructing an initial combined task list which contained tasks from the documents selected that were: (1) common tasks to skill levels 1 through 4, (2) shared tasks between MOS 11B and 11M skill levels 1 through 4, and (3) MOS-specific tasks to MOS levels 11B and 11M, skill levels 1 through 4.

The fourth step involved editing this list of tasks to delete: (1) redundant tasks which are tasks listed in both the Soldier's Manual of Common Tasks (SMCT) and MOS specific Soldier Manuals; (2) skill level mismatched tasks which are tasks found in both the SMCT and one or more MOS-specific Soldier's Manuals (SM) at different skill levels; and (3) tasks with proponent school/agency errors which are tasks listed in more than one MOS-specific Soldier Manual's of the same MOS at different skill levels (Winn & Evensen, 1987).

The final step involved accounting and providing a rationale for the reason each task was deleted. This enabled the researchers to determine an accurate count of all of the tasks that each job incumbent within MOS 11B and MOS 11M was responsible for.

Valid Master Task List

A final master task list of 450 tasks was developed for all current Department of Army (DA) approved critical individual combat tasks for MOS 11B and MOS 11M job incumbents. This task list consisted of all the common, shared, and MOS-specific tasks, skill levels 1 through 4, contained in current Soldier Training Publications (STP). The master task list was arranged by task number in ascending numerical order to group all tasks from the same proponent school/agency together. The 450 tasks consisted of: (1) 116 Common tasks (common, depending upon skill level), (2) 206

Shared tasks (MOS 11B and MOS 11M share 103 tasks), (3) 47 MOS 11B-specific tasks, and (4) 81 MOS 11M-specific tasks.

This final master task list was the starting point for the investigation of the combat critical tasks of the MOS-specific job incumbents. This initial combined task list was free of redundancies, skill level mismatches, and proponent school/agency errors.

Job Aiding the CLG

The intent of the job aid analysis (Harless, 1984) was to determine if a job aid should be prepared for any of the tasks that were deficient, or would be deficient, due to a lack of skill and/or knowledge caused by stress and fatigue. For each task that was considered to be deficient, a decision was made as to whether the task would be treated by a job aid alone, by training-to-recall alone, or would require a combination of a job aid and training-to-recall. Harless (1978) defines a job aid as a storage place for information about performance of the task which reduces the amount of recall needed; and training-to-recall as a process to increase the chance that skills/knowledge are stored in an individual's memory.

Harless (1978) suggests that certain factors or criteria should be considered when deciding if a task should be job aided: (1) how frequently a person performs a task; (2) the number of steps involved in performing the task; (3) the complexity of the task; (4) the consequences of errors when performing the task incorrectly; and (5) how often the performance of the task might change in the future. However, Harless also contends that individuals must take into account certain factors which may be barriers to developing a job aid such as: (1) performing the steps in a task so rapidly that a soldier does not have time to use a job aid; (2) performing the task so often that there is little chance that the soldier will forget the task; (3) social and psychological factors which may preclude a soldier from using the job aid because he is embarrassed to use it; and (4) the environment does not allow the soldier to use a job aid, such as when the soldier is using both hands to perform the task. If factors were found to weigh against the use of job aids, the authors tried to overcome them and still develop a job aid to overcome the skills and/or knowledge deficiency caused by stress.

Tasks Selected for Job Aiding

The procedure used to determine whether tasks should be job aided was developed by Harless (1978), and utilized Harless' decision-making process. The authors developed their own criterion scales to determine whether to store the information about a task in memory or in a job aid (Winn & Evensen, 1987). Each task was rated, by a subject matter expert according to seven criterion scales to determine whether the task would be job aided or not. The outcome was one of three choices: (1) training-to-recall only (no role for a job aid), (2) job aid only (no role for training-to-recall), or (3) job aid plus training (combination).

An algorithm developed by Harless (1978, p. 18), was used to determine the salient factor(s) for or against job aiding the 450 tasks. If, by using the algorithm, tasks were determined to be taught only by the training-to-recall method, the task was not job aided. After tasks were selected for job aiding, another algorithm developed by Harless (1978, p. 19) was employed to determine whether each task should be treated by: (1) training only, (2) job aid only, or (3) job aid (plus training).

Based on the data from both algorithms, tasks were selected for either training only or for job aiding plus training. The majority of tasks fell into the "job aid plus training" category. This was due to the unique nature of military combat operations. From the 450 critical combat tasks, 195 tasks were selected for job aiding plus training.

Once it was determined that a task should be job aided, the next step was to decide upon a format for each job aid (Winn & Evensen, 1987). First, a very detailed description of the task was required to determine the type of performance that was involved in the task. Once this description was obtained, a decision was made on the format for the job aid for each particular task based upon the type of performance involved in the task. The number of job aids designed and produced to support the 195 tasks selected for job aiding was 214. These 214 job aids were further divided into 21 modules which formed the body of the prototype version of the Combat Leaders' Guide for Rifle Platoon and Squad Leaders.

METHOD

Objective of the Field Evaluation Plan

The objective of the field evaluation plan was to: (1) verify the field utility of the CLG; (2) determine the usefulness, and utility of the tasks included in the CLG by surveying potential users of the CLG; and (3) to identify any additions or omissions to those tasks.

Respondents

Overall, approximately 1100 CLGs were distributed across various command levels of the U.S. Army, and to various FORSCOM infantry battalions (light and mechanized), both active and reserve components, who used the prototype CLG during their battalion ARTEPs, FTXs, and National Training Center (NTC) rotations. All rifle company commanders, platoon leaders, platoon sergeants, and squad leaders in these units were equipped with CLGs. In addition, individuals in FORSCOM and TRADOC, Observers/Controllers at NTC, and a number of former active duty soldiers reviewed the CLG. Feedback forms were distributed to all individuals who evaluated the CLG along a variety of dimensions.

Soldiers participating in the evaluation included: general officers, brigade commanders, battalion commanders, company commanders, platoon leaders, platoon sergeants, squad leaders, and team leaders. Of the 1100 feedback forms and CLGs which were distributed, 437 forms were returned,

resulting in a return rate of 40% which is an acceptable percentage for mailed surveys (Babbie, 1973).

The respondents responding to the feedback form were divided into two groups. The first group (active-duty group) of respondents consisted of soldiers using the CLG who were active duty (including National Guard and Army Reserve soldiers). Respondents completed the feedback form after they had used the CLG. The second group of respondents consisted of respondents who were former active duty soldiers, completing a desk-top review of the CLG and then completing the feedback form. Tables 1 and 2 include the breakdown of the numbers of respondents within each duty position for the active duty group, and within each level of rank for the active duty group and the former active duty review group.

Table 1

Breakdown of Respondents' Duty Position in the Army

Army duty position	Military status	
	Active-duty (n=411)	
	No.	%
Team leader	19	(4.6%)
Squad leader	95	(23.1%)
Platoon sergeant	104	(25.3%)
Platoon leader	73	(17.8%)
Company commander	67	(16.3%)
Battalion commander	43	(10.4%)
Brigade commander	4	(1.0%)
Other	6	(1.5%)

Note: Percentages are calculated based upon column totals.

Table 2

Breakdown of Respondents' Rank in the Army

Army rank	Military Status					
	Overall (n=437)		Former active-duty (n=26)		Active-duty (n=411)	
	No.	%	No.	%	No.	%
Cadet	3	(0.7%)	0		3	(0.7%)
Corporal	2	(0.4%)	0		2	(0.5%)
SGT	40	(9.2%)	1	(3.8%)	39	(9.4%)
SSG	82	(18.8%)	0		82	(19.9%)
SFC	93	(21.3%)	1	(3.8%)	92	(22.4%)
MSG/1SG	10	(2.3%)	5	(19.3%)	5	(1.2%)
CSM/SGM	10	(2.3%)	3	(11.5%)	7	(1.7%)
2LT	23	(5.3%)	0		23	(5.6%)
1LT	48	(11.0%)	0		48	(11.7%)
CPT	69	(15.8%)	3	(11.5%)	66	(16.1%)
MAJ	26	(5.9%)	2	(7.7%)	24	(5.9%)
LTC	22	(5.0%)	6	(23.1%)	16	(3.9%)
COL	7	(1.6%)	5	(19.2%)	2	(0.6%)
BG	1	(0.2%)	0		1	(0.2%)
Unknown	1	(0.2%)	0		1	(0.2%)

Note: Percentages are calculated based upon column totals.

Description of the Feedback Form

Organization. The feedback form (see Appendix C) was organized into six sections designed to assess raters' perceptions about the CLG and its usefulness, effectiveness, potential utilization, utility of several field aids included in the CLG, and the respondents' ratings of confidence when using the CLG.

The first five sections consisted of respondents making specific ratings as to the format of the tasks; the use of the CLG in various situations (i.e., aid to combat missions, training exercises, training aid, desk reference, and preparing instructional materials); respondents' overall confidence when using the CLG; and ease of use of the navigational job aids (i.e., grid coordinate scales and protractor) and tools (i.e., calculator) included in the CLG. The final section consisted of several open-ended questions which allowed respondents to suggest ways to carry or places to attach the CLG; comment on the format in which the job aids were written; identify errors, omissions, and additions; suggest other situations than those already mentioned where the CLG could be used; and rate whether the CLG would have been an asset in combat.

Feedback form response types. The types of responses required for the feedback form items were categorized as follows:

- Rating. Various features of the CLG were rated either on a 5-point Likert type scale or a 2-point Likert type scale.
- Free Response. The respondent answered the question in any manner he wishes.

RESULTS

In responding to the feedback form, raters answered questions designed to assess their perceptions about the CLG, its usefulness and effectiveness, potential utilization, and ratings of confidence when using the CLG. Not all of the questions contained on the feedback form are included in the following results sections, but only those that we felt truly addressed the CLG's usefulness and effectiveness. Means, standard deviations, and percentages of positive responses for all questions on the feedback form, broken down by respondents' duty position and rank in the Army, can be found in Appendix A.

The evaluation of the CLG section was conducted in two parts. The first part of the results involved frequency analyses to determine overall positive responses for the duty positions of squad leaders, platoon sergeants, platoon leaders, and company commanders. These duty positions were chosen as they were the positions that were designated as the user population of the CLG. Univariate analyses of variance (ANOVAs) were also conducted to determine if any rating differences existed between the four duty positions. Further analyses (Newman-Keuls Multiple Range test) were conducted if a main effect was found to be significant to assess where the rating differences occurred. The second part of the results contained

respondents' answers to open-ended questions on the feedback form. Overall, respondents' mean ratings were very positive and are presented by section.

Description of Respondents

Active duty group. The largest group of respondents (94%) made up the active duty group, with 6% of respondents in the Army Reserves (USAR) and 4% of respondents in the National Guard (ARNG). The majority of the respondents were squad leaders, platoon sergeants, platoon leaders, and company commanders with over 55% of them having over 10 years of military experience. The average level of education for this group was a 4 year college degree. Only 15.5% of the respondents had combat experience.

Former active duty group. Of the 437 respondents, 6% of the respondents were former active duty soldiers who participated in a desk-top review of the CLG, of whom 62% were former officers. The average level of education was a 2 year graduate degree, and the majority of these respondents had over 20 years of military experience. Over 88% of the respondents had combat experience.

Part I - Section 1: Respondents' Attitudes Concerning the CLG

Respondents indicated their ratings concerning their attitudes about the CLG using 5-point Likert type scales (1=very positive, 2=positive, 3=so-so, 4=negative, 5=very negative) (see Appendix C for the feedback form). As shown in Table 3, the strong support for the use of the CLG by respondents in the four duty positions is demonstrated by an overwhelmingly large majority of respondents rating the CLG very positively on all the attitude questions. Additionally, overall mean ratings were very positive.

ANOVAs were conducted on the mean ratings of the attitude questions to determine if any differences among the four duty positions were significant. The ANOVA indicated a significant main effect for duty position only for importance to the overall combat effectiveness question, $F(3, 335) = 4.18, p \leq .01$. Subjects used the following scale to rate importance: 1=very important, 2=important, 3=so-so, 4=not important, 5=not important at all.

Further analyses indicated that both squad leaders ($M = 1.88$) and platoon sergeants ($M = 1.89$) rated the CLG as more important to the overall combat effectiveness of their unit than either company commanders ($M = 2.25, p \leq .05$) and platoon leaders ($M = 2.14, p \leq .05$). However, it is important to note that company commanders' and platoon leaders' ratings were close to the "important" anchor on the rating scale.

The percentages for the positive responses in Table 3 indicate that respondents rated the CLG as being important to their combat missions, and more importantly, to the overall combat effectiveness of their units. Even though ratings for one question, by duty position, were found to be significantly different from each other, respondents' ratings fell between

Table 3

Percentages of Positive Responses and Overall Mean Rating for CLG Attitude

Questions

Attitude question	Overall (n=437)	Respondents' duty position				Overall M (SD)
		Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)	Company commander (n=67)	
Like CLG	90.6%	87.4%	90.4%	89.0%	94.0%	1.62 (.73)
Useful CLG	88.6%	86.3%	89.4%	85.0%	94.0%	1.65 (.72)
Overall effectiveness	89.0%	85.3%	93.3%	87.7%	91.0%	1.75 (.72)
Importance to combat mission	76.2%	79.0%	76.9%	71.3%	76.1%	2.01 (.83)
Importance to overall combat effectiveness	76.7%	80.0%	80.8%	75.3%	65.6%	2.02 (.83)
Like using CLG	83.7%	76.9%	85.5%	86.3%	89.5%	1.80 (.78)
Ease of use of CLG	91.1%	86.4%	95.2%	87.7%	97.0%	1.68 (.69)
Provide enough information	80.1%	76.8%	84.6%	74.0%	82.1%	2.00 (.71)
Publish CLG	88.8%	89.5%	89.4%	90.4%	88.0%	1.68 (.81)
Frequency of use (between many times a day and once a day)	90.4%	81.1%	84.5%	91.8%	88.1%	2.30 (1.00)

Note: Lower mean ratings indicate more positive ratings.

the "like very much" and "like" categories for liking the CLG, "very useful" and "useful" categories for respondents' ratings of the usefulness of the CLG, and between "very effective" and "effective" categories for respondents' ratings of the overall effectiveness of the CLG. These ratings suggest that all respondents liked the CLG and found it to be a useful and effective instrument.

