AD-A251 845

Effectiveness of Contractor Mission Instructors in the 160th Special Operations Aviation Regiment Basic Mission Qualification Course

Carl R. Bierbaum, D. Michael McAnulty,
and Kenneth D. Cross

Anacapa Sciences, Inc.

DTIC
ELECTE
MAY 11 1992
S B D

Field Unit at Fort Rucker, Alabama
Charles A. Gainer, Chief

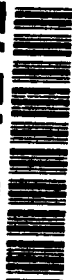**Training Systems Research Division**
Jack H. Hiller, Director

April 1992

United States Army
Research Institute for the Behavioral and Social Sciences

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

MICHAEL D. SHALER
COL, AR
Commanding

Research accomplished under contract
for the Department of the Army

Anacapa Sciences, Inc.

Technical review by

Dennis K. Leedom
John E. Stewart
Robert H. Wright

REPORT DOCUMENTATION PAGE

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE 1992, April	3. REPORT TYPE AND DATES COVERED Interim Report Jul 90 - Dec 91

4. TITLE AND SUBTITLE

Effectiveness of Contractor Mission Instructors in the 160th Special Operations Aviation Regiment Basic Mission Qualification Course

6. AUTHOR(S)

Bierbaum, Carl R.; McAnulty, D. Michael; and Cross, Kenneth D.

5. FUNDING NUMBERS

MDA903-87-C-0523
63007A
795
3309
C06

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Anacapa Sciences, Inc.
P.O. Box 489
Fort Rucker, AL 36362-5000

8. PERFORMING ORGANIZATION REPORT NUMBER

--

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

U.S. Army Research Institute
Fort Rucker Field Unit
ATTN: PERI-IR
Fort Rucker, AL 36362-5354

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

ARI Research Note 92-30

11. SUPPLEMENTARY NOTES

Contracting Officer's Representative, Charles A. Gainer

12a. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release;
distribution is unlimited.

12b. DISTRIBUTION CODE

--

13. ABSTRACT (Maximum 200 words)

In response to a request from the Technology Applications Program Office, U.S. Aviation Systems Command, researchers conducted a training effectiveness evaluation of basic mission training for aviators assigned to the 160th Special Operations Aviation Regiment. The objective of the evaluation was to compare effectiveness of contractor and military instructors. Three classes of students attending the basic mission qualification training course, conducted by the Selection and Training Detachment, were evaluated. Student demographic data were used to divide the classes into two groups. The grouping was based on flight time in assigned aircraft, total flight time, rank, age, highest qualification held, and experience with night vision goggles. One group was trained by contractor instructors and one group was trained by military instructors. Written examinations, flight evaluations, and part-task trainer procedure evaluations were administered throughout the course to compare the performance of the two groups. The instructors were rated by the students and an independent observer. Researchers found no significant differences between the training effectiveness of contractor and military instructors.

14. SUBJECT TERMS

Special operations aviation training
Basic mission qualification course
Contractor mission instructors

(Continued)

15. NUMBER OF PAGES

83

16. PRICE CODE

--

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	Unlimited

14.   SUBJECT TERMS (Continued)

MH-6 training
Instructional assessment
Flight training academic examination
Flight evaluation gradeslip
Student self-appraisal

Accession For	
NTIS GRA&I	☑
DTIC TAB	☐
Unannounced	☐
Justification	
By	
Distribution/	
Availability Codes	

Dist	Avail and/or Special
A-1	

ACKNOWLEDGMENTS

EFFECTIVENESS OF CONTRACTOR MISSION INSTRUCTORS IN THE 160TH SPECIAL OPERATIONS AVIATION REGIMENT BASIC MISSION QUALIFICATION COURSE

CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AVSCOM   Aviation Systems Command
AWC   Adverse Weather Cockpit
BMQ   Basic Mission Qualification
BMT   Basic Mission Training
CMI   Contractor Mission Instructor
CMS   Cockpit Management System
FARP   Forward Arming and Refueling Point
FLIR   Forward Looking Infrared
IP   Instructor Pilot
LAFS   Light Airborne FLIR System
MMI   Military Mission Instructor
NVG   Night Vision Goggles
S&T   Selection and Training Detachment
SATCOM   Satellite Communication(s)
SERE   Survival, Evasion, Resistance, and Escape
SME   Subject Matter Expert
SOAR   Special Operations Aviation Regiment
VFR   Visual Flight Rules

EFFECTIVENESS OF CONTRACTOR MISSION INSTRUCTORS
IN THE 160TH SPECIAL OPERATIONS AVIATION REGIMENT
BASIC MISSION QUALIFICATION COURSE

Introduction

The Selection and Training (S&T) Detachment of the 160th
Special Operations Aviation Regiment (SOAR) at Fort Campbell,
Kentucky, is responsible for conducting basic mission
qualification (BMQ) training of prospective special
operations crewmembers. The BMQ course consists of a
survival, evasion, resistance, and escape (SERE) training
phase, an academic phase, and a flight phase. The SERE
training phase is conducted at Fort Bragg, North Carolina, by
SERE training personnel and is only monitored by the S&T
staff. Students must complete the SERE training phase before
entering the academic phase.

During the academic phase, students take classes on
subjects common to all types of special operations aircraft.
The nonflight subject classes of the academic phase are
taught by subject matter experts (SMEs) of the specific field
(i.e., military intelligence personnel teach intelligence
classes and Staff Judge Advocate personnel teach wills and
power of attorney classes). The requirement to teach the
common flight subjects is passed to the operational units and
a unit aviator is tasked to teach the class.

During the flight phase, students receive training in a
specific type of aircraft. Operational units are tasked to
**provide the instructor pilots (IPs) and the aircraft to train the
BMQ students and to conduct flight checkrides.**

The S&T Detachment has traditionally utilized
operational unit instructor pilots as mission
instructors for BMQ training. The operational unit IPs are
fully qualified to accomplish the BMQ training. However, the
requirement to conduct BMQ training in addition to normal
unit duties places an excessive burden on the IPs and reduces
the availability of trained aviators for operational
missions. In addition, when the IPs are not available
because of operational missions, student training is
interrupted.

A potentially effective method for addressing the IP
availability and overload problems is to use civilian
contractor mission instructors (CMIs) for BMQ training.
Because the S&T Detachment had not previously used CMIs, the
Commander, 1st Special Operations Command (SOCOM) established
the requirement to evaluate the feasibility and effectiveness

1

of employing CMIs to accomplish the basic mission training currently being conducted by operational unit IPs. Accordingly, the Aviation Systems Command (AVSCOM) requested support from the U.S. Army Research Institute Fort Rucker Field Unit to conduct a training effectiveness evaluation. The Fort Rucker Field Unit tasked Anacapa Sciences to develop and conduct the evaluation.

Objective

The objective of this research was to determine whether CMIs are as effective as military mission instructors (MMIs) in teaching the academic phase and the flight phase of the special operations BMQ course.

Method

Review and Organize Materials

The first task in the evaluation of the BMQ training effectiveness was to review the existing training materials. Subsequent tasks could be accomplished only after gaining a clear understanding of the training objectives and the methods currently being used to accomplish the objectives. With the assistance of the S&T Detachment and contractor personnel, the reference materials listed in Appendix A were reviewed and organized into binders. In addition, materials requiring revision and subjects to be taught by the contractor personnel were identified. The materials to be revised were given to the S&T Detachment personnel and subsequently revised by the CMIs.

Evaluation Instruments

A total of 39 evaluation instruments were developed to perform the research (see Appendix B). A two-section questionnaire was developed to gather background data about the students (see Appendix C). Section I contains questions about personal characteristics (e.g., age, rank) and Section II contains questions about flight experience (e.g., flight time, specialized training). The last item in Section II is a self-appraisal of the individuals' proficiency in performing 11 flight tasks. The item requires the students to indicate their proficiency on a scale of 1 to 9, with 1 indicating not proficient and 9 indicating extremely proficient. Aviators who had no experience on a task were instructed to enter a zero.

2

Two assessment forms were developed to collect student feedback on the quality of instruction and instructors. The assessment forms have a rating scale of 1 to 5, with 1 indicating poor and 5 indicating excellent. The academic phase assessment form was divided into two major parts (see Appendix D). Part 1 contains items for assessing training materials and the physical environment, instructional aspects, and instructor characteristics. Part 2 contains items for making overall comments about the academic phase.

The flight phase assessment form was divided into three parts (see Appendix E). Part 1 is a self-appraisal of the individuals' proficiency in performing the same 11 flight tasks that were assessed in the background questionnaire. Part 2 contains items about materials, equipment, and instructional aspects. Part 3 contains items for making overall comments about the flight phase.

An observer assessment form for the academic instruction was developed with the same 1 to 5 rating scale used for the student assessment form. The observer form was divided into three major sections (see Appendix F). Section A contains items about instructional aspects, Section B contains items about organizational aspects, and Section C contains items about instructor quality.