Respondents' ratings concerning the attitude questions indicate that respondents felt that the tasks in the CLG provided them with enough information to enable leaders to perform their tasks well, and subsequently, respondents liked using the CLG and found it to be easy to use. This finding was further supported by the indication that respondents agreed with the statement that the "CLG should be published as a standard Army publication". Furthermore, respondents reported that they used the CLG approximately between "several times a day" and "once a day". Thus, these ratings suggest that all respondents recognized the utility of the CLG.

Section 2: Utilization of the CLG

Respondents rated on 5-point Likert type scales (1=not useful at all, 2=not useful, 3=so-so, 4=useful, 5=very useful) how useful the CLG would be as a job aid in six situations: performing the combat mission, preparing instructional materials, as training exercises, as a training aid, as a self-training aid, and as a desk reference. As shown in Table 4, the high percentages of positive ratings made by respondents for the usefulness of the CLG in six different situations points to the enthusiastic support of the CLG for a variety of combat and training environments.

The ANOVA did not indicate a significant main effect for duty position for any of the six situations for CLG utilization. These results suggest that respondents in all duty positions were very positive concerning the use of the CLG in a variety of training and combat situations, such as ARTEPs, FTXs, and situations in which soldiers might not perform all combat tasks on a regular basis.

Table 4

Percentages of Positive Responses and Overall Mean Rating for CLG Utilization

CLG utilization	Respondents' duty position					Overall M (SD)
	Overall (n=437)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)	Company commander (n=67)	
Performing combat mission	76.9%	67.3%	83.7%	79.4%	83.6%	3.94 (.84)
Preparing instructional materials	76.9%	73.7%	77.9%	83.6%	76.1%	4.08 (.87)
During training exercises	91.3%	90.5%	93.3%	84.9%	95.5%	4.42 (.72)
Desk reference	83.7%	78.9%	86.5%	89.0%	85.1%	4.22 (.86)
Basic training aid	83.8%	82.1%	86.6%	84.9%	85.0%	4.15 (.84)
Self-training aid	85.6%	86.4%	86.5%	87.6%	79.1%	4.25 (.81)

Note: Higher mean ratings indicate more positive ratings ("very useful" and "useful" categories on the rating scales).

Section 3: Confidence Ratings Concerning the CLG

Respondents were asked to indicate how confident they felt when performing all the tasks included in the CLG with and without the CLG. Frequencies for respondents' positive responses for the confidence ratings are presented in Table 5 for respondents' overall and by duty position. As shown in Table 5, respondents in the four duty positions did not express a great deal of confidence that they could perform all the tasks in the CLG without using the CLG. However, respondents were overwhelmingly more confident about performing the combat tasks in the CLG when they were using the CLG.

Table 5

Percentages of Positive Responses and Overall Mean Rating for Confidence
Concerning the CLG

Confidence ratings	Respondents' duty position					Overall M (SD)
	Overall (n=437)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)	Company commander (n=67)	
Confidence <u>without</u> CLG	58.3%	46.3%	48.1%	43.9%	32.9%	2.76 (.98)
Confidence <u>with</u> CLG	90.0%	83.1%	88.5%	95.9%	94.0%	1.62 (.79)
Overall confidence with CLG	89.0%	86.3%	91.3%	90.4%	89.6%	1.71 (.79)

Note: Lower mean ratings indicate more positive ratings ("very confident" and "confident" categories on the rating scales).

The researchers were also interested in determining whether differences occurred within the duty positions in terms of respondents' confidence level to perform all the tasks in the CLG with and without the CLG. A t-test was conducted and as can be seen in Table 6, significant differences were obtained between how confident respondents felt when performing all the tasks with the CLG compared with performing tasks without the CLG for each of the duty positions. All four duty positions reported that they felt significantly more confident performing tasks in the CLG with the CLG than without the CLG. In addition, this finding was significant for the entire sample of respondents (see Table 5). Further support for the CLG is indicated by 89% of respondents reporting that, overall, they felt very confident when using the CLG.

Thus, the findings indicate that respondents were very enthusiastic about using the CLG, and expressed a high level of confidence that they would perform the tasks with a high level of proficiency when using the CLG.

Table 6

Mean Ratings and Standard Deviations for CLG Confidence Ratings

Confidence ratings	Respondents' duty position				
		Squad leaders (n=95)	Platoon sergeants (n=104)	Platoon leaders (n=73)	Company commanders (n=67)
Confidence with CLG	M	1.69 ^a	1.66 ^b	1.53 ^c	1.51 ^d
	SD	.95	.77	.58	.73
Confidence without CLG	M	2.58 ^a	2.66 ^b	2.71 ^c	2.90 ^d
	SD	.99	.97	.87	.91

Note: Means with the same letters in columns are significantly different at the .05 level. Lower numbers indicate more positive ratings.

Section 4: Usefulness of Field Aids Included in the CLG

Certain field aids were included in the CLG: a solar-powered calculator, a protractor, a 1/25,000 grid, and a 1/50,000 grid. We were interested in determining the utility of the field aids, and more importantly, how useful respondents found the field aids. Respondents indicated their ratings concerning the usefulness of the field aids using a 5-point Likert type scale (1=not useful at all, 2=not useful, 3=so-so, 4=useful, 5=very useful).

As shown in Table 7, there was strong support for the use of the field aids included in the CLG by respondents. This is demonstrated by a large majority of respondents rating all four field aids as being very useful. Overall, respondents rated the four field aids very positively as indicated by the overall mean ratings. However, squad leaders and platoon sergeants rated the field aids somewhat more positively than either platoon leaders or company commanders.

Table 7

Percentages of Positive Responses and Overall Mean Rating for CLG Field Aids

Field aid	Respondents' duty position					Overall M (SD)
	Overall (n=437)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)	Company commander (n=67)	
Calculator	75.3%	73.7%	84.7%	63.0%	73.2%	4.04 (.97)
Protractor	83.1%	88.4%	87.5%	69.9%	79.1%	4.17 (.93)
1/25,000 grid	77.1%	87.3%	85.6%	63.0%	68.7%	4.07 (.98)
1/50,000 grid	81.7%	87.4%	86.5%	68.5%	74.6%	4.15 (.96)

Note: Higher mean ratings indicate more positive ratings ("very useful" and "useful categories on the rating scales).

To determine if any significant differences existed between how respondents within the duty positions of squad leader, platoon sergeant, platoon leader, and company commander (see Table 8) rated the usefulness of the field aids included in the CLG, ANOVAs were conducted on the four field aids. The ANOVA revealed a significant main effect for duty position for the calculator, $F(3, 335) = 2.71, p \leq .044$, the 1/25,000 grid, $F(3, 335) = 7.89, p \leq .001$, and the 1/50,000 grid, $F(3, 335) = 2.71, p \leq .001$. As can be seen in Table 8, further analyses indicated that platoon sergeants rated the calculator as more useful than either company commanders or platoon leaders. Furthermore, squad leaders also rated the calculator as more useful than did platoon leaders. Analyses also indicated that both squad leaders and platoon sergeants rated the both the 1/25,000 grid and the 1/50,000 grid as more useful than either company commanders or platoon leaders.

The above results concerning the field aids suggest that, in general, respondents rated all four field aids to be useful; however, squad leaders and platoon sergeants rated some of the field aids in the CLG more favorably than company commanders and platoon leaders. Thus, the researchers hypothesized that with more time and combat experience, company commanders and platoon leaders would rate the field aids as more useful. Separate correlational analyses were conducted to determine if the research findings supported this hypothesis. The results of these analyses supported the hypothesis, indicating that the more experience a respondent has had in the Army, the more favorable is his impression of the overall effectiveness of the CLG ($r = .20, p \leq .001$), the more important he perceives the CLG is to

the combat mission ($r = .14, p \leq .005$), and the more useful is his perception of the CLG ($r = .14, p \leq .005$).

Table 8

Mean Ratings and Standard Deviations for CLG Field Aids

Field aid		Respondents' duty position			
		Squad leaders (n=95)	Platoon sergeants (n=104)	Platoon leaders (n=73)	Company commanders (n=67)
Calculator	M	4.08 ^a	4.16 ^a	3.77 ^b	3.96 ^{bc}
	SD	.96	.88	1.05	.96
Protractor	M	4.33	4.25	3.88	3.96
	SD	.83	.91	1.12	.86
1/25,000 grid	M	4.31	4.26	3.73	3.82
	SD	.83 ^a	.86 ^{ab}	1.20 ^c	.98 ^c
1/50,000 grid	M	4.34	4.27	3.77	3.96
	SD	.87 ^a	.85 ^{ab}	1.16 ^c	1.01 ^c

Note: Means with different letters within rows are significantly different at the .05 level. Higher mean ratings indicate more positive ratings.

Section 5: Targeted User Population for the CLG

Respondents were asked to indicate who in their brigade and battalion chain of command they felt should receive the CLG: team leader, squad leader, platoon sergeant, platoon leader, company commander, battalion commander, brigade commander, or another leader whom they specified. Table 9 indicates the breakdown of user population ratings. These results indicate that although the CLG was developed for squad leaders and platoon leaders, respondents considered it appropriate for team leaders (70%), squad leaders (94%), platoon sergeants (89%), platoon leaders (90%), and company commanders (83%). However, respondents did not consider the CLG appropriate for battalion commanders (29%) and brigade commanders (22%). These opinions may be a reasonably accurate reflection of the probable use of the CLG by personnel within various duty positions. Thus, it appears that the respondents believe that team leaders, platoon sergeants, and company commanders should be added to the user population of the CLG.

Table 9

Respondents' Ratings of Targeted CLG User Population

Duty position	Respondents' duty position							
	Squad leaders (n=95)		Platoon sergeants (n=104)		Platoon leaders (n=73)		Company commanders (n=67)	
	No.	%	No.	%	No.	%	No.	%
Team leader								
Yes	70	(74%)	76	(73%)	42	(58%)	46	(69%)
No	25	(26%)	28	(27%)	31	(42%)	21	(31%)
Squad leader								
Yes	87	(92%)	100	(96%)	68	(93%)	65	(97%)
No	7	(8%)	4	(4%)	5	(7%)	2	(3%)
Platoon sergeant								
Yes	78	(82%)	94	(90%)	67	(92%)	61	(91%)
No	17	(18%)	10	(10%)	6	(8%)	6	(9%)
Platoon leader								
Yes	76	(80%)	94	(90%)	68	(93%)	64	(95%)
No	19	(20%)	10	(10%)	5	(7%)	3	(5%)
Company commander								
Yes	52	(55%)	66	(63%)	51	(70%)	48	(72%)
No	43	(45%)	38	(37%)	22	(30%)	19	(28%)
Battalion commander								
Yes	30	(32%)	36	(35%)	13	(18%)	13	(19%)
No	65	(68%)	68	(65%)	60	(82%)	54	(81%)
Brigade commander								
Yes	28	(29%)	30	(29%)	10	(14%)	8	(12%)
No	67	(71%)	74	(71%)	63	(86%)	59	(88%)

Note: Percentages are based on the column totals.

Part II: Open-Ended Questions

Ninety-five percent of respondents who completed the feedback form answered a series of open-ended questions designed to elicit other information concerning the CLG. In this section we will only mention those comments which received a high consensus from all respondents, however

Appendix B contains the entire list of comments which were made by all respondents.

Table 10 contains information from 71% of respondents concerning where they would carry the CLG when they were not using it. As shown in Table 10, half of the comments to this question (50%) indicated that respondents would carry the CLG in their BDU trousers pocket. Other comments indicated that a map bag or ammo pouch (23%), or rucksack (15%) would be an ideal place to carry the CLG.

Table 10

"How Did You Carry the CLG When You Were Not Using It?"

Respondent comment	Number (319)	Percentage (100%)
BDU trousers pocket	159	50%
Map bag, ammo pouch or other waterproof container	75	23%
Rucksack	48	15%
Miscellaneous answers	37	12%

Table 11 contains comments from 93% of respondents concerning whether the CLG needed a carrying case. The majority of comments (66%) to this question indicated that the CLG did not need to have a carrying case issued, but individuals could utilize some other case (pants pocket or waterproof

Table 11

"Does the CLG Need a Carrying Case?"

Respondent comment	Number (n=395)	Percentage (100%)
No carrying case is needed	260	66%
Yes-clip carrying case on belt	79	20%
Yes-put in bag or case	56	14%

bag). Other comments to this question (34%) indicated that respondents felt that a carrying case such as an ammo pouch was needed which could be clipped to their rucksack, LCE, or pistol belt.

Table 12 contains comments from 33% of respondents addressing the question of what tasks should be added (some respondents gave more than one answer). The majority of these comments indicated that tasks in the area of offense/defense (29%) should be added, such as range cards, sector sketches, and battle drills. Additionally, tasks in the area of weapons (24%), such as call for/adjust indirect fire and more detailed weapons data should be included. As can be seen from Table 12, the remainder of the comments mentioned a vast array of different tasks.

Table 12

"What Tasks Should be Added?"

Respondent comment	Number (208)	Percentage (100%)
Offense/Defense	61	29%
Weapons	50	24%
Unit-specific	20	10%
Medical	13	6%
Special chapters	12	5%
Specific missions	11	5%
NBC	9	4%
Miscellaneous	36	17%

Table 13 contains comments from 15% of respondents addressing the question of whether there were any error or omissions in the tasks (15% of respondents answered this question). The majority of these comments included specific changes (37%) within tasks which should be addressed, the lack of diagrams in the CLG (21%), and a variety of book-related changes such as more blank pages, index tabs, and subtask steps (15%).

Table 13

"Is There Anything Left Out (Missing or Incomplete Information, Errors) of the Tasks Within Any of the Sections?"

Respondent comment	Number (136)	Percentage (100%)
Changes to specific pages	50	37%
Diagrams	29	21%
Book-related changes	13	10%
OPORD/Warning Order Changes	7	5%
Weapons	7	5%
Medical	5	4%
Miscellaneous	25	18%

Table 14 contains comments from 85% of respondents addressing the question of whether respondents liked the format of the tasks in the CLG. The majority of respondents (93%) liked the checklist and worksheet formats of the tasks, and commented that the tasks were easy to use and understand, liked the big print, and thought the tasks enabled the user to easily locate the task that they wanted. A small number of respondents (7%) did not like the format of the tasks and questioned why the formats of the tasks differed from those found in field manuals.

Table 14

"How Did You Like the Format the Tasks Are Written In?"

Respondent comment	Number (354)	Percentage (100%)
Good: easy to read and understand	329	93%
Didn't like it: why are formats different from FMs	25	7%

Table 15 contains comments from 22% of respondents which addressed the question of other situations in which the CLG could be utilized. The majority of the comments to this question suggested that the CLG could be utilized in training classes and preparations for ARTEPs (33%); and in courses such as Infantry Officers Basic Course (IOBC), Infantry Officers Advanced Course (IOAC), Officer Candidate School (OCS), Advanced Noncommissioned Officers Course (ANCOC), etc. (17%). The remainder of the comments addressed utilization of the CLG in CTT and SQT training missions, as a training aid in garrison and non-garrison environments, staff officer positions, and evaluators and observer training.

Table 15

"Are There Any Other Situations Where You Would Use the CLG ...?"

Respondent comment	Number (86)	Percentage (100%)
Training classes and preparation for ARTEPs	28	33%
Leadership classes and courses	15	17%
CTT & SQT training missions	8	9%
Training aids in garrison and non-garrison environments	7	8%
Staff officers	6	7%
Observers and evaluator of units	6	7%
Miscellaneous	16	19%

Table 16 contains comments from 57% of respondents asking them to identify good features in the CLG (some respondents responded with multiple comments). The majority of comments (59%) addressed specific features regarding the organization of the CLG, such as the waterproof and weather-proof pages, the compact size, ease of use, clarity and organization of the tasks, and the field aids included in the CLG. Other comments addressed both specific sections in the book (24%) and the comment that all the CLG sections were good (19%).

Table 16

"Identify Any Good Features in the CLG Sections."

Respondent comment	Number (249)	Percentage (100%)
Organization of book	176	59%
Specific sections were good	66	24%
All sections were good	57	19%

Table 17 contains comments from 22% of respondents asking them to identify bad features in the CLG. The majority of these comments (38%) emphasized making the CLG thinner, eliminating some sections, and changing the covers. Other comments (28%) addressed specific things such as omitting certain tasks, adding more space on pages, and adding blank pages; and adding more diagrams (11%).

Table 17

"Identify Any Bad Features in the CLG Sections."

Respondent comment	Number (93)	Percentage (100%)
Making book thinner	35	38%
Specific changes to book	26	28%
Too few diagrams	10	11%
Page problems	7	7%
Field aid problems	7	7%
Miscellaneous	8	9%

Table 18 contains comments from 29% of respondents addressing the question of what other kinds of changes or addition, not previously mentioned, should be made to the CLG. Most of these comments (44%) addressed specific changes to the organization of the CLG sections, such as reducing the size of the CLG, tabbing the major sections, standardizing

the print, adding blank pages, and reducing the bulkiness of the covers. Other comments addressed additions to the CLG (23%), such as adding diagrams and illustrations, including more information on mounted/mechanized operations, and adding call for/adjust fire techniques.

Table 18

"Would You Make Any Other Changes or Additions to the CLG?"

Respondent comment	Number (142)	Percentage (100%)
Changes to book organization and contents	63	44%
Specific additions	33	23%
Special chapter additions	23	16%
Specific deletions	16	11%
Miscellaneous	7	5%

Respondents also felt that special chapters on different branches should be included with specific unit tasks (16%). They also suggested deleting certain tasks in sections where, for example, instructions for AN/PVS-5 and AN-PAS-7 maintenance are included in the carrying cases of the instruments.

Table 19 contains comments from 24% of respondents who were combat veterans addressing the question of whether the CLG would have been an asset in combat. Some respondents who were not combat veterans (14%) also made comments. As can be seen in Table 19, the majority of respondents made positive comments regarding the CLG as an asset when they were in combat (see Appendix B for a listing of the specific comments made by respondents). made comments. As can be seen in Table 19, the majority of respondents made positive comments regarding the CLG as an asset when they were in combat (see Appendix B for a listing of the specific comments made by respondents).

Table 19

"If You Are a Combat Veteran, Do You Feel That the CLG Would Have Been an Asset in Combat?"

Respondent comment	Number (101)	Percentage (100%)
Positive comments	79	78%
Negative comments	17	17%
Miscellaneous comments	5	5%

DISCUSSION

Due to the ever increasing complexity of decisions which combat leaders must make under stress and the sophistication of modern weapons and equipment, a need existed to develop and produce a job aid system of Combat Leaders' Guides to assist the leader in combat. This endeavor involved obtaining a complete understanding of what the combat leader needs to assist him in his job performance, and then to devise and produce a personalized, paper-based, modular job aid system of a Combat Leaders' Guide (CLG) which would most efficiently and effectively accomplish that goal. The current effort resulted in a system of CLGs which were designed to be applicable to all combat leaders, and which received extremely favorable and enthusiastic responses from all respondents who used and evaluated it.

The evaluations of the CLG by respondents suggest that the idea of a modular, job aid system for combat leaders was very well received by both individuals who participated in the desk-top review of the CLG and soldiers currently on active duty in the U.S. Army. Overall, the results strongly indicate that the CLG was found to be quite useful and effective as a job aid for combat leaders by all respondents across all ranks and duty positions in the Army who evaluated it. The findings suggest that, although everyone was positive, in certain instances squad leaders and platoon sergeants were more enthusiastic about the CLG than were company commanders and platoon leaders. However, it is important to keep in mind that squad leaders and platoon sergeants had experienced more combat and had more years in the Army than company commanders and platoon leaders. Thus, when rating differences occurred between duty positions, the differences tended to be rather small, such as differences between the ratings of "very positive" and "positive" categories.

Strong support for the CLG was demonstrated across all duty positions and ranks within the U.S. Army. Respondents' ratings indicated that respondents felt that the tasks in the CLG provided them with enough

information to enable leaders to perform their tasks well. Subsequently, respondents liked using the CLG, found it easy to use, and would use the CLG several times a day if it were made available to them. The support for the CLG was also demonstrated by the respondents' strong endorsement for the CLG being published as a standard Army publication, suggesting that respondents were genuinely interested in having the CLG disseminated as a document throughout the Army. Thus, respondents recognized the great utility of the CLG as filling a critical gap in the area of job aids for combat leaders, and felt very confident that they could perform their combat missions with a high level of proficiency when using the CLG. In addition, the researchers suggest that a CLG would be a very important training tool for reservists in the Army who do not have as much exposure to combat training tasks as do active duty soldiers.

Additionally, the researchers were interested in assessing the user acceptance of the CLG and attitudes toward using the CLG. The findings indicate that respondents found the CLG to be a useful and important asset to their combat training mission and, more importantly, an asset which would enhance the overall combat effectiveness of their combat training missions. This finding was further emphasized by the comments which were received from combat veterans evaluating the CLG (see Appendix B for respondents' specific comments). An overwhelmingly large number of the combat veterans were very enthusiastic about the CLG, and indicated that it would have been a very important tool when they were in combat, especially when planning combat missions. Furthermore, a number of their comments indicated the potential use of the CLG as a training tool to ensure that soldiers perform the correct steps in the proper sequence for a variety of tasks.

In addition to using the CLG as a job aid to assist combat leaders, the researchers were interested in determining other situations in which soldiers might utilize the CLG. The respondents indicated that the CLG would be a rather useful aid in a variety of situations, such as: (1) training exercises (field exercises and ARTEPs); (2) in situations where soldiers might train themselves or keep themselves current on tasks which they did not perform very frequently; (3) as a desk reference to be referred to by soldiers who might not participate in combat missions; and (4) as an aid when preparing instructional materials for training soldiers.

The respondents' comments also point to a number of other situations in which the CLG could be used, such as leadership classes and courses (e.g., the Infantry Officers Basic Course, the Infantry Officers Advanced Course, the Basic Noncommissioned Officers Course, and the Advanced Noncommissioned Officer Course), a guide for observers to use when observing and evaluating combat units in situations such as the Joint Readiness Training Center (JRTC) and the NTC, and as a preparation for training missions and ARTEPs.

The researchers were also interested in evaluating the utility and user acceptance of including field aids with the CLG. Both squad leaders and platoon sergeants rated the field aids as somewhat more useful than did platoon leaders and company commanders. However, it is important to note that respondents in the squad leader and platoon sergeant positions

had had more experience in the Army, more combat experience than company commanders and platoon leaders, and used the field aids more than did company commanders and platoon leaders. One could hypothesize that with more time and combat experience, company commanders and platoon leaders would rate the field aids as more useful. This hypothesis was supported by the significant positive correlations between a respondents' time in service and his favorable impression of the overall effectiveness of the CLG.

Some concerns were expressed by respondents dealing with specific aspects of the CLG. One of these concerns was the size of the CLG. A number of respondents suggested that the CLG was too bulky and needed to be made thinner, especially when used by light infantry soldiers. However, we feel that when the CLG is disseminated throughout the Army, it must be emphasized that the CLG is a modular, flexible, job aid system.

The CLG was developed to be a set of job aids designed in such a way that combat leaders could remove or add pages, tasks, and/or sections which were or were not pertinent to their specific situation or mission. In addition, soldiers would be able to organize the modules or job aids by content area or in the order they perform them to orient the CLG towards their own situation and particular unit. Thus, the emphasis of the CLG was oriented toward developing a job aid which was flexible enough to accept changing information on a regular basis. Furthermore, the "notebook-like" format was used because we envisioned that it would facilitate soldiers being able to reduce the size of the CLG by removing sections which were unnecessary to their particular mission.

A second concern expressed by respondents was that few soldiers would have sufficient time to open a book for reference during the heat of battle. More importantly, some respondents felt that all soldiers should be proficient at skill levels 1 through 4, and should feel confident in doing their job on the "spur of the moment" without looking a task up in a book. Again, it is important to emphasize that the CLG was designed as a job performance aid for combat leaders to use when under the stress of combat or continuous operations. A unit's success in battle depends upon how well the unit reacts to certain situations and how organized the unit's planning process is. The CLG was developed to facilitate the planning process, especially when the unit leader may be inexperienced, fatigued, or under stress because of continuous operations. Therefore, having a book which serves as a "memory jogger" to clearly and concisely organize the planning process into step-by-step procedures that are easy to use and read can help in a stressful situation; and, more importantly, result in eliminating another stressor, namely failing memory.

A final point to address concerning the CLG was that only 64% of the respondents indicated that they were "sure that they would use the CLG in combat." This percentage is somewhat low compared to the rather high positive percentages that respondents expressed concerning other situations in which they would use the CLG. It is important to note that the majority of respondents (80%) had never been in combat, therefore, it would be difficult for them to rate how "sure" they were that they would use the CLG in combat. However, 85% of the respondents rated the tasks in the CLG as

being critical to their combat mission with 75% of the respondents rating the CLG as being important to the overall combat effectiveness of their combat mission. These findings suggest that if the CLG were made available to soldiers when training for combat, they would be much more apt to use the CLG when placed into a real-life combat situation.

The fact that the feedback forms from the respondents were very favorable with respect to the CLG itself, as well as the format the tasks were written in, suggests that the CLG would be a definite asset for soldiers going into combat. This is especially true for soldiers who may not have committed all 419 tasks required in skill levels 1-4 to memory; and if they have, may forget key elements of those tasks because of fatigue and stress.

The CLG was originally intended for the user population of squad leaders and platoon leaders. However, the respondents suggest that the user population for the CLG should be extended to include team leaders, platoon sergeants, and company commanders. This would result in all unit leaders within a company being "on the same sheet of music" or using standardized information. This is especially important if a leader is lost in combat, because his replacement, who is not as experienced as the leader, will be able to perform the same tasks more effectively than if he were not using the CLG.

Based upon the overwhelmingly positive response concerning the prototype CLG and a large number of requests from both units and individuals in the user community, the CLG Research Team developed and produced a new version of the CLG, Combat Leaders' Guide: Platoon Leaders, Platoon Sergeants, and Squad Leaders. This new CLG was completely revised as a function of observations and feedback received by respondents during the field evaluation. The new CLG was based upon a reconsideration of the user population and a reexamination of the information requirements of that audience. The new CLG was configured for combat leaders of all platoons and squads, not specifically for rifle platoon leaders, platoon sergeants, and squad leaders. This was done because all leaders, regardless of branch, must correctly perform the critical combat tasks selected for job aiding in the prototype CLG. In continuous combat or combat training, these leaders will be subject to the same degradation of performance due to stress and fatigue.

The major product improvements in the new CLG were: (1) a standardization of a larger print size; (2) the addition of modules (e.g., fire support and air assault operations) and job aids which were requested by a significant number of users; (3) the deletion of some job aids where on-equipment job aids or other performance supports already existed; and (4) improvements to the front and back covers to make them conform better to the leader's body, adding tabs to more rapidly access frequently used job aids, and adding plastic sleeves so leaders could insert unit-specific job aids.

SUMMARY AND CONCLUSIONS

The Combat Leaders' Guide: Rifle Platoon and Squad was developed to fulfill a critical gap in job aids available to assist the leader in combat. To determine the usefulness and user acceptance of the Combat Leaders' Guide: Rifle Platoon and Squad, a CLG and feedback form were distributed to 1100 active duty soldiers and former active duty soldiers to permit a systematic and comprehensive assessment of the CLG.

The response of all respondents to the CLG was extremely favorable. All respondents were very enthusiastic about having the CLG implemented on an Army-wide basis. Although selected modules were preferred or not preferred by personnel on an individual basis, the overwhelming response was one of concurrence that the CLG is the kind of job performance aid that everyone wished he had had in combat, or on his unit ARTEP, or in any field exercise. Furthermore, the positive response to the CLG by all respondents suggests that the CLG fills the previously existing gap in job aids available to combat leaders.