Seven academic phase subjects were identified for the CMIs to teach (see Table 1). A 118-question academic examination was developed to assess the students' knowledge in each of the seven subjects. The academic examination contains multiple choice, multiple check, matching, fill in the blank, and short answer items. The number of items on

Table 1

Academic Examination

Section	Subject	Number of items
I	Shipboard Operations	20
II	Visual Flight Rules	17
III	Forward Arming and Refueling Point Operations	13
IV	160th Local Flying Area	21
V	CAM Reg 95-1/Waivers	7
VI	Environmental Operations	25
VII	Mission Planning	15

each section of the examination ranges from 7 to 25. The examination was administered to the students at the end of the academic phase, but each section was scored separately so that each subject was equally weighted in the overall grade.

An evaluation gradeslip was developed for each of the flight checks and performance evaluations. A rating scale of 0 - 7, with 0 indicating unsatisfactory performance and 7 indicating exceptional performance was used for all gradeslips. Figure 1 is an example of the gradeslip. The gradeslips contain space for rating all the major tasks required to perform an operation and for making an overall evaluation of student performance. Eight gradeslips were developed for the CH/MH-47 (see Appendix G), eight gradeslips were developed for the UH/MH-60 (see Appendix H), and four gradeslips were developed for the MH-6 (see Appendix I).

Seven examinee instruction handouts were developed and distributed to ensure that all students received the same information about specific flight and hot bench operations. An instructor checklist was developed for the BMQ mission briefing for each of the aircraft to give the instructor guidance in performing the evaluation.

Finally, new written examinations were developed for the light airborne forward looking infrared (FLIR) system (LAFS), the MH-6 aircraft system, and the MH-6 aircraft loading classroom instruction given during the flight phase. In addition, all the operator manual (-10) examinations and a UH-60 cockpit management system (called the CMS-80) examination currently in use in the BMQ course were retained for the MMI-CMI comparison.

Personnel

Six CMIs and 18 MMIs provided the instruction. All the CMIs had served with special operations aviation units before leaving the Army. The MMIs were IPs presently assigned to the 160th operational units. Checkrides were administered by IPs from the 160th units and the academic independent observers were SMEs from the 160th.

Students from Classes 91-02, 91-03, and 91-04 of the BMQ course participated in the evaluation. The number of students in each class were 13, 14, and 11, respectively. All the students were male and in the active Army, and all had completed the SERE phase of BMQ training. In addition, 34 line unit pilots took the academic examination as a baseline measure of academic performance; all the pilots were assigned to the 160th SOAR at the time they took the academic examination.

UH-60 BASIC NAVIGATION EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

1. Oral Examination	UNSAT	1	2	3	4	5	6	7
2. Long-Range Mission Planning	UNSAT	1	2	3	4	5	6	7
3. VFR Flight Planning	UNSAT	1	2	3	4	5	6	7
4. DD Form 365-4	UNSAT	1	2	3	4	5	6	7
5. DA Form 4887-R	UNSAT	1	2	3	4	5	6	7
6. Preflight Inspection	UNSAT	1	2	3	4	5	6	7
7. Engine Start, Runup	UNSAT	1	2	3	4	5	6	7
8. Pilotage and Dead Reckoning	UNSAT	1	2	3	4	5	6	7
9. Long-Range Navigation (200 NM)	UNSAT	1	2	3	4	5	6	7
10. Checkpoint Times (± 2 Min.)	UNSAT	1	2	3	4	5	6	7
11. Fuel Management Procedures	UNSAT	1	2	3	4	5	6	7
12. Emergency Procedures (Oral)	UNSAT	1	2	3	4	5	6	7
13. Cockpit Teamwork	UNSAT	1	2	3	4	5	6	7
14. VHIRP	UNSAT	1	2	3	4	5	6	7
15. Emergency Procedures for NVG Failures	UNSAT	1	2	3	4	5	6	7
16. Target Time (± 30 Sec.)	UNSAT	1	2	3	4	5	6	7
17. Before Landing Check	UNSAT	1	2	3	4	5	6	7
18. After Landing Tasks	UNSAT	1	2	3	4	5	6	7
19. Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ]   Training Hour
Level _____

Figure 1. Example of a performance evaluation gradeslip.

Procedures

Academic phase. During the course orientation class, each student completed the background questionnaire. The original research design stipulated that one half of each class was to be taught by MMIs and the other half was to be taught by CMIs, but the MMIs were not available for the academic phase of Class 91-02 because of Operation Desert Storm. The research design was changed so that CMIs taught the academic phase for Classes 91-02 and 91-04, and the MMIs taught the academic phase for Class 91-03. However, a member of the S&T staff taught the mission planning topic for Class 91-02 because a CMI was not available. Therefore, student performance on the mission planning section of the examination was analyzed as part of the evaluation.

The academic examination was administered to the students at the completion of the academic phase. Each of the six academic subjects taught by CMIs and MMIs was evaluated by an observer to assess the quality of instruction. In addition, the students completed an instructor assessment form for each subject.

The academic examination was also administered to 34 pilots assigned to the 160th SOAR battalions. The examination was administered to the line pilots to develop a baseline for evaluating the student examinations. Three line pilots did not complete the examination and were eliminated from the baseline sample.

Flight phase. During the flight phase, each class was divided into a CMI and an MMI group. Students were assigned to one of four aircraft tracks: the AH-6, MH-6, UH-60, or the CH-47. The UH-60 and CH-47 track flight phases have two major segments. The first segment is basic navigation and the second segment is system training. Although the flight phase is conducted mostly in the aircraft, a few hours are spent in the classroom to cover specific aircraft systems.

During the flight phase, both written and performance evaluations were conducted. Table 2 lists the evaluations used for the UH-60 and the CH-47 flight phase topics. A part-task trainer (hot bench) was used to evaluate student performance on the CMS-80, the all weather cockpit (AWC) system, and the Omega navigation system. Although the subsystems were also evaluated during flight checks, a more complete check of student performance can be accomplished on the subsystem hot bench.

6

Table 2

UH-60/CH-47 Flight Phase Evaluations

UH-60 evaluation topic	CH-47 evaluation topic	Type evaluation
Commander's Evaluation	Commander's Evaluation	Flight Check
Basic Navigation	Basic Navigation	Flight Check
LAFS		Written
CMS-80		Written
CMS-80 Procedure	AWC Procedure	Hot Bench Performance
Omega Procedure	Omega Procedure	Hot Bench Performance
LAFS		Flight Check
CMS-80 Flight	AWC Flight	Flight Check
BMQ Mission Briefing	BMQ Mission Briefing	Briefing Performance
BMQ	BMQ	Flight Check
-10 Exam	-10 Exam	Written

Note. UH = utility helicopter; CH = cargo helicopter; LAFS = light airborne forward looking infrared system; CMS = cockpit management system; BMQ = basic mission qualification.

The MH-6 and AH-6 flight phases also have two major segments. The first segment is pilot transition training into the different aircraft and the second segment is basic navigation training. The special systems on the aircraft and gunnery are taught by the aviator's assigned unit after completing the S&T Detachment basic mission training (BMT). No CMI was available to conduct AH-6 training; therefore, it was not part of this evaluation. Table 3 lists the evaluations used for the MH-6 flight phase topics.

All written examinations and hot bench evaluations were given at the end of the flight phase classroom instruction. Flight checks were administered when the student had accumulated a specified number of flight hours or had reached a specified level of proficiency. Before each checkride, the mission instructors evaluated the students' progress and completed a putup gradeslip.

Table 3

MH-6 Flight Phase Evaluations

Evaluation topic	Type evaluation
Transition Flight Maneuvers	Flight Check
Aircraft Systems	Written
Aircraft Loading	Written
-10 Exam	Written
NVG Qualification Evaluation	Flight Check
BMT Mission Briefing	Briefing Performance
BMT	Flight Check

Note. MH = mission helicopter; BMT = basic mission training; NVG = night vision goggles.

At the end of the flight phase, the students completed an assessment form (see Appendix E) that included a self-appraisal of flight task proficiency and an evaluation of the flight phase instructional quality. The students were also given the opportunity to write anonymous comments about the course and instructors.

Results

This research addressed the question of whether CMIs are as effective as MMIs in teaching the BMQ course by examining the performance of the academic and flight instructors and by examining the performance of their students. Three types of data are presented in the Results section. First, data collected about the BMQ students' background are examined on the basis of their class and whether they were instructed by a CMI or an MMI. These data are important to consider when comparing the performance of students trained by CMIs and MMIs; differences in student academic and flight performance could be a function of their instructors or of pre-existing differences between the students in each group.