The findings suggest that the CLG is an important tool for soldiers to use when engaged in and preparing for combat missions through training and combat proficiency drills, as a ready reference during training and leadership courses; and most importantly, as a training aid for developing leaders for combat. It is important to emphasize that soldiers must become familiar with the CLG and use it during training and planning, or its effectiveness and intended use may be undermined. Subsequently, it is expected that the anticipated frequency of use of the CLG would increase greatly during wartime. The findings from the evaluation of user acceptance of the CLG suggest that it is presently, and will continue to be in the future, a viable and effective instrument which is an important asset to the combat leader.

REFERENCES

- Babbie, E. R. (1973). Survey research methods. Belmont, CA: Wadsworth Publishing Company.
- Department of the Army. (1983). Management of stress in army operations (Field Manual 26-2). Washington, D.C.
- Department of the Army. (Coordinating Draft). Soldier performance in continuous operations (Field Manual 22-9). Washington, D.C.
- Dunaway, R. L. (1987). A battle book for the BFV platoon leader. Infantry Magazine, July-August, 12-13.
- Harless, J. (1978). Job aid for the selection and construction of job aids. Newnan, GA: J. H. Harless.
- Harless, J. (1984). Dialogue: Background concepts. Newnan, GA: Harless Performance Guild, Inc.
- Harris, J. E. (1980). Memory aids people use: Two interview studies. Memory & Cognition, 8, 31-38.
- Intons-Peterson, M. J. & Fournier, J. (1986). External and internal memory aids: When and how often do we use them? Journal of Experimental Psychology: General, 115, 267-280.
- Kreutzer, M. A., Leonard, C., & Flavell, J. H. (1975). An interview study of children's knowledge about memory. Monographs of the Society for Research in Child Development, 40, (1, Serial No. 159).
- Ryan-Jones, D. L. (1979). Development and evaluation of a simple job performance aid for M151A1, A2 truck operators (Research Report 1230). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences. AD A082 817
- Winn, R. B., & Evensen, E. B. (1987). Authoring guide: A job aid to design and produce a combat leaders' guide (Draft Research Product). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Winn, R.B., Evensen, E.B., & Salter, M.S. (1987a). Combat Leaders' Guide: Platoon leaders, platoon sergeants, and squad leaders (Draft Research Product 87-33). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Winn, R.B., Evensen, E.B., & Salter, M.S. (1987b). Combat Leaders' Guide: Rifle platoon and squad Research Product 87-23 . Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences. AD A190 605.

APPENDIX A: PERCENTAGES OF POSITIVE RESPONSES AND OVERALL MEAN RATINGS FOR ALL QUESTIONS ON THE FEEDBACK FORM

Table A-1

Positive Response Percentages for Attitude Questions by Duty Position

Attitude question	Team leader (n=19)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)
Like CLG	73.7%	87.4%	90.4%	89.0%
Accurate information	73.7%	92.7%	88.4%	91.8%
Complete information	57.9%	81.1%	76.0%	80.8%
Useful CLG	63.1%	86.3%	89.4%	85.0%
Clear information	79.0%	87.4%	97.1%	91.8%
Up-to-date information	73.7%	88.4%	83.7%	87.6%
Criticality of tasks to combat mission	68.4%	79.0%	83.7%	85.0%
Overall effectiveness	68.5%	85.3%	93.3%	87.7%
Importance of CLG to combat mission	42.1%	79.0%	76.9%	71.3%
Importance to overall combat effectiveness	57.9%	85.0%	80.8%	75.3%
Sure you will use CLG in combat	31.6%	65.0%	68.3%	57.6%
Like using CLG	63.2%	76.9%	85.5%	86.3%
Ease of use of CLG	68.4%	86.4%	96.2%	87.7%
Easier to perform tasks with CLG	47.4%	72.7%	82.7%	80.9%
Frequency of use	73.7%	81.1%	84.5%	91.8%
Provide enough information	47.4%	76.8%	84.6%	74.0%

Table A-1 (Continued)

Positive Response Percentages for Attitude Questions by Duty Position

Attitude question	Team leader (n=19)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)
Should be published as standard document	73.6%	89.5%	89.4%	90.4%
Like Table of Contents	52.6%	86.3%	90.4%	85.0%
Usefulness of Table of Contents	79.0%	92.6%	93.2%	84.0%
Usefulness of page numbering system	63.2%	89.5%	91.3%	82.2%

Note: Frequency of use includes "many times a day", "several times a day", and "once a week" categories on the scale. Positive ratings are the sum of "very positive" and "positive" categories on the rating scale.

Table A-1 (Continued)

Positive Response Percentages for Attitude Questions by Duty Position

Attitude question	Company commander (n=67)	Battalion commander (n=45)	Brigade commander (n=4)	Overall (n=437)
Like CLG	94.0%	95.6%	100%	90.4%
Accurate information	92.6%	91.1%	100%	90.6%
Complete information	74.6%	91.1%	100%	79.7%
Useful CLG	94.0%	91.1%	100%	88.6%
Clear information	95.5%	93.4%	75.0%	92.7%
Up-to-date information	89.6%	88.9%	75.0%	86.5%
Criticality of tasks to combat mission	83.6%	82.3%	100%	83.1%
Overall effectiveness	91.0%	91.1%	75.0%	89.0%
Importance of CLG to combat mission	76.1%	77.8%	75.0%	75.9%
Importance to overall combat effectiveness	65.6%	73.3%	50.0%	75.8%
Sure you will use CLG in combat	62.7%	80.0%	75.0%	64.0%
Like using CLG	89.5%	88.9%	75.0%	83.7%
Ease of use of CLG	97.0%	93.3%	100%	91.1%
Easier to perform tasks with CLG	85.1%	86.6%	75.0%	79.0%
Frequency of use	88.1%	97.8%	100%	87.2%
Provide enough information	82.1%	86.7%	50.0%	79.9%

Table A-1 (Continued)

Positive Response Percentages for Attitude Questions by Duty Position

Attitude question	Company commander (n=67)	Battalion commander (n=45)	Brigade commander (n=4)	Overall (n=437)
Should be published as standard document	88.0%	88.8%	75.0%	88.6%
Like Table of Contents	89.5%	88.9%	75.0%	86.3%
Usefulness of Table of Contents	92.5%	95.5%	100%	92.0%
Usefulness of page numbering system	82.1%	82.2%	75.0%	85.6%

Note: Frequency of use includes "many times a day", "several times a day", and "once a week" categories on the scale. Positive ratings are the sum of "very positive" and "positive" categories on the rating scale.

Table A-2

Positive Response Percentages for CLG Utilization by Duty Position

CLG utilization	Team leader (n=19)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)
Performing combat mission	84.3%	67.3%	83.7%	79.4%
Training exercises	73.7%	90.5%	93.3%	84.9%
Desk reference	57.9%	78.9%	89.5%	89.0%
Prepare instructional materials	47.4%	73.7%	77.9%	83.6%
Self-training aid	68.4%	86.4%	86.5%	87.6%
Training aid	57.9%	80.9%	86.6%	83.6%

Table A-2 (Continued)

Positive Response Percentages for CLG Utilization by Duty Position

CLG utilization	Company Commander (n=67)	Battalion Commander (n=45)	Brigade Commander (n=4)	Overall (n=437)
Performing combat mission	83.6%	77.8%	75.0%	76.9%
Training exercises	95.5%	93.3%	100%	91.2%
Desk reference	85.1%	77.7%	100%	83.7%
Prepare instructional materials	75.6%	75.6%	100%	76.9%
Self-training aid	79.1%	88.9%	100%	85.4%
Training aid	79.6%	80.0%	100%	83.7%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table A-3

Positive Response Percentages for Usefulness of CLG Field Aids and Book

Items by Duty Position

Item	Team leader (n=19)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)
Format of tasks	47.3%	70.2%	91.1%	86.2%
Calculator	52.6%	70.1%	73.6%	65.5%
Protractor	63.2%	88.4%	87.5%	69.9%
1/25,000 grid	47.4%	87.3%	85.6%	63.0%
1/50,000 grid	63.2%	87.4%	86.5%	68.5%
Extra note and grid pages	79.0%	80.0%	84.7%	68.5%
Compact size	63.1%	72.7%	82.7%	79.5%
Front and back covers	57.9%	81.1%	85.6%	80.8%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table A-3 (Continued)

Positive Response Percentages for Usefulness of CLG Field Aids and Book
Items by Duty Position

Item	Company commander (n=67)	Battalion commander (n=45)	Brigade commander (n=4)	Overall (n=437)
Format of tasks	84.8%	91.1%	75.0%	83.6%
Calculator	83.3%	77.8%	75.0%	75.3%
Protractor	79.1%	88.9%	100%	83.1%
1/25,000 grid	68.7%	80.0%	75.0%	77.4%
1/50,000 grid	74.6%	91.1%	100%	81.8%
Extra note and grid pages	80.6%	80.0%	100%	79.7%
Compact size	83.6%	77.8%	75.0%	79.2%
Front and back covers	77.6%	84.4%	100%	81.9%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table A-4

Positive Response Percentages for Confidence Concerning CLG by Duty Position

Confidence rating	Team leader (n=19)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)
Confidence without CLG	47.4%	46.3%	48.1%	43.9%
Confidence with CLG	68.5%	83.1%	88.5%	95.9%
Confidence when using own notes	84.2%	75.8%	76.0%	71.2%
Overall confidence with CLG	73.7%	86.3%	91.3%	90.4%
Ever made notes?				
Yes	68.4%	84.2%	82.7%	91.8%
No	31.6%	15.8%	17.3%	8.2%
Presently use notes?				
Yes	63.2%	77.9%	82.7%	84.9%
No	36.8%	22.1%	17.3%	15.1%

Note: Positive ratings are the sum of "very confident" and "confident" categories on the rating scale.

Table A-4 (Continued)

Positive Response Percentages for Confidence Concerning CLG by Duty Position

Confidence rating	Company commander (n=67)	Battalion commander (n=45)	Brigade commander (n=4)	Overall (n=437)
Confidence without CLG	32.9%	28.9%	50.0%	41.7%
Confidence with CLG	94.0%	95.5%	100%	89.9%
Confidence when using own notes	79.1%	84.5%	50.0%	77.1%
Overall confidence with CLG	89.6%	93.3%	75.0%	90.4%
Ever made notes?				
Yes	97.0%	100%	100%	88.0%
No	3.0%	0%	0%	12.0%
Presently use notes?				
Yes	89.6%	88.0%	75.0%	80.0%
No	10.4%	12.0%	25.0%	20.0%

Note: Positive ratings are the sum of "very confident" and "confident" categories on the rating scale.

Table A-5

Positive Response Percentages for Ease of Use of CLG Field Aids by Duty
Position

Item	Team leader (n=19)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)
Calculator	63.2%	75.7%	85.6%	74.7%
1/25,000 grid	57.9%	86.3%	88.4%	79.5%
1/50,000 grid	57.9%	85.2%	87.5%	78.1%
Protractor	68.4%	86.4%	88.5%	79.5%
Front and back covers	68.4%	82.1%	86.5%	75.4%

Table A-5 (continued)

Positive Response Percentages for Ease of Use of CLG Field Aids by Duty
Position

Item	Company commander (n=67)	Battalion commander (n=45)	Brigade commander (n=4)	Overall (n=437)
Calculator	79.3%	68.9%	100%	79.2%
1/25,000 grid	86.9%	91.1%	100%	85.3%
1/50,000 grid	85.1%	95.5%	100%	85.1%
Protractor	88.1%	91.1%	100%	86.0%
Front and back covers	74.6%	77.8%	75.0%	80.7%

Note: Positive ratings are the sum of "very easy to use" and "easy to use" categories on the rating scale.

Table A-6

Overall Mean Rating and Standard Deviation for Attitude Questions

Attitude question	Mean	Standard Deviation
Like CLG	1.62	.73
Accurate information	1.80	.61
Complete information	1.97	.74
Useful CLG	1.65	.72
Clear information	1.62	.65
Up-to-date information	1.86	.68
Criticality of tasks to combat mission	1.82	.82
Overall effectiveness	1.75	.72
Importance of CLG to combat mission	2.01	.83
Importance to overall combat effectiveness	2.02	.83
Sure you will use CLG in combat	2.27	1.08
Like using CLG	1.80	.78
Ease of use of CLG	1.68	.69%
Easier to perform tasks with CLG	1.86	.79
Frequency of use	2.30	1.00
Provide enough information	1.99	.71

Note: Lower mean ratings indicate more positive ratings. Frequency of use includes "many times a day", "several times a day", and "once a week" categories on the scale.

Table A-6 (continued)

Overall Mean Rating and Standard Deviation for Attitude Questions

Attitude question	Mean	Standard Deviation
Should be published as standard document	1.68	.81
Like Table of Contents	1.78	.75
Usefulness of Table of Contents	1.58	.69
Usefulness of page numbering system	1.71	.75

Note: Lower mean ratings indicate more positive ratings. Frequency of use includes "many times a day", "several times a day", and "once a week" categories on the scale.

Table A-7

Overall Mean Rating and Standard Deviation for CLG Utilization

CLG utilization	Mean	Standard Deviation
Performing combat mission	3.94	.85
Training exercises	4.41	.72
Desk reference	4.21	.86
Prepare instructional materials	4.08	.86
Self-training aid	4.25	.81
Training aid	4.15	.84

Note: Higher mean ratings indicate more positive ratings.

Table A-8

Overall Mean Rating and Standard Deviation for Usefulness of CLG Field Aids
and Book Items

Item	Mean	Standard Deviation
Format of tasks	4.13	.77
Calculator	4.04	.97
Protractor	4.17	.93
1/25,000 grid	4.07	.98
1/50,000 grid	4.15	.96
Extra note and grid pages	4.08	.94
Compact size	4.16	1.04
Front and back covers	4.17	.94

Note: Higher mean ratings indicate more positive ratings.

Table A-9

Overall Mean Rating and Standard Deviation for Confidence Concerning CLG

Confidence rating	Mean	Standard Deviation
Confidence without CLG	2.76	.98
Confidence with CLG	1.62	.79
Confidence when using own notes	1.94	.78
Overall confidence with CLG	1.71	.79

Note: Lower mean ratings indicate more positive ratings.