Second, data are presented about the academic phase of training, in which each class was taught by either MMIs or CMIs. These data include student performance on academic examinations, student ratings of instructor performance, and observer ratings of instructor performance. The third type

8

of data were collected during the flight phase of training, in which each class was divided into MMI and CMI training groups. These data include the students' performance on flight phase written examinations, on system hot bench tests, and on flight evaluations (putup and checkride grades). The students also provided ratings of instructor performance during the flight phase and a self-appraisal of their proficiency levels on various flight tasks.

The research results presented in this section are primarily descriptive rather than inferential. Statistical tests were planned for all the data and statistical results are presented where appropriate (e.g., for the academic examination results). However, the sample sizes were smaller than expected and equal numbers of students could not be maintained in each group for many variables. Both of these problems limit the use of statistical tests. For many individual maneuvers, the sample sizes are too small to detect a significant difference if it exists. However, the consistency of the descriptive data across all phases of training and all types of measures is sufficient to answer the primary question about the effectiveness of CMIs in teaching the BMQ course.

Student Demographics

Each of the classes that participated in this research received academic instruction from either MMIs (Class 91-03) or CMIs (Classes 91-02 and 91-04). Because there was no assignment to training groups during the academic phase, the differences in the backgrounds of each class could affect the students' academic performance as much or more than the type of instruction they received. Fortunately, the students in each of the classes were reasonably similar in most of their background characteristics (see Table 4). The largest differences were in the assigned aircraft and in the students' ranks. Half of the students in Class 91-03 were assigned to the AH-6 and none to the MH-6; for the other two classes, just less than half the students were divided almost equally between the AH-6 and MH-6. However, the differences in assigned aircraft probably had little effect on the results because the academic topics were taught to the entire class (i.e, they were not aircraft specific) and the aircraft assignment was used to divide the students into MMI and CMI groups for the flight phase of training. In addition, the AH-6 students were not evaluated during the flight phase because an AH-6 CMI was not available to instruct the course.

9

Table 4

Demographic Data of Student Groups During Academic Instruction

Characteristic	CMI students Class 91-02 (n = 13)	MMI students Class 91-03 (n = 14)	CMI students Class 91-04 (n = 13)
Rank: Number			
CW2	3	9	8
CW3	4	1	1
CW4	1	2	1
CPT	5	2	1
MAJ	0	0	2
Age			
Median	32	31	30
Range	26 – 41	27 – 44	26 – 41
Aviation experience (years)			
Median	9	7	5
Range	6 – 19	3 – 21	1 – 21
Primary aircraft			
AH-6	3	7	2
MH-6	3	0	4
CH-47	4	4	3
UH-60	3	3	4
Total flight hours in primary aircraft			
Median	900	650	730
Range	130 – 3000	32 – 3700	60 – 2700
Total flight hours			
Median	1600	1500	1500
Range	800 – 4000	880 – 5350	610 – 4500
Total NVG flight hours			
Median	100	150	170
Range	45 – 450	42 – 450	50 – 700
Number of NVG hours last 12 months			
Median	15	20	40
Range	1 – 200	0 – 80	0 – 100

Note. CMI = contractor mission instructor; MMI = military mission instructor; CW = chief warrant; CPT = captain; MAJ = major; AH = attack helicopter; MH = mission helicopter; CH = cargo helicopter; UH = utility helicopter; and NVG = night vision goggle.

There were also large differences in the students'
ranks: More than 60% of the students in Classes 91-03 and
91-04 but only 23% of the students in Class 91-02 held the
rank of CW2. Because rank is correlated with experience,
students in Classes 91-03 and 91-04 had fewer years of
aviation experience, fewer total flight hours, and fewer
flight hours in the assigned aircraft. The class differences
in flight experience are reversed for the NVG flight hour
variables, but the accumulation of NVG flight time is greatly
affected by the type of aircraft flown, by duty assignments
within a unit, and by the mission of the aviator's unit.

Although there are differences between the classes on
the background variables, the magnitude of the differences is
not large enough to be a major concern in analyzing the
students' performance as a function of whether they were
instructed by MMIs or CMIs. In some cases, there are
mitigating considerations. For example, the low minimum and
median flight hours in the assigned aircraft for Class 91-03
is partly a function of the number of AH-6 students. If a
student was assigned to the AH-6, which is flown only for
special operations, flight time in the OH-58 was included in
the assigned aircraft flight hour data as the most similar
type of experience. Some of the AH-6 students had very
little OH-58 flight time even though they had a large number
of total flight hours (cf. the total flight hours row in
Table 4). In all cases, the variability within groups is
much greater than the variability between groups.

The MH-6, CH-47, and UH-60 students in classes 91-02 and
91-03 were divided into CMI and MMI groups for flight
training on the basis of their assigned aircraft and
backgrounds to minimize pre-existing differences between the
groups. The assignment to groups was generally successful
(see Table 5), but the small number of students in each group
(8 in the MMI group and 9 in the CMI group after eliminating
the AH-6 students) limited how well the groups could be
equated on all the background variables. The primary
grouping criteria were assigned aircraft, flight time in the
assigned aircraft, NVG experience during the last 12 months,
and years of aviation experience. As a result, the median
and range for the two groups are very similar for these
variables and somewhat less similar for the other variables.
However, there are no differences between the two groups that
are likely to influence their performance during the flight
phase of training.

Table 5

Background Data of MMI and CMI Groups During the Flight Phase

Characteristic	MMI student group ($\underline{n}$ = 8)	CMI student group ($\underline{n}$ = 9)
Rank (number)		
CW2	3	2
CW3	3	2
CW4	1	2
CPT	1	3
Age		
Median (years)	31.5	34
Range	28 - 41	26 - 44
Aviation experience		
Median (years)	9	9
Range	4 - 17	4 - 21
Assigned aircraft		
MH-6	1	2
CH-47	4	4
UH-60	3	3
Flight hours in assigned aircraft		
Median	975	950
Range	350 - 2500	35 - 3700
Total flight hours		
Median	1600	2150
Range	1019 - 3000	800 - 5350
NVG flight hours		
Median	130	260
Range	42 - 325	70 - 450
NVG flight hours last 12 months		
Median	20	15
Range	2 - 125	0 - 200

Note. MMI = military mission instructor; CMI = contractor mission instructor; CW = chief warrant; CPT = captain; MH = mission helicopter; CH = cargo helicopter; UH = utility helicopter; and NVG = night vision goggle.

12

Academic Phase Results

Academic examination performance. There was a significant main effect for groups on the academic examination, $F_{(3, 65)} = 6.15$, $p < .001$. Scheffé tests ($p < .05$) indicated that Classes 91-03 and 91-04 performed significantly better than the baseline group of operational aviators; there were no significant differences in academic performance between the classes taught by MMIs and CMIs. In all three of the classes, the average performance level was in the mid-80s with no scores less than 77% correct (see Table 6). In contrast, the baseline aviators averaged only 75.6% correct with a range of 54% to 98%.

The test results, especially the range of scores for the baseline aviators, indicate that the academic examination is challenging but that all the items can be answered correctly. There were significant differences in performance on the six sections of the academic examination, $F_{(5, 325)} = 49.20$, $p <.0001$. Average performance was best on the forward arming and refueling point (FARP) section (92.0% correct) and worst on the local flying area section (70.7%). Scheffé tests ($p < .05$) indicated that neither the CAM-95 waivers (84.8%) and environmental (82.4%) sections nor the visual flight rules (78.6%) and the shipboard operations (77.0%) were significantly different from each other, but each of these pairs were different from all the other sections.

There was also a significant interaction between the examination sections and the four groups [$F_{(15, 325)} = 8.63$, $p <.0001$]. Most of the significant differences between cells involved the baseline aviators' performance on the local flying area section of the examination (see Figure 2). The only significant interaction of practical interest involved performance on the shipboard operations section of the exam:

Table 6

Academic Examination Scores

	n	Mean	SD	Range
Baseline	31	75.6	13.9	54 – 98
Class 91-02 (CMI)	13	83.1	3.6	78 – 89
Class 91-03 (MMI)	14	84.7	3.5	77 – 90
Class 91-04 (CMI)	11	88.4	2.5	85 – 92
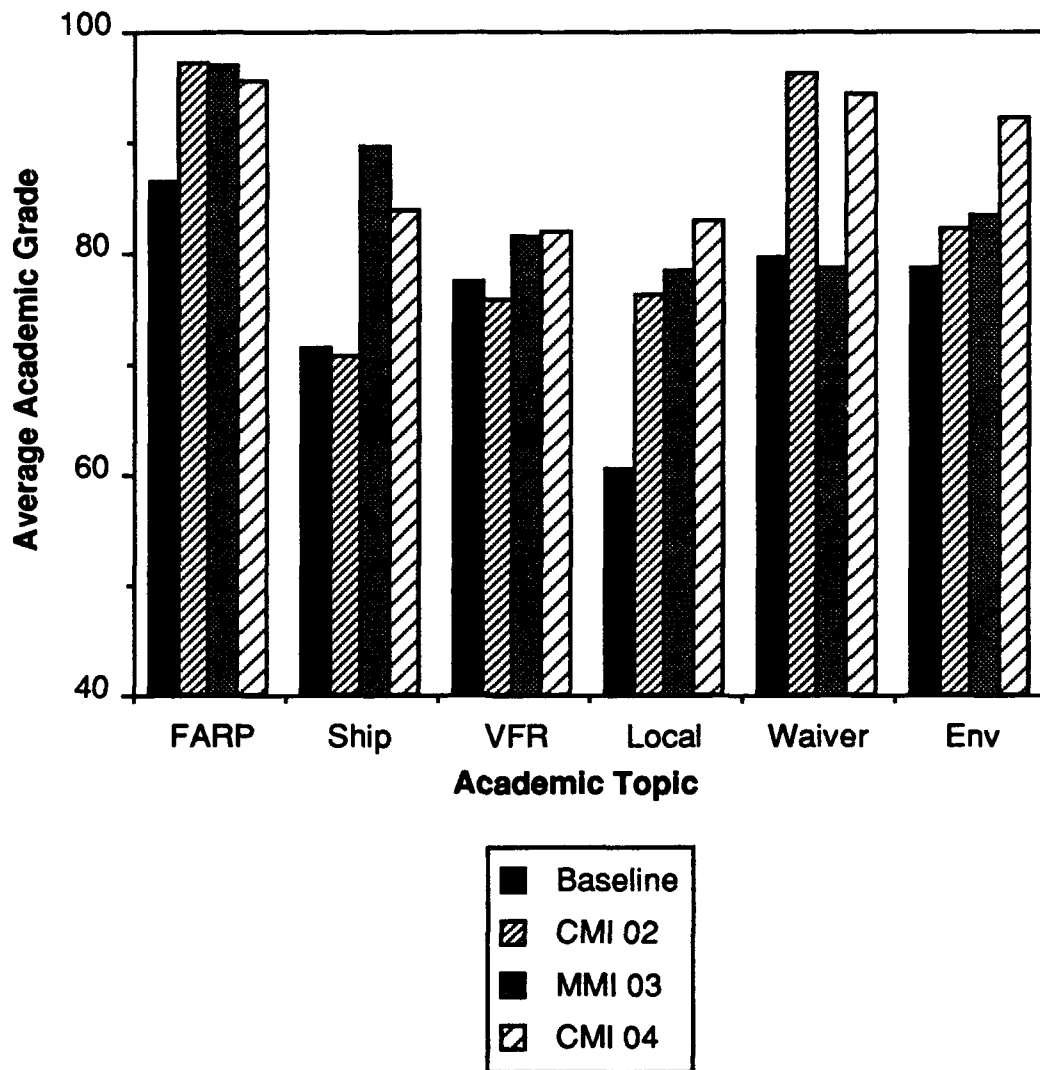
Figure 2. Average academic grade for each topic for each group (FARP = forward arming and refueling point; VFR = visual flight rules; Env = environmental).

The first CMI class scored significantly lower (mean = 70.8% correct) than the MMI class (mean = 89.5%), but the second CMI class score (mean = 83.9%) was not significantly different from either of the first two classes.

Student assessments. Each student was asked to assess various aspects (see Appendix D) of each academic session that was taught by a CMI in Class 91-02 and an MMI in Class 91-03. Figures 3 and 4 show the average MMI and CMI ratings for training materials, instructional aspects, and instructor
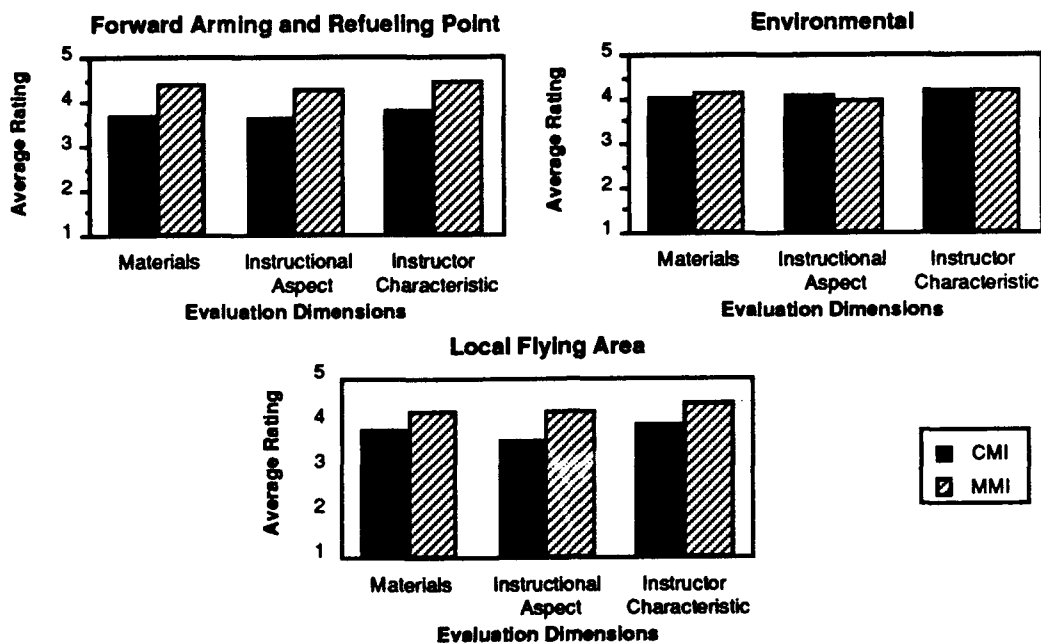
Figure 3. Student ratings of environmental, forward arming
and refueling point, and local flying area instruction.
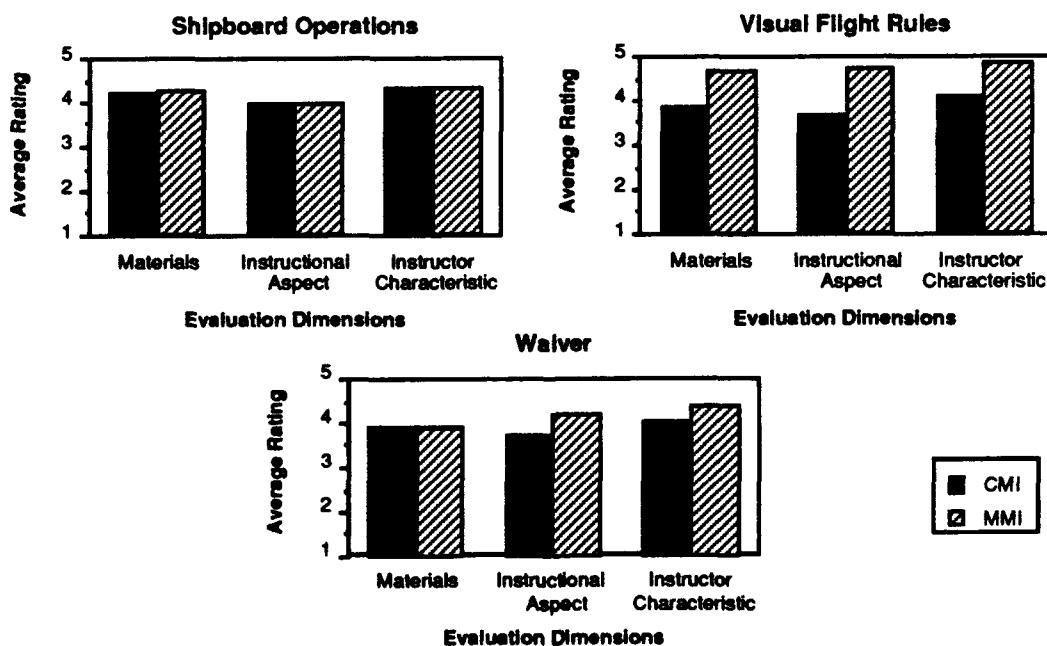
Figure 4. Student ratings of shipboard operations, visual
flight rules, and waiver instructions.

characteristics for each academic topic. The MMI and CMI ratings are nearly identical for the environmental and shipboard operations topics; the student ratings for the other topics slightly favor the MMIs over the CMIs. However, the differences are relatively small and all the ratings are near a value of 4, which was defined as very good instruction. None of the academic instructors received a rating of less than 3 (good instruction).

The student ratings were consistent across the three evaluation dimensions. That is, if the MMIs were rated higher than the CMIs on materials for a topic (e.g., VFR), they were also rated higher on instructional aspects and instructor characteristics for that topic. Although the differences are very small (see Figure 3 and Figure 4), the instructor characteristic dimension was rated slightly higher and the instructional aspect dimension was rated slightly lower than the other dimensions across both types of instructors.