Table A-10

Overall Mean Rating and Standard Deviation for Ease of Use of CLG Field Aids

Field aid	Mean	Standard Deviation
Calculator	4.09	.94
1/25,000 grid	4.22	.85
1/50,000 grid	4.23	.87
Protractor	84.24	.86
Front and back covers	4.12	.98

Note: Higher mean ratings indicate more positive ratings.

Table A-11

Positive Response Percentages for Attitude Questions by Rank

Attitude question	SGT (n=40)	SSG (n=82)	SFC (n=93)	MSG/1SG (n=10)	SGM (n=10)
Like CLG	77.5%	90.2%	91.4%	90.0%	100%
Accurate information	90.0%	90.2%	89.2%	100%	80.0%
Complete information	75.0%	80.5%	75.3%	100%	90.0%
Useful CLG	77.5%	87.8%	90.3%	90.0%	80.0%
Clear information	85.0%	87.8%	96.8%	100%	90.0%
Up-to-date information	87.5%	85.4%	83.9%	100%	60.0%
Criticality of tasks to combat mission	77.5%	79.2%	84.9%	80.0%	60.0%
Overall effectiveness	80.0%	85.3%	93.5%	90.0%	100%
Importance of CLG to combat mission	67.5%	76.8%	78.5%	70.0%	70.0%
Importance to overall combat effectiveness	77.5%	86.8%	82.8%	60.0%	60.0%
Sure you will use CLG in combat	50.0%	58.5%	69.9%	60.0%	70.0%
Like using CLG	75.0%	78.1%	86.0%	70.0%	90.0%
Ease of use of CLG	77.5%	87.8%	94.6%	100%	90.0%
Easier to perform tasks with CLG	75.0%	67.1%	83.9%	80.0%	90.0%
Frequency of use	87.5%	78.1%	85.0%	70.0%	100%
Provide enough information	65.0%	78.1%	84.9%	90.0%	80.0%

Table A-11 (Continued)

Positive Response Percentages for Attitude Questions by Rank

Attitude question	SGT (n=40)	SSG (n=82)	SFC (n=93)	MSG/1SG (n=10)	SGM (n=10)
Should be published as standard document	85.0%	89.0%	86.2%	80.0%	90.0%
Like Table of Contents	80.0%	85.4%	89.2%	90.0%	90.0%
Usefulness of Table of Contents	88.5%	91.5%	93.6%	90.0%	100%
Usefulness of page numbering system	82.5%	87.8%	90.3%	90.0%	90.0%

Note: Frequency of use includes "many times a day", "several times a day", and "once a week" categories on the scale. Positive ratings are the sum of "very positive" and "positive" categories on the rating scale.

Table A-11 (Continued)

Positive Response Percentages for Attitude Questions by Rank

Attitude question	2LT (n=23)	1LT (n=48)	CPT (n=69)	MAJ (n=26)	LTC (n=22)
Like CLG	100%	83.4%	92.8%	100%	95.4%
Accurate information	100%	87.5%	91.3%	96.1%	90.9%
Complete information	78.3%	81.3%	75.3%	88.5%	95.5%
Useful CLG	81.3%	94.2%	96.2%	95.5%	100%
Clear information	91.3%	91.7%	94.2%	96.1%	100%
Up-to-date information	91.3%	85.4%	89.9%	96.1%	91.0%
Criticality of tasks to combat mission	91.3%	83.4%	84.0%	84.6%	100%
Overall effectiveness	91.3%	85.5%	91.3%	92.3%	90.9%
Importance of CLG to combat mission	82.6%	66.7%	76.8%	76.9%	95.4%
Importance to overall combat effectiveness	91.3%	68.8%	66.7%	79.9%	90.9%
Sure you will use CLG in combat	65.2%	54.2%	65.6%	84.6%	86.3%
Like using CLG	87.0%	85.4%	89.8%	88.4%	90.9%
Ease of use of CLG	95.7%	83.4%	97.1%	88.5%	100%
Easier to perform tasks with CLG	91.3%	75.0%	85.5%	84.6%	86.4%
Frequency of use	100%	89.6%	88.3%	100%	95.5%
Provide enough information	73.9%	72.9%	82.6%	87.6%	90.9%

Note: Frequency of use includes "many times a day", "several times a day", and "once a week" categories on the scale.

Table A-11 (Continued)

Positive Response Percentages for Attitude Questions by Rank

Attitude question	2LT (n=23)	1LT (n=48)	CPT (n=69)	MAJ (n=26)	LTC (n=22)
Should be published as standard document	100%	85.4%	88.4%	92.3%	86.3%
Like Table of Contents	86.9%	83.4%	88.4%	88.5%	96.4%
Usefulness of Table of Contents	91.3%	87.6%	92.7%	92.3%	100%
Usefulness of page numbering system	82.6%	81.3%	82.6%	88.4%	87.3%

Note: Frequency of use includes "many times a day", "several times a day", and "once a week" categories on the scale. Positive ratings are the sum of "very positive" and "positive" categories on the rating scale.

Table A-11 (Continued)

Positive Response Percentages for Attitude Questions by Rank

Attitude question	COL (n=7)	BG (n=1)	Corporal (n=2)	Cadet (n=3)
Like CLG	100%	100%	100%	100%
Accurate information	90.9%	100%	100%	100%
Complete information	85.8%	100%	100%	66.7%
Useful CLG	100%	100%	100%	100%
Clear information	85.7%	100%	100%	100%
Up-to-date information	71.5%	100%	100%	100%
Criticality of tasks to combat mission	100%	0%	100%	100%
Overall effectiveness	85.8%	100%	50.0%	100%
Importance of CLG to combat mission	85.7%	100%	100%	100%
Importance to overall combat effectiveness	57.2%	100%	50.0%	100%
Sure you will use CLG in combat	71.5%	100%	100%	66.7%
Like using CLG	71.5%	100%	100%	100%
Ease of use of CLG	100%	100%	100%	100%
Easier to perform tasks with CLG	71.4%	0%	0%	66.7%
Frequency of use	100%	100%	50.0%	100%
Provide enough information	71.4%	100.0%	50.0%	100%

Note: Frequency of use includes "many times a day", "several times a day", and "once a week" categories on the scale.

Table A-11 (Continued)

Positive Response Percentages for Attitude Questions by Rank

Attitude question	COL (n=7)	BG (n=1)	Corporal (n=2)	Cadet (n=3)
Should be published as standard document	85.8%	100%	50.0%	100%
Like Table of Contents	57.2%	100%	0%	100%
Usefulness of Table of Contents	85.7%	100%	100%	100%
Usefulness of page numbering system	71.5%	100%	100%	100%

Note: Frequency of use includes "many times a day", "several times a day", and "once a week" categories on the scale. Positive ratings are the sum of "very positive" and "positive" categories on the rating scale.

Table A-12

Positive Response Percentages for CLG Utilization by Rank

CLG utilization	SGT (n=40)	SSG (n=82)	SFC (n=93)	MSG/1SG (n=10)	SGM (n=10)
Performing combat mission	59.4%	69.5%	83.8%	60.0%	70.0%
Training exercises	90.0%	89.1%	93.5%	100%	100%
Desk reference	72.5%	79.2%	87.1%	100%	100%
Prepare instructional materials	67.5%	73.2%	78.5%	90.0%	100%
Self-training aid	85.0%	85.3%	86.1%	100%	100%
Training aid	75.0%	82.9%	86.0%	100%	90.0%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table 12 (Continued)

Positive Response Percentages for CLG Utilization by Rank

CLG utilization	2LT (n=23)	1LT (n=48)	CPT (n=69)	MAJ (n=26)	LTC (n=22)
Performing combat mission	95.7%	72.9%	84.0%	80.8%	90.9%
Training exercises	87.0%	85.4%	95.7%	92.3%	95.4%
Desk reference	78.2%	93.7%	84.0%	73.1%	90.9%
Prepare instructional materials	78.2%	85.4%	75.3%	57.7%	90.9%
Self-training aid	78.3%	91.6%	76.8%	88.5%	90.9%
Training aid	78.3%	87.6%	84.1%	74.9%	86.4%

Table 12 (continued)

Positive Response Percentages for CLG Utilization by Rank

Attitude question	COL (n=7)	BG (n=1)	Corporal (n=2)	Cadet (n=3)
Performing combat mission	85.7%	100%	0%	66.7%
Training exercises	100%	100%	0%	100%
Desk reference	100%	100%	0%	100%
Prepare instructional materials	85.7%	100%	0%	100%
Self-training aid	100%	100%	0%	100%
Training aid	100%	0%	0%	100%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table A-13

Positive Response Percentages for Usefulness of CLG Field Aids and Book

Items by Rank

Item	SGT (n=40)	SSG (n=82)	SFC (n=93)	MSG/1SG (n=10)	SGM (n=10)
Format of tasks	75.0%	74.4%	85.0%	100%	100%
Calculator	67.5%	74.3%	87.1%	80.0%	70.0%
Protractor	75.0%	91.4%	86.0%	100%	80.0%
1/25,000 grid	72.5%	89.1%	84.9%	80.0%	70.0%
1/50,000 grid	77.5%	89.0%	86.0%	100%	100%
Extra note and grid pages	82.5%	80.5%	84.9%	80.0%	100%
Compact size	70.0%	76.8%	83.8%	90.0%	90.0%
Front and back covers	77.5%	81.7%	86.1%	80.0%	100%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table A-13 (Continued)

Positive Response Percentages for Usefulness of CLG Field Aids and Book

Items by Rank

Item	2LT (n=23)	1LT (n=48)	CPT (n=69)	MAJ (n=26)	LTC (n=22)
Format of tasks	91.3%	81.3%	86.9%	96.2%	90.9%
Calculator	56.5%	66.7%	73.9%	84.6%	77.3%
Protractor	65.2%	70.8%	78.3%	92.4%	90.9%
1/25,000 grid	56.5%	64.6%	69.6%	80.8%	81.9%
1/50,000 grid	60.8%	70.8%	75.4%	92.3%	91.0%
Extra note and grid pages	56.5%	72.9%	82.6%	73.1%	72.7%
Compact size	78.2%	79.2%	85.5%	76.9%	81.8%
Front and back covers	69.6%	85.4%	79.7%	80.8%	86.4%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table A-13 (Continued)

Positive Response Percentages for Usefulness of CLG Field Aids and Book

Items by Rank

Item	COL (n=7)	BG (n=1)	Corporal (n=2)	Cadet (n=3)
Format of tasks	85.8%	100%	0%	100%
Calculator	65.7%	100%	100%	100%
Protractor	80.6%	100%	50.0%	100%
1/25,000 grid	71.4%	100%	0%	100%
1/50,000 grid	100%	100%	0%	100%
Extra note and grid pages	82.5%	100%	0%	66.7%
Compact size	82.5%	100%	50.0%	100%
Front and back covers	79.0%	100%	0%	100%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table A-14

Positive Response Percentages for Confidence Concerning CLG by Rank

Confidence rating	SGT (n=40)	SSG (n=82)	SFC (n=93)	MSG/1SG (n=10)	SGM (n=10)
Confidence without CLG	52.5%	40.2%	50.6%	40.0%	50.0%
Confidence with CLG	85.0%	81.7%	88.2%	90.0%	80.0%
Confidence when using own notes	90.0%	69.5%	74.2%	90.0%	70.0%
Overall confidence with CLG	87.5%	84.2%	92.5%	80.0%	80.0%
Ever made notes?					
Yes	77.5%	82.9%	84.9%	70.0%	100%
No	22.5%	17.1%	15.1%	30.0%	0%
Presently use notes?					
Yes	70.0%	78.0%	84.9%	70.0%	80.0%
No	30.0%	22.0%	15.1%	30.0%	20.0%

Note: Positive ratings are the sum of "very confident" and "confident" categories on the rating scale.

Table A-14 (Continued)

Positive Response Percentages for Confidence Concerning CLG by Rank

Confidence rating	2LT (n=23)	1LT (n=48)	CPT (n=69)	MAJ (n=26)	LTC (n=22)
Confidence without CLG	34.7%	48.0%	34.7%	23.0%	31.8%
Confidence with CLG	95.7%	95.9%	94.2%	96.1%	91.0%
Confidence when using own notes	56.5%	79.2%	81.2%	80.8%	81.8%
Overall confidence with CLG	86.9%	91.7%	89.9%	92.3%	95.5%
Ever made notes?					
Yes	82.6%	95.8%	97.1%	100%	95.5%
No	17.4%	4.2%	2.9%	0%	4.5%
Presently use notes?					
Yes	73.9%	91.7%	88.4%	88.5%	81.8%
No	26.1%	6.3%	11.5%	18.2%	18.2%

Note: Positive ratings are the sum of "very confident" and "confident" categories on the rating scale.

Table A-14 (Continued)

Positive Response Percentages for Confidence Concerning CLG by Rank

Confidence rating	COL (n=7)	BG (n=1)	Corporal (n=2)	Cadet (n=3)
Confidence without CLG	42.9%	0%	0%	0%
Confidence with CLG	100%	100%	100%	100%
Confidence when using own notes	85.8%	100%	100%	66.7%
Overall confidence with CLG	85.7%	100%	50.0%	100%
Ever made notes?				
Yes	100%	100%	100%	100%
No	0%	0%	0%	0%
Presently use notes?				
Yes	71.4%	100%	50.0%	66.7%
No	29.6%	0%	50.0%	33.3%

Note: Positive ratings are the sum of "very confident" and "confident" categories on the rating scale.