Observer assessments. Each academic class presentation was also evaluated by an independent observer on the training materials used, instructional aspects, and instructor characteristics using the same scale of 1 = poor to 5 = excellent. Because there was only one rating per topic per group, the observer ratings are averaged across topics. In contrast to the student assessments, the observer gave slightly higher ratings to the CMI instructors than to the MMI instructors (see Figure 5), but both types of instructors were rated as being good to very good (i.e., ratings between 3 and 4). The rating pattern was consistent across all three dimensions.

Flight Phase Results

A Commander's Evaluation checkride was given to the CH-47 and UH-60 students before beginning the flight phase of BMQ training. The Commander's Evaluation mean score was 4.32 (SD = .52) for the MMI students and 4.30 (SD = .53) for the CMI students, indicating that the two groups were equally proficient at the beginning of training. The MH-6 students had to undergo transition training so they were not given a Commander's Evaluation checkride.

Written examinations. Five written examinations were administered during the flight phase of training, but not all the students took each examination because of assigned aircraft type, scheduling problems, and the anticipated unit assignment of the students (not all units use the same
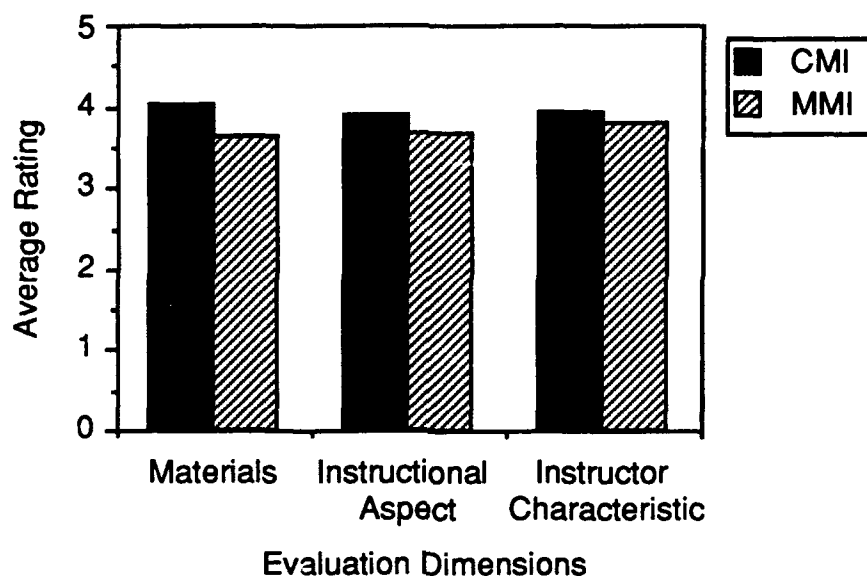
Figure 5. Observer ratings of academic instruction.

systems). All of the MH-6, CH-47, and UH-60 students took the -10 examination, but only the UH-60 students took the FLIR and CMS-80 examinations. Only one student in either the MMI or CMI group took the MH-6 aircraft systems and MH-6 aircraft loading examinations, so no data are presented for these examinations. The performance of the students trained by MMIs and CMIs is very similar on the -10 and the CMS-80 examinations (see Table 7). The CMI students' average is somewhat higher than the MMI students on the FLIR examination.

Hot bench evaluations. Two types of performance were evaluated with a hot bench technique: use of the CMS-80 (UH-60 only) and the AWC (CH-47 only) systems, and use of the Omega navigation system (UH-60 and CH-47 students). Before each hot bench evaluation, the instructors assigned a putup grade to each of his students on the basis of the student's training performance. The students trained by MMIs and CMIs demonstrated similar and satisfactory performance levels on both the putup and hot bench performance evaluations (see Table 8). The average evaluation grades were slightly higher than the putup grades for the CMS-80/AWC test but almost identical for the Omega test.

Table 7

Flight Phase Written Examination Results

	MMI students			CMI students		
Examination	n	Mean	SD	n	Mean	SD
-10 exam	6	95.0	3.0	8	95.5	3.7
FLIR	3	77.0	10.4	3	83.0	5.0
CMS-80	2	83.5	2.1	3	86.7	5.7

Note. MMI = military mission instructors; CMI = civilian mission instructors; FLIR = forward looking infrared; CMS = cockpit management system.

Table 8

Flight Phase Hot Bench Putup and Evaluation Results

	MMI students			CMI students		
Evaluation	n	Mean	SD	n	Mean	SD
CMS-80/AWC						
Putup	2	4.20	.10	5	4.52	.61
Evaluation	4	4.48	.84	5	4.85	1.14
Omega navigation						
Putup	7	4.49	.59	7	4.43	.48
Evaluation	7	4.52	.57	7	4.48	1.13

Note. MMI = military mission instructors; CMI = civilian mission instructors; CMS = cockpit management system; AWC = all weather cockpit.

Flight putup grades. Before each of the five flight check evaluations, each IP graded his students on the basis of their training performance. The means and standard deviations of the average putup grades indicate that nearly all the students were rated as an average or above average BMQ student (see Table 9). There were only small differences in the putup grades for the MMI and CMI groups. The differences in the number of students for each evaluation were caused by aircraft specific evaluations or evaluations that were not administered because of the student's anticipated duty assignment.

Table 9

Flight Phase Putup and Check Evaluation Results

Evaluation	MMI students			CMI students		
	n	Mean	SD	n	Mean	SD
Putup Evaluation						
Basic navigation	7	4.53	.39	7	4.54	.50
LAFS (UH-60 only)	3	4.09	.31	3	4.19	.16
CMS-80/AWC	4	4.34	.54	5	4.38	.28
Mission brief	7	4.13	.47	7	4.27	.44
BMQ/BMT	7	4.47	.27	7	4.49	.51
Check Evaluation						
Basic navigation	7	4.16	.71	7	4.53	.40
LAFS	3	4.51	.57	3	5.04	1.70
CMS-80/AWC	4	4.05	.13	5	4.64	1.34
Mission brief	6	4.38	.49	7	4.58	.50
BMQ/BMT	7	4.63	.60	7	4.45	.43

Note. MMI = military mission instructors; CMI = civilian mission instructors; LAFS = light airborne forward looking infrared system; CMS = cockpit management system; AWC = all weather cockpit; BMQ = basic mission qualification; BMT = basic mission training.

Flight check grades. Except for the MMI students on the basic navigation and CMS-80/AWC checkrides, the students performed as well or better on the flight phase check evaluations than they did on the putup evaluations (see Table 9). The average ratings for all the evaluations were 4 or higher. The check performance of the MMI students was slightly higher than the CMI students on the BMQ/BMT evaluation; the CMI students had slightly to moderately higher average scores on all the other check evaluations. The largest differences in average performance were on the LAFS and the CMS-80/AWC checkrides.

Student assessments. Each student was asked to assess various aspects (see Appendix E) of each segment of flight instruction. Over all segments, the CMI students rated their instructors somewhat higher on training materials used, instructional aspects, and instructor characteristics than the MMI students (see Figure 6). Conversely, the MMI
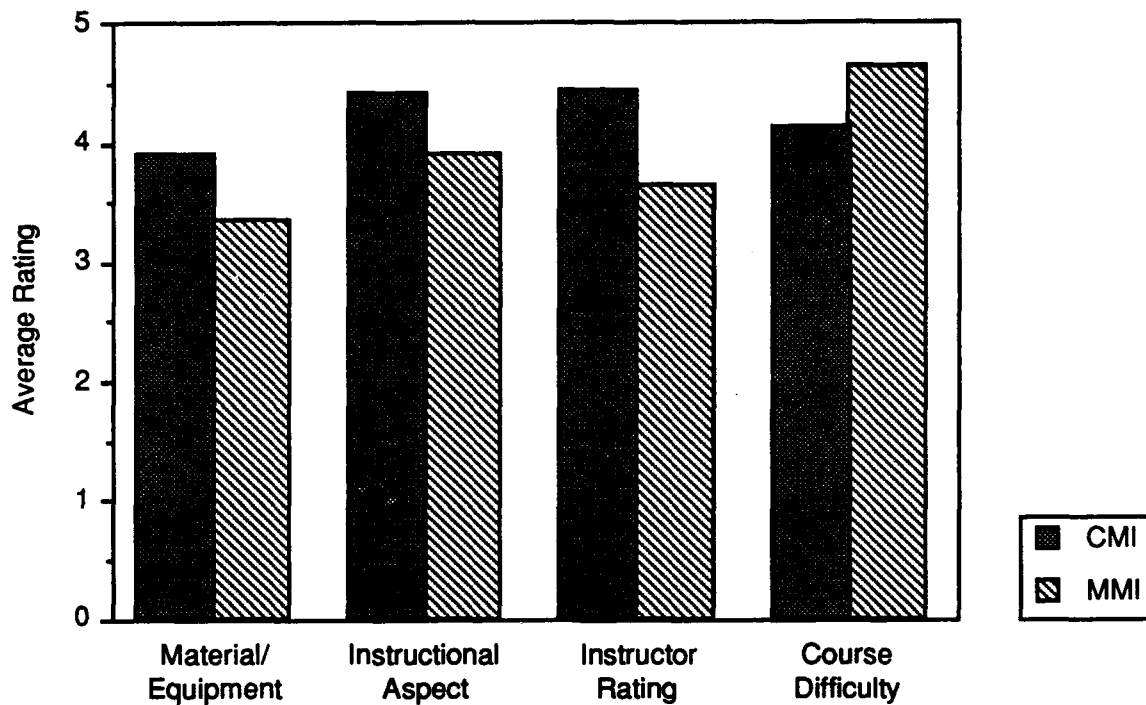
Figure 6. Student ratings of flight instruction.

students rated the BMQ course as more difficult than did the CMI students.

During informal discussions with students who had completed the training, some MMI-trained students expressed the opinion that the MMIs did not facilitate the training as effectively as the CMIs. The students' main complaint was that frequent IP changes interfered with the continuity of training. Four MMI-trained students complained about multiple IPs on the Flight Phase Assessment form completed by all students following training. One student had nine different IPs during training, one student had seven IPs, one student had five IPs, and one student had four IPs. Although all four of these students successfully completed training, the students probably had to expend more effort than students who had fewer IPs.

As part of the student assessment data collection, the students were given the opportunity to provide written comments and suggestions about the course and the instructors. Some of the suggestions related to the course materials and organization. The most frequently mentioned suggestions were the needs for (a) FLIR qualification for the

CH-47 students, (b) a published flight schedule or syllabus, (c) better visual aids in the flight phase, (d) a video demonstration on shipboard operations, and (e) the distribution of a field manual for the mission planning topic. In addition, several comments addressed the difficulty of meeting the required flight training standards when trained by multiple instructors, which occurred when MMIs were drawn from the operational unit for training duty.

There were 22 comments written about specific instructors, 10 in the academic phase and 12 in the flight phase. Of the comments about instructors in the academic phase, there were 2 positive and 3 negative comments about MMIs and 5 positive comments about CMIs. Of the comments about flight phase instructors, there were 3 positive and 1 negative comments about MMIs, and 7 positive and 1 negative comments about CMIs.

Student self-appraisals. The students rated their own proficiency on 11 flight tasks (see Appendixes C and E) before and after the BMQ course (see Tables 10 and 11). The individuals who entered a zero, indicating no experience in a specific operation, were not included in the analysis for that task. Before the course began, the students in both groups considered themselves to be moderately proficient on the five NVG tasks (mean MMI = 5.20; mean CMI = 5.34) but only somewhat proficient on the other six tasks (mean MMI = 3.12; mean CMI = 2.93).

Both groups showed an increase in self-assessed proficiency on all 11 tasks as a result of the BMQ training, with the CMI students showing a slightly to moderately higher increase on most of the tasks. On the average, the MMI students' proficiency increased 1.48 and 1.45 points on the NVG and other tasks, respectively, and the CMI students' proficiency increased 1.74 and 1.85 points. Overall, the students in both groups rated themselves as being highly proficient on the NVG tasks and moderately proficient on the other tasks at the end of the BMQ course.

Summary and Conclusions

This research was conducted to determine whether CMIs are as effective as MMIs in conducting the BMQ course. Direct evaluations (student and observer assessments) of the instructors indicated that both MMIs and CMIs provided a very good quality of instruction. The students rated the MMIs as equal to or slightly better than the CMIs in the academic phase. During the same phase, the independent observer

Table 10

Individual NVG Self-Appraisal

	MMI students (n = 8)		CMI students (n = 9)	
	Before	After	Before	After
NVG flight				
n	8	8	9	9
Mean	5.4	6.9	5.2	7.1
SD	2.2	1.3	1.2	1.7
NVG navigation				
n	8	8	9	9
Mean	5.3	6.8	5.0	6.7
SD	2.3	1.3	1.0	1.8
NVG slope operations				
n	8	8	9	9
Mean	4.9	6.3	5.4	7.2
SD	2.2	1.0	1.9	1.5
NVG confined area operations				
n	8	8	9	9
Mean	5.0	6.1	5.4	7.1
SD	2.3	1.0	1.9	1.6
NVG failure procedures				
n	8	8	9	9
Mean	5.4	7.3	5.7	7.3
SD	2.6	1.4	1.7	1.3

Note. MMI = military mission instructor; CMI = contractor mission instructor; NVG = night vision goggles.

consistently rated the CMIs as slightly better than the MMIs. The students consistently rated the CMIs as slightly better than the MMIs during the flight phase of training. In both phases, the differences between the MMI and CMI assessments by the students and the observer were small, and in all cases the instructors were rated as providing good instruction or better.

In a related assessment of the instructors, the students submitted written comments about the course. Overall, there were 17 positive comments and 5 negative comments about the instructors. The students wrote more negative comments about the MMIs than the CMIs during the academic phase and more

Table 11

Individual Systems Self-Appraisal

	MMI students (n = 8)		CMI students (n = 9)	
	Before	After	Before	After
Omega navigation				
n	5	8	7	9
Mean	4.2	5.0	3.0	5.1
SD	2.2	2.1	1.5	2.9
FLIR operations				
n	3	5	4	6
Mean	2.3	5.0	2.3	4.5
SD	2.3	2.4	1.9	3.3
Shipboard operations				
n	4	6	5	7
Mean	2.5	4.5	1.8	5.3
SD	1.9	2.0	0.8	3.0
Fast rope operations				
n	5	6	4	6
Mean	2.0	3.8	2.0	4.2
SD	1.4	1.6	1.4	3.6
Doppler navigation				
n	7	8	9	9
Mean	4.9	5.8	4.9	5.4
SD	2.1	2.3	2.7	2.8
SATCOM operations				
n	4	4	5	6
Mean	2.8	3.3	3.6	4.2
SD	2.1	2.6	2.5	3.1

Note. MMI = military mission instructor; CMI = contractor mission instructor; FLIR = forward looking infrared; SATCOM = satellite communication.

than twice as many positive comments about the CMIs than the MMIs during both phases of training. The proportion of positive and negative student-initiated comments indicates that the students were generally satisfied with the quality of instruction during the BMQ course in general and somewhat more satisfied with the CMIs than with the MMIs.

Indirect evaluations of the instructors were made by assessing the performance of their products, the prospective special operations aviators. A comparison of the students' backgrounds indicated the MMI- and CMI-trained students were sufficiently similar before the BMQ course began that comparisons of instructional effectiveness could be made by examining student performance. The MMIs and CMIs were equally effective in conducting academic training, as measured by the students' performance on the academic examination. Furthermore, both groups of students performed better than the baseline group of operational aviators on the academic examination.

During the flight phase of training, both the MMI- and CMI-trained students performed equally and satisfactorily on the Commander's Evaluation, the written examinations, the hot bench evaluations, and the flight phase putup evaluations. All the students received satisfactory ratings on the flight check evaluations, with the MMI-trained students being rated slightly higher on one checkride and the CMI-trained students being rated slightly to moderately higher on the other four check evaluations. Finally, the students' self-appraisals on 11 flight tasks indicated an increase in proficiency as a result of the BMQ course. The CMI-trained students indicated a slightly larger increase in proficiency than the MMI-trained students.

There was no substantive evidence that the CMIs provided a lower quality of instruction than the MMIs. Overall, the research results indicate that both the MMIs and CMIs provided effective BMQ training. In addition, the CMIs provided a more consistent training program in terms of the number of IPs involved in the training (6 CMIs versus 18 MMIs). Not only do the CMI students benefit from having the same IP throughout a flight segment, but the CMIs are able to benefit from their experience with one class and improve their instruction in subsequent classes. Finally, using CMIs to instruct limits the BMQ training workload for the operational unit IPs to serving only as check pilots. The research results indicate that employing CMIs is an effective method of conducting the BMQ course, with a reduction in other problems associated with using MMIs (turnover, IP overload).

APPENDIX   A

ALL SOURCE INTELLIGENCE CENTER
MISSION QUALIFICATION COURSE MATERIALS

160th Special Operations Aviation Regiment. Tactical standing operating procedures (TAC SOP).

160th Special Operations Aviation Regiment Selection and Training Detachment. Local flying area seminar. 160th SOAG (ABN) Selection and Training (handout).

160th Special Operations Aviation Regiment Special Operations Aviation Regiment Selection and Training Detachment. CH-47/MH-47D flight training guide.

160th Special Operations Aviation Regiment Selection and Training Detachment. CMS-80 training program (handout).

AN/ARN-148 OMEGA instructor's guide (Lessons 1 - 5).

AN/ARN-148 OMEGA student's guide (Lessons 1 - 5).

ARC-182 VHF/UHF communications pilot's guide (handout).