Table A-15

Positive Response Percentages for Ease of Use of CLG Field Aids by Rank

Item	SGT (n=40)	SSG (n=82)	SFC (n=93)	MSG/1SG (n=10)	SGM (n=10)
Calculator	75.0%	73.2%	87.1%	100%	100%
1/25,000 grid	82.5%	82.9%	89.2%	90.0%	80.0%
1/50,000 grid	82.5%	80.5%	89.2%	100%	80.0%
Protractor	80.0%	85.4%	89.2%	100%	70.0%
Front and back covers	85.0%	78.0%	88.2%	80.0%	80.0%

Table A-15 (Continued)

Positive Response Percentages for Ease of Use of CLG Field Aids by Rank

Item	2LT (n=23)	1LT (n=48)	CPT (n=69)	MAJ (n=26)	LTC (n=22)
Calculator	87.0%	72.9%	79.7%	88.4%	68.2%
1/25,000 grid	87.0%	75.0%	87.0%	96.1%	86.4%
1/50,000 grid	87.0%	72.9%	85.5%	100%	90.9%
Protractor	82.6%	77.1%	87.0%	96.1%	90.9%
Front and back covers	73.9%	77.1%	95.3%	76.9%	91.0%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table A-15 (continued)

Positive Response Percentages for Ease of Use of CLG Field Aids by Rank

Item	COL (n=7)	BG (n=1)	Corporal (n=2)	Cadet (n=3)
Calculator	100%	100%	100%	100%
1/25,000 grid	100%	100%	0%	100%
1/50,000 grid	100%	100%	100%	100%
Protractor	100%	100%	100%	100%
Front and back covers	85.8%	100%	50.0%	100%

Note: Positive ratings are the sum of "very useful" and "useful" categories on the rating scale.

Table A-16

Respondents' Percentages of Targeted CLG User Population by Duty Position

Duty position	Team leader (n=19)	Squad leader (n=95)	Platoon sergeant (n=104)	Platoon leader (n=73)
Team leader				
Yes	73.7%	73.7%	73.1%	57.5%
No	26.2%	26.3%	26.9%	42.5%
Squad leader				
Yes	68.4%	91.6%	96.2%	93.2%
No	31.6%	8.4%	3.8%	6.8%
Platoon sergeant				
Yes	73.7%	82.1%	90.4%	91.8%
No	26.3%	17.9%	9.6%	8.2%
Platoon leader				
Yes	73.7%	82.1%	90.4%	91.8%
No	26.3%	16.8%	9.6%	8.2%
Company commander				
Yes	42.1%	53.7%	63.5%	69.9%
No	57.9%	45.3%	36.5%	30.1%
Battalion commander				
Yes	21.1%	30.5%	34.6%	17.8%
No	78.9%	69.5%	65.4%	82.2%
Brigade commander				
Yes	21.1%	29.5%	28.8%	13.7%
No	78.9%	69.5%	71.2%	86.3%

Table A-16 (Continued)

Respondents' Percentages of Targeted CLG User Population by Duty Position

Duty position	Company commander (n=67)	Battalion commander (n=45)	Brigade commander (n=4)
Team leader			
Yes	68.7%	73.3%	25.0%
No	31.3%	26.7%	75.0%
Squad leader			
Yes	97.0%	95.6%	100%
No	3.0%	4.4%	0%
Platoon sergeant			
Yes	91.0%	95.6%	100%
No	9.0%	4.4%	0%
Platoon leader			
Yes	91.0%	95.6%	93.1%
No	9.0%	4.4%	6.9%
Company commander			
Yes	71.6%	71.1%	100%
No	28.4%	28.9%	0%
Battalion commander			
Yes	19.4%	40.0%	34.5%
No	80.6%	60.0%	65.5%
Brigade commander			
Yes	11.9%	15.6%	25.0%
No	88.1%	73.3%	75.0%

Table A-17

Respondents' Percentages of Targeted CLG User Population by Rank

Duty position	SGT (n=40)	SSG (n=82)	SFC (n=93)	MSG/1SG (n=10)	SGM (n=10)
Team leader					
Yes	77.5%	74.4%	72.0%	90.0%	80.0%
No	22.5%	25.6%	28.0%	10.0%	20.0%
Squad leader					
Yes	85.0%	91.5%	95.7%	100%	90.0%
No	15.0%	9.5%	4.3%	0%	10.0%
Platoon sergeant					
Yes	80.0%	80.5%	92.5%	80.0	100%
No	20.0%	19.5%	7.5%	20%	0%
Platoon leader					
Yes	80.0%	78.0%	91.4%	100	90.0%
No	20.0%	22.0%	8.6%	0%	10.0%
Company commander					
Yes	50.0%	52.4%	64.5%	70.0%	80.0%
No	50.0%	47.6%	35.5%	30.0%	20.0%
Battalion commander					
Yes	22.5%	32.9%	32.3%	50.0%	40.0%
No	77.5%	67.1%	67.7%	50.0%	60.0%
Brigade commander					
Yes	22.5%	31.7%	25.8%	40.0%	20.0%
No	77.5%	68.3%	74.2%	60.0%	80.0%

Table A-17 (Continued)

Respondents' Percentages of Targeted CLG User Population by Rank

Duty position	2LT (n=23)	1LT (n=48)	CPT (n=69)	MAJ (n=26)	LTC (n=22)
Team leader					
Yes	30.4%	68.8%	68.1%	65.4%	72.7%
No	69.6%	31.2%	31.9%	34.6%	27.3%
Squad leader					
Yes	91.3%	93.8%	97.1%	100%	95.5%
No	8.7%	6.2%	2.9%	0%	4.5%
Platoon sergeant					
Yes	87.0%	93.8%	91.3%	92.3%	95.5%
No	13.0%	6.2%	8.7%	7.7%	4.5%
Platoon leader					
Yes	100%	89.6%	95.7%	100%	100%
No	0%	10.4%	4.3%	0%	0%
Company commander					
Yes	78.3%	66.7%	71.0%	69.2%	72.7%
No	21.7%	33.3%	29.0%	30.8%	27.3%
Battalion commander					
Yes	21.7%	16.7%	18.8%	30.8%	54.5%
No	78.3%	83.3%	81.2%	69.2%	45.5%
Brigade commander					
Yes	13.0%	14.6%	10.1%	19.2%	18.2%
No	87.0%	85.4%	89.9%	80.8%	81.8%

Table A-17 (Continued)

Respondents' Percentages of Targeted CLG User Population by Rank

Duty position	COL (n=7)	BG (n=1)	Corporal (n=2)	Cadet (n=3)
Team leader				
Yes	57.1%	100%	50.0%	100%
No	42.9%	0%	50.0%	0%
Squad leader				
Yes	100%	100%	50.0%	100%
No	0%	0%	50.0%	0%
Platoon sergeant				
Yes	100%	100%	100%	100%
No	0%	0%	0%	0%
Platoon leader				
Yes	100%	100%	100%	100%
No	0%	0%	0%	0%
Company commander				
Yes	85.7%	100%	50.0%	0%
No	14.3%	0%	50.0%	100%
Battalion commander				
Yes	42.9%	100%	50.0%	0%
No	57.1%	0%	50.0%	100%
Brigade commander				
Yes	42.9%	100%	50.0%	0%
No	57.1%	0%	50.0%	100%

APPENDIX B: SPECIFIC RESPONDENT COMMENTS TO OPEN-ENDED QUESTIONS ON THE
FEEDBACK FORM

RESPONDENTS WITH COMMENTS n = 417 (95% of all respondents)

3. HOW DID YOU CARRY THE CLG WHEN YOU WERE NOT USING IT?

n = 298 (71%) respondents making 319 comments

- 159 (50%) BDU trousers pocket -- Cargo pocket
- 75 (23%) Map bag, ammo pouch, or other waterproof container
- 48 (15%) Rucksack (top flap, inside, or rear pocket)
- 37 (12%) MISCELLANEOUS: Put in vehicle (21), hang on a cord around neck, squad leader bag, and carry in hand.

4. DOES THE CLG NEED A CARRYING CASE? IF YES, WHERE WOULD YOU ATTACH OR CARRY IT?

n = 387 (93%) respondents making 395 comments

- 260 (66%) NO, carry on belt (LCE), in waterproof bag, in pants pocket, or hang on cord around neck
- 79 (20%) YES, clip case on LCE, pistol belt, new battle vest, web gear, clip to rucksack
- 56 (14%) YES, put in bag or case to keep clean, or something similar to ammo/magazine pouch

5. WHAT TASKS, IF ANY, SHOULD BE ADDED? IF SO, INDICATE THEM.

n = 136 (33%) respondents making 208 comments

- 61 (29%) OFFENSE/DEFENSE: Range cards and sector sketches (17), battle drills (6), armor tasks (4), passage of lines (3), dismounted info (2), CEOI (2), actions at the objective, prepare for combat operations, stream crossing, pathfinder tasks, sniper operations, scout operations, laying the battery, overlay techniques, control measures defense/offense, outline of offensive and defensive operations (FM 100-5), battle drills, action left/action right, bridge classification, flank coordinates, NATO vehicles, obstacle breaching, and conducting an attack, evaluate approaches to defensive perimeter, walk the ground, use of outside aid to infantry (sniper, scout-dog team, air force personnel and equipment, field artillery), react to enemy, how to assault, scout missions, and tactics.
- 50 (24%) WEAPONS: call for/adjust indirect fire (35), more detailed weapons data (6), tasks on 50 cal (2), dragon (2), more on field artillery material (3), how to make fire plan, boresighting 90, timing instructions for 50 cal, use of enemy weapons, maximize effective ranges with and without tripes, tracer burnout, mechanized gunnery, - list characteristics of all weapons systems (dragon, TOW, 40mm, 60 and 81 mm mort), dragon/40mm range card, M16/203, and M60 Crew Drill; Bradley weapons (data/operations) and Bradley drills, and pre-fire checks.
- 20 (10%) UNIT-SPECIFIC: add mech tasks (7), Engineering tasks (4), Plt and Co SOP's (3), more duty specific tasks (2), Bn alert plan, Bn report formats, location report, and logistics report.
- 13 (6%) MEDICAL: prepare casualty reports, prepare MIA reports, treat gunshot wounds, treat frag wounds, treat chemical casualty, treat burns, and symptoms of different agents and first aid for them.
- 12 (6%) SPECIAL CHAPTERS: common skills for SOF - task specific checklists (2), Airborne ops (2), Air Assault, Ranger, tasks in low intensity conflict area where SF/Lt Inf interact, mech vs. light, plt ldr vs. sqd ldr tasks, and Bn version.
- 11 (5%) SPECIFIC MISSIONS: movement to contact (3), bridge classification (2), delay, elastic defense, Panama vs. Europe specific tasks, SERE (2), 11H type missions, and flame field expedients.
- 9 (4%) NBC: MOPP (2), DECON, first aid, set up personnel and equipment decon sites (2), M8 chemical alarm, and down wind message.

5. WHAT TASKS, IF ANY, SHOULD BE ADDED? IF SO, INDICATE THEM.

(Continued):

- 4 (3%) AIRCRAFT: quick review of Airland Battle, Aircraft ID (Friendly/NATO), Air assault, and Airmobile planning ops.
- 4 (3%) PLANNING: detailed OPORD (3) and more detailed Patrol orders.
- 4 (3%) DEMO and MINES: add more information (3) and demo cards.
- 3 (2%) LAND NAVIGATION: plot azimuth with protractor, plot azimuth with lensatic compass, and read azimuth with lensatic compass.
- 3 (2%) MECH: move with tanks, separate mech oriented tasks, and deadlining items on M113 with pictures.
- 3 (2%) COMMO: TSEC/KY-57, construct a hot loop, and radio procedures.
- 2 (1%) GRAPHIC MEASURES: graphic symbols and graphic control measures.
- 9 (4%) MISCELLANEOUS: CTT and SQT type tasks (2), field sanitation, add subtask steps, CEOI, weather, include calculator info on first page-- instructions and examples, diagrams, CAS coordination, incorporate GTAs into CLG, and delete redundant tasks.

6. IS THERE ANYTHING LEFT OUT (MISSING OR INCOMPLETE INFORMATION, ERRORS) OF THE TASKS WITHIN ANY OF THE SECTIONS?

n = 64 (15%) respondents making 136 comments

- 29 (21%) DIAGRAMS: range cards and sector sketches should have diagrams (17); need pictures of friendly forces' vehicles and aircraft (4); some tasks need diagrams (mines, commo, hasty minefields) (3); graphic symbols for units, wpns, targets; hand and arm signals; flag signals; map symbols; and pictures of OT 62's and OT 64's.
- 13 (10%) BOOK-RELATED CHANGES: more blank pages (5); index tabs to facilitate finding major sections (3); and add company SOP's to rear, listing of Bn assets, subtask steps, and too much crammed into book with too many leadership levels - separate into sqd ldr, plt ldr and plt sgt (2).
- 7 (5%) OPORD & WARNING ORDER FORMATS: need more detail on OPOrDs and new WO's (4); Ranger dept has added much detail to the patrol order--change the format; report formats should follow new JINTACs system; and OPOrD for Bn level OPs and Co level OPs with subordinate subunit paragraphs.
- 7 (5%) WEAPONS: field artillery; information on all weapons systems and enemy weapons picked up on battlefield (3), call for fire (2); sighting of M60; info on Soviet small arms operation; reading of T&E; and size and dimensions of fighting positions.
- 5 (4%) MEDICAL: treatment for broken bones, chest or abdominal wounds, first aid for heat injuries, set up helicopter landing site to address ratio of size to # aircraft, and need more medical info.
- 25 (18%) MISCELLANEOUS: need discussion of techniques and combat (2), squad plt and defensive terrain (2), detail on collective skills, more emphasis on terrain association, crossing danger areas, river crossings, night attacks, operational terms and symbols (FM 101-5-1), commander's intent, more detailed info about TAC, more detail on vehicle recovery, how to enter a METT-T, how to use a CEOI, MOPP levels, some info is in too great detail, need more NBC tasks (2); battle drills, KY-38 is obsolete--replace with KY-57, and METT-T includes an estimate of the situation, and WARNING ORDER and 2.8: formats vary greatly--where did this one come from? does not model FM 21-2.
- 50 (37%) SPECIFIC CHANGES TO CLG:

P 0.2.1: can you use other writing implements in book?

6. IS THERE ANYTHING LEFT OUT (MISSING OR INCOMPLETE INFORMATION, ERRORS) OF THE TASKS WITHIN ANY OF THE SECTIONS?

(Continued):

P 0.4.1: "Avoid surprise" should read avoid "bring surprised" for clarity; what is meant by "coordinate ... electronics", plts and sqds don't have much to do with electronic warfare

P 1.4.1-item 3: provide example try to hit enemies rear and flanks

P 2.1.1 item 4: 1st SGT not XO directs CO logistics

P 2.1.1 item 8: add "order" for clarity

P 2.2.1: there is no longer an "LP", only "OPs" (since 1978)

P 2.3.1: omitted enemy's location?

P 2.4.1: redundant with 2.3.2

P 2.4.1 step 8: add "fields of fire"

P 2.6: does not follow model espoused by CAC "meets Cdrs guidance"

P 2.6.1: plt/sqd ldrs don't do much formal "analysis and comparison of courses of action"

P 2.7.2: recommend inserting "commander's intent"

P 2.7.3: list typical subunits (engineers, ADA) and visual signals

P 2.9.1: should place this section into a reference section in back of guide

P 3.2.1: add "establish and maintain communications"; add "enemy" to step 1, add "hide position" in step 4

P 3.5.1: add "maintain observation/contact with other vehicles"

P 3.6.1: drop all the possible, necessary, and permitted words --of course you will do these tasks if possible, necessary, and permitted

P 3.9.1: don't need a checklist for terrain driving

P 3.10.1: include pictures (diagrams) of travelling, travelling overwatch, bounding; include range card picture;

6. IS THERE ANYTHING LEFT OUT (MISSING OR INCOMPLETE INFORMATION, ERRORS) OF THE TASKS WITHIN ANY OF THE SECTIONS?

(Continued):

remember the plt ldr will position himself where he can best control movement/action

P 5.1.1-step 3: add "and vehicles"

P 5.1.1-step 8: add "and prepare range cards"

P 5.3.1-5.3.4: should include exchange of info on enemy situation, add coordination with adjacent units, locations, and positions of contact/coordination points.

P 5.4.1 - 5.4.2: should include a checklist of equipment needed on O.P.

P 5.5.1: "STANO" is old term

P 5.6.1-step 4: state how deep

P 5.6.1-step 6: how thick overhead cover

P 5.6.1-step 8: excellent, do same for steps 4 and 6.

P 5.6.1-step 10: should check that corrections were made

P 5.7.1 & 5.8.1: a picture/example is worth a thousand words

P 5.9.1 and 5.9.2 - step 2: should have plt overwatch recon of BP, add "siting obstacles, "covering obstacles by fire"; step 9F: just say "wire communications" to cover other options.

P 5.10.1 - step 3: contact report and spot report are two different reports

P 5.12.1: Platoons do not operate GSR, platoons do not have "scouts" to employ, Bns do.

P 5.12.3: What is item 14 trying to explain?

P 7.3.1: Coordinate recognition signals

P 9.1.3: Mark cleared buildings

P10.3.1: explain how to use sound range information

P 10.8 .1: insert known widths of certain common items (tank, helicopter in meters)

6. IS THERE ANYTHING LEFT OUT (MISSING OR INCOMPLETE INFORMATION, ERRORS) OF THE TASKS WITHIN ANY OF THE SECTIONS?

(Continued):

P 10.16.1, 10.17.1, 10.19.1: These should be deleted, covered in -10 manuals

P 10.16.2: omit maintenance instructions on the PVS-5 and PAS-7 as the instructions are in the carrying box; include a demolition card

P 12.15.1: 174A/PD has been converted to hold 2 D-cell batteries

P 13.1.1-13.16.1: are basic and well used leader tasks and should not need to be in a ref pocket guide

P 13.2.1: include a picture of an easterly/westerly grid diagram

P 13.21.1 - step 1: what is "vertically in ground facing sun"?

P 14.1.1: insert critical life saving measures (priorities)

Section 14: insert NBC casualty symptoms; include index of types of NBC reports (NBC-1 Report to report; and NBC-2 Report to report).

Section 15.1.1: add "ensure each soldier gets at least 4 hours sleep per night"

Section 16: add definitions of ADA weapons status-white, yellow, red; tight, hold, free

Section 18: Add headspace for 50 cal for M113 units, add tasks on the 25mm for the BFV; add headspace and times 50 cal for M113 units, add tasks on the 25 mm for the BFV

19.7 and 19.8: Are they important to a rifle plt and sqd or is it just nice to know?

P 2.9.1 and 2.10.1: Move to glossary

7. HOW DO YOU LIKE THE FORMAT THE TASKS ARE WRITTEN IN?

n = 355 (85%) respondents with 354 comments

- 329 (93%) Good/Great, quick, simple, easy to read and use, like large print, easy to understand, follow and to locate tasks; big print; useful; logical order; and like checklist format.
- 25 (7%) Didn't like it; question why formats differed from FM 7-14, 7-15, and Ranger handbook; and so-so.

8. ARE THERE ANY OTHER SITUATIONS WHERE YOU WOULD USE THE CLG THAT HAVE NOT BEEN MENTIONED?

n = 86 (22%) respondents with 86 comments

- 28 (33%) Training classes and preparation for missions (ARTEP), observer training, and teaching.
- 15 (17%) Leadership classes, NCO/OPD classes, ROTC FTX, Basic Course training, IOBC, OCS, ANCO, National Guard, USAR, BFV NETT, and intel courses.
- 8 (9%) CTT & SQT training missions and combat training.
- 7 (8%) Training aids in both garrison and non-garrison environment.
- 6 (7%) Staff officers' CLG (positions S1 - S4) for writing SOPs
- 6 (7%) Evaluators and observers of units
- 16 (19%) MISCELLANEOUS: planning, make modified book for armor and cavalry soldiers, reference and training aid book, counselling soldiers, "Beat enemy to death with it.", standard for infantryman's badge, refresher after a long leave, good business applications, all 11B professional development courses, log planning, National Guard and Reserves (2), pocket lesson plans, evasion ops, FID mission, small unit attacks, good reference and review guide, and SOF training.

9. IDENTIFY ANY GOOD FEATURES IN THE CLG SECTIONS.

n = 238 (57%) respondents making 299 comments

57 (19%) All sections were good

66 (24%) SPECIFIC SECTIONS:

16 Planning: Estimate of situation, conversion tables, warning order, OPORD

8 Patrol/Recon: Patrol order, patrolling section

5 Land Navigation

6 Defend

6 Vehicle Recognition: Warsaw Pact Vehicle Recognition

5 Move, Withdraw, CONOPS, and Combat in Cities

5 Medical

5 NBC

3 COMMO

3 Basic Combat Rules

3 Mines/Demo: fire missions and explosives

176 (59%)

ORGANIZATION OF BOOK:

49 Compact size, weather-proof, and waterproof pages

37 Clarity and organization - easy to follow format and step by step sequence

19 Simple and easy to use

18 Protractor, calculator, templates, and pencil

15 Big, bold print and size of print

13 Consolidates good information; quick, ready-reference for combat leader which results in standardization and organization

9 Checklists

7 Flexibility with Chicago screws

9. IDENTIFY ANY GOOD FEATURES IN THE CLG SECTIONS.
(Continued):

- 6 Table of Contents
- 3 Ability to write and erase

10. IDENTIFY ANY BAD FEATURES IN THE CLG.

n = 90 (22%) respondents making 93 comments

- 35 (38%) BOOK: bulky, wasted space, needs to be thinner (12), too heavy for light infantry, eliminate some sections, and change covers.
- 26 (38%) SPECIFICS: not enough blank pages (4); delete abbreviations sections; omit Basic Combat Rules (4), Attack, Conops, Air defense, Move, Defend, Delay, Withdraw, Combat in Cities, and Commo (portions on PVS-5, PVS-7) sections; pockets on covers are difficult to extract items (2); certain sections too basic to be in reference guide (e.g., movement techs, march orders, engaging aircraft); track recovery is mech unit specific; not enough emphasis on mech; eliminate Profession of Arms; too much info on PEWS, add more space on OPOD pages, and need more NBC tasks.
- 10 (11%) DIAGRAMS: not enough pictures (5), and no diagrams in Mines/Demo section.
- 7 (7%) PAGES: difficult to erase something on pages of CLG, stick together when wet (2), and reduce print (2).
- 7 (7%) GRIDS and CALCULATOR: grid scale print wears off, needs a 1/100 scale, and too easy to lose and useless in dark (calc).
- 8 (9%) MISCELLANEOUS: need place on table of contents for people to add, some of "do" loops may be confusing, instructions for placing and arming mines are on the packaging crates and carrying bags, problem with getting leaders to take it to the field and actually use the CLG, need new patrol order format, add straightedge for map reading, too many Skill level 1 tasks, and flimsy protractor.

11. WOULD YOU MAKING ANY OTHER CHANGES OR ADDITIONS TO THE CLG?

n = 119 (29%) respondents with 142 comments

- 63 (44%) CHANGES TO BOOK ORGANIZATION AND CONTENTS: make book smaller (19), tab major sections (9), add blank pages (4), add carrying case (3), standardize print (4), small chem-light device for reading at night (3), attach pencil to the CLG with a "dummy" cord (2), color code sections (4), improve calculator (3), covers are too bulky (5), reduce print, capitalize major headings, cut out unnecessary duplication, emphasize flexibility of adding/deleting pages, add all acronyms PL (P 6.3.2) and CFL/FSCL (P 6.3.2), identify sections in small print by page # (14.8 MED, 15.2 CONOPS), and use grease pencil.
- 33 (23%) ADDITIONS: add diagrams and illustrations (8), more info on mounted/mechanized operations (4), call for/adjust fire techniques (3), add section with common use graphic symbols and control measures, (2) include tech data on weapons (2), add lanyard for security, add more Land Nav items, add table of factors to be applied to map-measured ground distance to compensate for discrepancies with actual surface distances, give example of OPORD format, demo card, range classification, fire spt planning, add after action review points, 1/100,000 protractor, add info on enemy rank and pictures of equipment and uniforms, need specific examples on FD cells for fire, range cards (3), sector sketches (2), add engineering tasks (2), and incorporate lessons learned from NTC (2).
- 23 (16%) SPECIAL CHAPTERS: breakdown information by duty positions (3), make a generic guide for infantryman with certain inserts available for different branches (4), add company level CLG, break into 2 books indiv tasks vs. unit tasks, separate CLG for light and mech, and need for SOF, add unit SOP information, and include reference section after each section (4).
- 16 (11%) DELETIONS: eliminate PVS-5, AN-PAS-7 MAINT, PRC-77 operation; delete Principles of War (4); delete info for a "combat" guide; delete commo section; delete info on demo if info is included in mine packages; and PEWS, CONOPS, and Commo section (3).
- 7 (5%) MISCELLANEOUS: calculator could be damaged, make screws so they won't be damaged, (2), add more calculator functions (miles to kilos; yards to meters), make side-binder, grid scale worn easily, and wet paper is ineffective.

12. IF YOU ARE A COMBAT VETERAN, DO YOU FEEL THAT THE CLG WOULD HAVE BEEN AN ASSET IN COMBAT?

n = 101 (24%) respondents making 101 comments

79 (78%) POSITIVE:

"YES!" or "Yes, definately." (36)

"Yes, definate asset. Excellent aid."

"Yes, especially after fatigue sets in."

"Yes, details on hasty minefields, ambushes, all checklists, etc."

"Yes, on a number of occasions."

"Yes, for all personnel going into combat and have not committed to memory all the tasks needed to be a winner."

"Yes, somewhat, according to the missions."

"I like the concentration on planning outlines, rather than tasks a leader has to refer to 'on the move'."

"Concept is applicable to all MOS and grades. There should be a job aid tailored to many situations . . . would like one tailored for Bn/Bde cdrs and staff officers."

"Sure hope the Army adopts it. Nice work!"

"It is a very small unit leaders' book."

"Would be an asset in preparing for combat missions. However, it's a bit heavy especially for light infantry, but the format is good for adding or removing sections that are not needed by particular units."

"I thought every section was good."

"How can I get one?"

"It contains subject material that has longevity It's not going to change dramatically."

"I would use it periodically. Most of the time I feel that I would not have time to use it."

"I would have paid for one out of my own pocket had one been available."

"Are you kidding? Sure it would have helped tremendously!"

12. IF YOU ARE A COMBAT VETERAN, DO YOU FEEL THAT THE CLG WOULD HAVE BEEN AN ASSET IN COMBAT?

(Continued):

"I'm not sure, but I've talked to a few people, they would have loved to have something like this to use and assist them."

"It is a generic combat guide that should be versatile enough (with additional sections) to allow for specific type units, such as mech heavy with attached tanks."

"The whole book is fantastic and the leader's dream. It is like a small tactical manual with the missions."

"Yes, with aviation planning modules (recon) I would have been more effective when we flew 3-4 missions daily for 14 days. We used an aviation checklist, emergency section. You reacted and went right by the checklist."

"Need 2 versions of CLG - one for light infantry and one for mech. Guide needs to be smaller, should be size of Ranger handbook."

"There should be a similar book for riflemen, dragon gunners, automatic riflemen. This would have a short guide to insure they were doing the right things at the right time."

"The CLG would have been an asset, particularly during periods of planning. It was my experience that after having been in country on ops for several patrols that I did not need written instructions for most things. However, for those missions such as defend in place, withdrawal, etc., written instructions would have been helpful."

"Yes, but only in a secure area, and for reference only. Hopefully, senior leaders are not depending on notes or cheat sheets in a combat situation."

"Send this to the Armor School (DOTD and ARI). They will be interested in redoing their "Armor Leaders Combat Guide."

"While attending a tactical training course, I used this book as a ready reference during the classes to keep abreast of the training given and I'm sure that without it, the weekend would not have been as informative as it was."

"Yes, when one has the time it will help--good book."

"YES, with mentioned modifications."

12. IF YOU ARE A COMBAT VETERAN, DO YOU FEEL THAT THE CLG WOULD HAVE BEEN AN ASSET IN COMBAT?

(Continued):

"Most definately. It would have saved time in the thought process and aided completeness in several areas (missions and submissions)."

"Very useful."

"Yes, very much so."

"Yes, when one has the time it will help-good book."