Canadian Marconi Company. (1985, October). Operator's handbook, status display system CMA-776, part 1, description and operation. Montreal, Canada: Canadian Marconi Company.

Collins. Collins UH-60A cockpit management system operator's guide (Volumes 1 - 3).

Davtron Digital Clock. Operator's manual M880A (handout).

Department of the Army. (1983, April). Technical manual, TM 11-5841-291-12, operator's and organizational maintenance manual, radar warning systems AN/APR-44(V)1 and AN/APR-44(V)3. Headquarters, Department of the Army.

Department of the Army. (1986, October). Aircrew training program commander's guide (TC 1-210). Headquarters, Department of the Army.

Department of the Army. (1987, November). Aircrew training manual, cargo helicopter (TC 1-216). Headquarters, Department of the Army.

Department of the Army. (1987, October). Technical manual, TM 11-5826-306-12, operator's and aviation unit maintenance manual, navigational set, OMEGA AN/ARN-148. Headquarters, Department of the Army.

Department of the Army. (1988, May). 1st CoCom regulation No. 350-6. Fort Bragg, NC: Headquarters, Department of the Army, U.S. Army 1st Special Operations Command (Airborne).

Department of the Army. (1988, October). TC 1-212, aircrew training manual, utility helicopter, UH-60. Headquarters, Department of the Army.

Department of the Army. (1988, December). Night flight techniques and procedures (TC 1-204). Headquarters, Department of the Army.

Department of the Army. (1989, April). UH-60 flight training POI. Fort Campbell, KY: Department of the Army, Selection and Training Detachment, 160th Special Operations Aviation Group (Airborne).

Department of the Army. (1989, September). Memorandum for commander, HSC, 160th SOAG (ABN), Attn: ASOF-AV-R (S/MO), Fort Campbell, KY. Subject: Airworthiness release for UH-60A helicopters with special mission equipment installed. St. Louis, MO: Headquarters, Department of the Army, U.S. Army Aviation Systems Command.

Department of the Army. TM 11-5841-294-12, extract, operator and aviation unit maintenance manual, radar signal detecting set AN/APR-39A(V)1. Headquarters, Department of the Army.

Departments of the Army and Navy. (1987, August). TM 11-5865-200-12, NAVAIR 16-35ALO144-1, extract, operator's and aviation unit maintenance manual, countermeasures sets AN/ALQ-144(V)1 and AN/ALQ-144(V)3. Departments of the Army and Navy.

Hughes Aircraft Company. (1984, November). Program 7304, operator's familiarization course, instructor's guide, HNVS. Hughes Aircraft Company Support Systems, EDSG Programs.

Hughes Aircraft Company. (1984, November). Program 7304, operator's familiarization course, practical exercises, AN/AAQ-16. Hughes Aircraft Company Support Systems, EDSG Programs.

Hughes Aircraft Company. (1984, November). _Program 7304,_
    operator's familiarization course, student guide,
    AN/AAO-16. Hughes Aircraft Company Support Systems,
    EDSG Programs.

Hughes Aircraft Company. (1984, November). _Technical manual_
    HAC PUB 84-7304-10, infrared detecting system AN/AAO-16
    (Hughes night vision system). Hughes Aircraft Company
    Support Systems, EDSG Programs.

Rockwell International. (1989, September). _Collins CH-47D_
    integrated avionics system operator's guide (Volumes 1 -
    5). Rockwell International, Collins Government Avionics
    Division.

Singer Company. (1981, September). _Doppler navigation set_
    K510A009-01 pilot's operational guide. Little Falls,
    NJ: The Singer Company, Kearfott Division.

Task Force 160th Aircrew Training Manual.

Trimble Navigation. _TA 7880, AN/ARN 148_.

A P P E N D I X   B

LIST OF EVALUATION INSTRUMENTS

General

   Academic Examination

   Observer Assessment of Academic Instruction

   Student Assessment of Academic Instruction

   Student Demographic Questionnaire

   Student Flight Phase Assessment

CH-47

   Commander's Evaluation

   Examinee Instructions Basic Navigation Evaluation Mission
      Assignment

   Basic Navigation Evaluation

   OMEGA Performance Handout

   OMEGA Performance Evaluation

   AWC Performance Requirements

   AWC Performance Evaluation

   LAFS Written Examination

   LAFS Flight Evaluation

   AWC Flight Evaluation

   BMQ Mission Briefing Checklist

   Examinee Instructions Basic Mission Qualification
      Evaluation Mission Assignment

   BMQ Mission Briefing Evaluation

   BMQ NVG Flight Evaluation

UH-60

   Commander's Evaluation

   Examinee Instructions Basic Navigation Evaluation Mission
      Assignment

   Basic Navigation Evaluation

   OMEGA Performance Evaluation

   OMEGA Performance Handout

   CMS Performance Requirements

   CMS Performance Evaluation

LAFS Written Examination

LAFS Flight Evaluation

CMS Flight Evaluation

BMQ Mission Briefing Checklist

Examinee Instructions Basic Mission Qualification
  Evaluation Mission Assignment

BMQ Mission Briefing Evaluation

BMQ NVG Flight Evaluation

MH-6

Transition Flight Evaluation

Aircraft Systems Examination

Aircraft Loading Examination

NVG Qualification Evaluation

Examinee Instructions Basic Mission Qualification
  Evaluation Mission Assignment

BMT Mission Briefing Checklist

BMT Mission Briefing Evaluation

BMT Flight Evaluation

APPENDIX C

160TH SELECTION AND TRAINING QUESTIONNAIRE

160TH SELECTION AND TRAINING

SECTION I: PERSONAL DATA

1. NAME:_____
   (Last)   (First)   (MI)

2. SSN: _____ ____ _____   3. Rank:_____

4. Age:_____ years   5. Date Graduated From IERW:_____
                                                          (Month/Year)

6. Last Aviator Qualification Course (AQC) attended:_____
                                                          (Type)

7. Date graduated from last AQC: _____   8. PMOS or SSI:_____
                                 (Month/Year)

9. SOF Training Aircraft: [ ] CH-47   [ ] UH-60   [ ] MH-6   [ ] AH-6

SECTION II: FLIGHT EXPERIENCE

10. Check [√] the **type of Army aircraft** in which you have been qualified and indicate the **number of flight hours** logged in each aircraft you check. Also, please check [√] the box that indicates the **highest qualification** you have held. (Check as many as apply.)

Rotary Wing

Type Aircraft	Hours Logged	Highest Qualification Held			
[ ] UH-1	_____	[ ] Pilot	[ ] UT	[ ] IP	[ ] SIP
[ ] UH-60	_____	[ ] Pilot	[ ] UT	[ ] IP	[ ] SIP
[ ] OH-6	_____	[ ] Pilot	[ ] UT	[ ] IP	[ ] SIP
[f] OH-58	_____	[ ] Pil	[ ] UT	[ ] IP	[ ] SIP
[ ] CH-47	_____	[ ] Pilot	[ ] UT	[ ] IP	[ ] SIP
[ ] CH-54	_____	[ ] Pilot	[ ] UT	[ ] IP	[ ] SIP
[ ] AH-1	_____	[ ] Pilot	[ ] UT	[ ] IP	[ ] SIP
[ ] Other	_____	[ ] Pilot	[ ] UT	[ ] IP	[ ] SIP

Specify Other_____

11. **Fixed Wing** flight time:_____ hours

12. Total NVG flight time:_____ hours

13. Total NVG hours in the last 12 months:_____ hours

14. Total ANVIS-6 flight time:_____ hours

15. Total flight tme:_____ (all aircraft)

16. Total flight time in the last 12 months:_____ hours

17. What **additional qualification** have you held during your Army career? (Check as many as apply.)
    [ ] Instrument Flight Examiner
    [ ] Unaided Night Tactical (Night Hawk)
    [ ] Night Vision Goggles
    [ ] Other (specify)_____

18. What additional specialized training have you received? (Check as many as apply.)
    [ ] OMEGA
    [ ] FLIR
    [ ] Shipboard Operations
    [ ] Fast Rope Operations
    [ ] High Gross Weight Operations (routine flights at max gross weight)
    [ ] Long range Pilotage Navigation (200 miles +)

NOTE: Item 19 requires that you provide information and opinions concerning your flight proficiency and training. Please answer the questions with regard to **your** skills only.

19. Use the following scale to rate your proficiency on each of the tasks listed below. Fill in the blank beside each task with the appropriate whole number between 1 and 9. (Fill in the blank with a 0 for tasks for which you have no experience.)