"This book can be a great training aid in developing our leaders for combat. I have not seen a book like this since they stopped printing 'Pointers', that was so popular with WWII, Korea, and early Vietnam combat leaders."

"Yes, it would."

"Yes, but limited. In pre-combat this is a useful item, but in my two years of combat-you have limited time when the bullets are flying."

"YES, I think this document is useful and has a good level of resolution."

"YES, I would have used it for planning."

"Excellent aid for preparing myself for combat. During combat if provided with the time it would definately by a quick and easy reference. Overall, I feel the pocket size TC 7-1 (Squads Mech and Light) for info would be my preference, this manual tells you and shows by drawings how to perform a task or mission. The good features of both the CLG and TC 7-1 would be ideal. If sent to a conflict tomorrow, I would bring the following for references: GTAs, CLG, and TC 7-1."

"Good piece of work! I used it in a recent OPD to all the Bde officers on training systems (Doctrine, Tactics, planning). Target audience (LT's though all were present) stated that this guide would solve 75% of their problems with NCO leaders as well as ease their jobs as plt ldrs."

17 (17%) NEGATIVE:

"I'm concerned about keeping the thing current in a rapidly changing doctrine environment (AMTPs, ARTEPs, and PLT drills)."

12. IF YOU ARE A COMBAT VETERAN, DO YOU FEEL THAT THE CLG WOULD HAVE BEEN AN ASSET IN COMBAT?

(Continued):

"It is my opinion that CLG is a better training tool. It is not likely that one would have sufficient time to open a book for reference during the heat of battle. It is however, an excellent tool for use in preparing for combat through training and combat proficiency drills."

"No, the situation was not conventional - leaders made spur-of-the-moment decisions as required."

"A bit. It is elementary. Therefore, the skilled are not inclined to use it. The unskilled might not be able to follow it. By setting everything done on an elaborate step by step detail, you are likely to lose the more unskilled."

"Could be smaller and remain effective--how about compartmenting tasks specific to leadership positions. The squad leader's CLG may not be as detailed as PSG or PL. The Co Cdr's CLG would be more general."

"No value--a competent soldier/leader/squad leader/PSG doesn't need the CLG, e.g., the Ranger handbook is never utilized during execution."

"My experience is very limited, but I don't think so. Weak leaders will use it as a crutch. Though it contains PRINCIPLES OF WAR and LEADING IN COMBAT, it goes against the grain of Airland Battle emphasis on initiative, mission-type order, commanders intent by institutionalizing lock-step, inflexible-seeming rules and checklists. Good training tool, but I envision platoon leaders burying themselves in its pages, while the situation deteriorates. If I were a commanding a company, I'd make subordinates use it in training, but take it away upon deployment to a major free-play exercise (NTC) or combat."

"I don't think it would be an asset in combat (not combat vet). All people going to combat should be proficient at these skill levels and feel confident in doing their job on the spur of the moment without the aid of looking it up first. I do think it serves as a excellent training vehicle and would develop more confident and competent soldiers. A worthwhile endeavor as long as we don't need a soldier detailed to carry all our info and planning crutches in battle. Keep it small."

"I would attempt to make it thinner. It seemed to me that the items could be smaller (i.e., smaller letters) to make the book smaller."

12. IF YOU ARE A COMBAT VETERAN, DO YOU FEEL THAT THE CLG WOULD HAVE BEEN AN ASSET IN COMBAT?

(Continued):

"A handy tool to use as time is available; good checklists; application is critical; you don't always have time to look up data when in a critical life/death situation."

"I'm not sure how effective it will be in the heat of battle (or used). Are there plans for CLGs for 11C, 11H, and 11M specific tasks?"

"Maybe, depends."

"No, only in pre combat checks, but not in combat itself."

"So-so."

"With all the soldiers manuals, drill books, and mission training plans and how to fight FMs-is it necessary? Especially when the CG, TRADOC is asking if we don't already have too many books. Can it capture all the critical individual and collective tasks listed in these books?"

"NO, the best use of this book is planning, preparing, and presenting training. I think I would not have carried this as a platoon leader in combat. In combat, I see a book of this type at company and bn. I was a light infantry platoon leader. If I would have been mech I probably would have this book handy for reference."

"No, unit SOP and day to date combat provided training needed and task will not be all in CLG. Very good as a training aid to get up to speed, but will probably be the first thing left behind in combat."

"Would only be good as a training tool."

"No, you have to react in combat, not research."

5 (5%) EXTRA:

"Please design a CLG for company and field grades. The Army needs one badly. Co and field grade officers often experience the haze of fatigue and the responsibility for large numbers of soldiers. They could really use a tool such as the CLG."

"Its a good checklist and reminder to do the essential things, such as troop leading process, decision making, etc, It is also a good handy personal reference."

12. IF YOU ARE A COMBAT VETERAN, DO YOU FEEL THAT THE CLG WOULD HAVE BEEN AN ASSET IN COMBAT?

(Continued):

"Good guide to refresh your memory."

"While this would be helpful in a combat situation, this is a super vehicle for junior leaders to train their units."

"Reduce the size by half--leave only the critical squad/plt tasks."

APPENDIX C: COMBAT LEADERS' GUIDE: RIFLE PLATOON AND SQUAD FEEDBACK FORM

COMBAT LEADERS' GUIDE FEEDBACK FORM

DATA REQUIRED FOR THE PRIVACY ACT of 1974

1. **AUTHORITY:** Title 10, US Code, Section 3012 and AR 70-8
2. **PRINCIPAL PURPOSE(S):** To collect necessary information on the Combat Leaders' Guide, CLG 7-XX (Test). The CLG is a job aid designed to help leaders perform their combat mission.
3. **ROUTINE USE:** Strictly research purposes.

CERTIFICATE

I understand that my responses to these questions will be held in strict confidence and in no way will affect my promotion, pay, position, or status in the Army. This is to certify that I have read the Pivacy Act Statement and I voluntarily consent to answer these questions in this form for data collection purposes only. I understand that my name will not be used. A number will be assigned to the form for administrative and statistical control purposes only. Full confidentiality will be maintained in the processing of this form.

DATE

SIGNATURE

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

VOLUNTARY: Your participation in this research is strictly voluntary. There will be no effect on you for not providing all or any part of the information.

CLG SN _____

(INSIDE FRONT COVER OR TOP OF BINDER)

CALCULATOR SN _____

(BACK OF CALCULATOR)

PLACE THE COMPLETED FEEDBACK FORM IN THE ADDRESSED
ENVELOPE PROVIDED AND EITHER RETURN AS DIRECTED OR
MAIL THE FORM BACK TO ARI

COMBAT LEADERS' GUIDE FEEDBACK FORM

The purpose of this form is to obtain your opinions about the Combat Leaders' Guide (CLG). The CLG is a job aid designed to help leaders perform their combat mission. It contains 21 sections that support critical combat tasks. The CLG reminds leaders of specific steps or items within each critical combat task; aids leaders in command, control, and communication by using the same standard format for each task; and provides leaders with the flexibility to adjust it to fit their own situation and mission.

Please answer each question on this form. Since there are no right or wrong answers, choose the ONE answer that best describes your feelings about the question. On certain questions, you will be asked to write your answer. Please answer all questions on the paper provided.

NAME _____

UNIT/LOCATION _____

1. RANK (circle):

SGT SSG SFC MSG/1SG SGM/CSM 2LT 1LT CPT
MAJ LTC COL BG Other (specify) _____

2. COMPONENT (circle):

Active Army USAR ARNG Retired Discharged Other _____

3. TIME IN SERVICE (circle):

Less Than 1 Year 1-3 Years 4-6 Years 7-9 Years 10-12 Years
13-15 Years 16-18 Years 19-20 Years Over 20 Years

4. CURRENT POSITION (circle):

Team Leader Squad Leader Platoon Sergeant Platoon Leader
Company Cdr Battalion Cdr Brigade Cdr Other (specify) _____

5. CIVILIAN EDUCATION (circle):

Some High School GED High School 2 Year College Degree
4 Year College Degree Some Graduate Work Graduate Degree Doctorate

6. HAVE YOU HAD ANY COMBAT EXPERIENCE? IF SO, LIST YOUR POSITION, UNIT, LOCATION, AND DATE(S).

POSITION UNIT LOCATION DATE(S)

PART 1: CIRCLE THE NUMBER THAT BEST DESCRIBES YOUR ANSWER.

- | | | | | | |
|--|------------------------|----------------|------------|-----------------------|------------------------------|
| 1. How much do you like the CLG? | 1
Like
Very Much | 2
Like | 3
So-So | 4
Dislike | 5
Dislike
Very Much |
| 2. How accurate is the information in the CLG? | 1
Very
Accurate | 2
Accurate | 3
So-So | 4
Inaccurate | 5
Very
Inaccurate |
| 3. How complete is the information in the CLG? | 1
Very
Complete | 2
Complete | 3
So-So | 4
Incomplete | 5
Very
Incomplete |
| 4. How useful is the CLG? | 1
Very
Useful | 2
Useful | 3
So-So | 4
Not
Useful | 5
Not Useful
At All |
| 5. How clear is the information in the CLG? | 1
Very
Clear | 2
Clear | 3
So-So | 4
Unclear | 5
Very
Unclear |
| 6. How correct and up-to-date is the information in the CLG? | 1
Very
Correct | 2
Correct | 3
So-So | 4
Incorrect | 5
Very
Incorrect |
| 7. How critical would the tasks in the CLG be to your combat mission? | 1
Very
Critical | 2
Critical | 3
So-So | 4
Not
Critical | 5
Not Critical
At All |
| 8. How effective, overall, do you think the CLG is? | 1
Very
Effective | 2
Effective | 3
So-So | 4
Ineffective | 5
Very
Ineffective |
| 9. How important would the CLG be to your combat mission? | 1
Very
Important | 2
Important | 3
So-So | 4
Not
Important | 5
Not Important
At All |
| 10. How important do you think the CLG will be to the overall combat effectiveness of your unit? | 1
Very
Important | 2
Important | 3
So-So | 4
Not
Important | 5
Not Important
At All |
| 11. How sure do you feel that you will use the CLG in combat? | 1
Very
Sure | 2
Sure | 3
So-So | 4
Not
Sure | 5
Not Sure
At All |
| 12. How much do you think you will like using the CLG? | 1
Like
Very Much | 2
Like | 3
So-So | 4
Dislike | 5
Dislike
Very Much |
| 13. How easy or hard is the CLG to use? | 1
Very
Easy | 2
Easy | 3
So-So | 4
Hard | 5
Very
Hard |
| 14. Did you find that it is easier to perform your tasks when using the CLG? | 1
Very
Easy | 2
Easy | 3
So-So | 4
Hard | 5
Very
Hard |

Continued

	1	2	3	4	5
15. How often would you expect to use the CLG on the average in combat?	Many times a day	Several times a day	Once a day	Once a week	Once a month
16. Do the tasks in the CLG provide you with enough information to do them well?	1 Very Well	2 Well	3 So-So	4 Poorly	5 Very Poorly
17. The Army should publish the CLG as a standard Army publication.	1 Strongly Agree	2 Agree	3 So-So	4 Disagree	5 Strongly Disagree
18. How do you like the organization of the sections in the Table of Contents?	1 Like Very Much	2 Like	3 So-So	4 Dislike	5 Dislike Very Much
19. How useful is the Table of Contents for finding a task?	1 Very Useful	2 Useful	3 So-So	4 Not Useful	5 Not Useful At All
20. How useful is the page numbering system?	1 Very Useful	2 Useful	3 So-So	4 Not Useful	5 Not Useful At All

PART 2: CIRCLE THE NUMBER THAT BEST DESCRIBES YOUR ANSWER.

	1 Not Useful At All	2 Not Useful	3 So-So	4 Useful	5 Very Useful
1. Using the CLG as an aid in performing your combat mission.	1	2	3	4	5
2. Using the CLG as an aid during training exercises.	1	2	3	4	5
3. Using the CLG as a desk reference.	1	2	3	4	5
4. Using the CLG to prepare instructional materials.	1	2	3	4	5
5. Using the CLG as a self-training aid.	1	2	3	4	5
6. Using the CLG as a training aid.	1	2	3	4	5
7. Format in which the tasks in the CLG are written.	1	2	3	4	5
8. Calculator included in the CLG.	1	2	3	4	5
9. Protractor included in the CLG.	1	2	3	4	5
10. 1/25,000 grid included in the CLG.	1	2	3	4	5
11. 1/50,000 grid included in the CLG.	1	2	3	4	5
12. Extra note and grid pages in the CLG	1	2	3	4	5
13. Compact size of the CLG.	1	2	3	4	5
14. Front and back covers of the CLG.	1	2	3	4	5
15. Other (specify) _____	1	2	3	4	5

PART 3: CIRCLE THE NUMBER OR WORD THAT BEST DESCRIBES YOUR ANSWER.

	1 Very Confident	2 Confident	3 So-So	4 Not Confident	5 Not Confident At All
1. How confident are you that you would be able to do all the tasks included in the CLG WITHOUT using the CLG?	1	2	3	4	5
2. How confident are you that you would be able to perform all the tasks in the CLG USING the CLG?	1	2	3	4	5
3. How confident are you when using your own notes or "cheat sheets" to perform the tasks?	1	2	3	4	5
4. How confident are you when using the CLG?	1	2	3	4	5
5. Have you ever made notes or "cheat sheets" like the CLG for your own use?	Yes	No			
6. Do you presently use any kinds of notes or "cheat sheets" while performing your combat mission?	Yes	No			

PART 4: CIRCLE THE NUMBER THAT BEST DESCRIBES YOUR ANSWER.

	1 Very Hard To Use	2 Hard To Use	3 So-So	4 Easy To Use	5 Very Easy To Use
1. Calculator included in CLG to perform your tasks.	1	2	3	4	5
2. 1/25,000 Grid included in CLG to perform your tasks.	1	2	3	4	5
3. 1/50,000 Grid included in CLG to perform your tasks.	1	2	3	4	5
4. Protractor included in CLG to perform your tasks.	1	2	3	4	5
5. Frnt and back covers of the CLG.	1	2	3	4	5