1	2	3	4	5	6	7	8	9
Not Proficient		Somewhat Proficient		Moderately Proficient		Highly Proficient		Extremely Proficient

a. _____ OMEGA Navigation

b. _____ FLIR Operations

c. _____ Shipboard Operations

d. _____ Fast Rope Operations

e. _____ NVG Flight

f. _____ NVG Navigation

g. _____ Doppler Navigation

h. _____ SATCOM Operations

i. _____ NVG Slope Operations

j. _____ NVG Confined Area Operations

k. _____ NVG Failure Procedures

A P P E N D I X D

STUDENT ASSESSMENT OF ACADEMIC INSTRUCTION

STUDENT ASSESSMENT OF ACADEMIC INSTRUCTION

Topic Covered: _____   Date: _____

Instructor: _____   Instruction Date(s): _____

PART 1

Directions: Use the numbers of the following scale to score each item listed below. Enter "NA" if the item does not apply to this particular course topic. Score each item relative to how close you believe the topic presentation approaches an "ideal" level of quality. You may use the space at the end of the form to make additional comments.

1 = Poor   2 = Marginal   3 = Good   4 = Very Good   5 = Excellent

A. _Materials and Physical Environment_ : *Score each aspect of the materials used for this topic and the classroom environment.*

Score	Materials and Physical Environment
_____	Quality of the slides, maps, diagrams, or other visual aids used
_____	Quality of the text materials used (e.g., handouts, SOP)
_____	Availability of materials for all students
_____	Quality of lighting, noise level, and temperature of the classroom
_____	Absence of interruptions (e.g., instructor called away, schedule deviations)
_____	Adequacy of time allotted to cover the topic

B. _Topic Presentation and Organization_ : *Score each instructional aspect as observed in the instructor's behavior during the classroom session(s) for this topic.*

Score	Instructional Aspect
_____	States topic objectives and relates them to the course objectives
_____	Presents relevant topic information in a logical, ordered sequence
_____	Organizes the presentation with smooth transitions between elements
_____	Covers completely each area of relevant topic information
_____	Uses examples and teaching aids effectively to support learning
_____	Determines if students understand material by using probing questions
_____	Responds clearly and effectively to student questions and concerns
_____	Points out additional resources or activities to aid student learning
_____	Provides a comprehensive review of the topic
_____	Emphasizes critical information the student will need later

(Continued on Back)

C. *Instructor Assessment* : *Score each instructor characteristic as observed during the classroom session(s) for this topic.*

<u>Score</u>   <u>Instructor Characteristic</u>

_____ Displays appropriate appearance (e.g., grooming, clothing)

_____ Shows enthusiasm for topic

_____ Establishes rapport with students

_____ Appears well prepared to present the topic

_____ Displays knowledge of subject matter

_____ Uses appropriate grammer, vocabulary, and pronunciation of terms

_____ Employs effective speaking techniques (e.g., inflection, eye contact, gestures)

_____ Uses good judgment in the selection of training aids, slides, and examples

_____ Manages class time well (e.g., not hurried near end of class)

_____ Manages student behavior well (e.g., stays in control of class)

_____ Encourages student participation and praises student efforts

---

PART 2

Directions: Use the numbers of the following scale to score each comment listed below. Score each comment *relative to other aviation training you have experienced.* You may use the space at the end of the form to make additional comments.

1	**2**	**3**	**4**	**5**
Well Below Average	**Below Average**	**Average (Typical Class)**	**Above Average**	**Well Above Average**

<u>Overall Topic Comment</u>

Compared to other topics covered in this course, this topic's importance was: _____.

Compared to the difficulty of most aviation topics, the difficulty of this topic was: _____.

Compared to other instructors I have had, this instructor was: _____.

<u>COMMENTS</u>   Use this area to make comments about the topic, such as what aspects you liked best, what aspects you liked least, and what suggestions you have for improving the topic.

A P P E N D I X   E

STUDENT FLIGHT PHASE ASSESSMENT

STUDENT FLIGHT PHASE ASSESSMENT

SSN Last Four: _____   Instructional Phase: _____   Instructor Pilot: _____

Instruction Date(s): _____   Aircraft Type: _____   Date: _____

PART 1

Directions: Use the following scale to rate your current proficiency on each task listed beneath the scale. Fill in the blank beside each task with the appropriate whole number between 1 and 9 (use a 0 for tasks on which you have no experience).

1	2	3	4	5	6	7	8	9
Not Proficient		**Somewhat Proficient**		**Moderately Proficient**		**Highly Proficient**		**Extremely Proficient**

____ OMEGA Navigation   ____ NVG Failure Operations

____ Doppler Navigation   ____ FLIR Operations

____ NVG Navigation   ____ SATCOM Operations

____ NVG Flight   ____ Shipboard Operations

____ NVG Slope Operations   ____ Fast Rope Operations

____ NVG Confined Area Operations

PART 2

Directions: Use the numbers of the following scale to score each item in sections A and B. Score each item relative to how closely you believe the flight phase instruction approaches an "ideal" level of quality. Make any additional comments at the end of the form.

1 = Poor   2 = Marginal   3 = Good   4 = Very Good   5 = Excellent

A. *Materials and Equipment*: *Score each aspect of the materials and equipment used during the flight phase.*

<u>Score</u>   <u>Materials and Equipment</u>

____ Quality of the slides, diagrams, handouts, or other visual aids used for briefings

____ Availability of materials for all students

____ Absence of interruptions (e.g., instructor called away, schedule deviations)

____ Adequacy of time allotted to cover the materials or equipment

____ Aircraft availability and reliability

____ System (e.g., OMEGA, FLIR) availability and reliability

(Continued On Back)

B. _In-Flight Instructional Process_: Score each instructional aspect as observed in the instructor's behavior during this training phase.

Score   Instructional Aspect

_____ Displayed knowledge of subject matter

_____ Presented flight tasks in a logical, ordered sequence

_____ Taught the mechanics needed to operate new systems

_____ Explained the processes underlying the flight tasks

_____ Covered each area of relevant information completely

_____ Responded clearly and effectively to questions and concerns

_____ Evaluated understanding of procedures by using probing questions

_____ Presented a variety of "what if" situations

_____ Remained alert to any possible errors or emergency conditions

_____ Remained calm and in control of the situation at all times

_____ Provided constructive criticism and helpful suggestions

_____ Provided positive feedback and praise when appropriate

_____ Identified additional resources or activities to aid learning

_____ Emphasized critical information that will be needed later

_____ Showed enthusiasm for training

PART 3

Directions: Use the numbers of the following scale to score each comment listed below. Score each comment relative to other aviation training you have experienced. Make any additional comments at the end of the form.

1	2	3	4	5
Well Below Average	Below Average	Average (Typical Flight Training)	Above Average	Well Above Average

Overall Flight Phase Comment   Score

• Compared to other flight training courses, the difficulty of this flight training phase was _____.

• Compared to other flight instructors I have had, this flight instructor was _____.

COMMENTS   Use this area to make comments about the flight instruction, such as what aspects you liked best, what aspects you liked least, and what suggestions you have for improving the flight instruction.

APPENDIX F

OBSERVER ASSESSMENT OF ACADEMIC INSTRUCTION

OBSERVER ASSESSMENT OF ACADEMIC INSTRUCTION

Instructor (Rank & Name): _____

Evaluator (Rank & Name): _____

Date: _____ Start Time: _____ End Time: _____

Subject(s) Taught: _____

Number of Students _____

Directions: Use the following scale to rate each aspect of the instructor's performance, lesson organization, and personal qualities; enter NA if the aspect is not applicable. Make each rating relative to an "ideal" level of performance, organization, or quality. Make comments supporting your ratings on the back side of this form.

1 = Poor   2 = Marginal   3 = Good   4 = Very Good   5 = Excellent

A. *Instructional Ratings*: *Rate each aspect of the instructor's performance during the lesson. Each aspect should be directly observable one or more times during the lesson.*

<u>Rating</u>   <u>Instructional Aspect</u>

_____   States lesson objectives and relates them to other lessons

_____   Presents relevant lesson information in a logical sequence

_____   Uses examples and teaching aids effectively to support learning

_____   Evaluates student comprehension with probing questions

_____   Responds effectively to student questions and concerns

_____   Identifies additional resources or activities to aid student learning

_____   Provides a comprehensive review and summary of the lesson

_____   Emphasizes critical information

_____   Total of Instructional Ratings

(Continued on Back)

B. *Organizational Ratings*: *Rate each organizational aspect of the instructor's performance during the lesson. Some aspects can be directly observed during the lesson but other aspects must be inferred from the instructor's performance.*

Rating   Organizational Aspect

_____ Lesson planning and preparation

_____ Completeness of relevant lesson information

_____ Organization of lesson and transition between topics

_____ Quantity and quality of training aids, slides, examples, etc.

_____ Management of class time

_____ Management of student behavior

_____ Maintenance of atmosphere conducive to learning (e.g., establishes high expectations, encourages student participation, uses praise)

_____ Total of Organizational Ratings

C. *Personal Qualities Ratings*: *Rate each instructor on the personal qualities exhibited during the lesson.*

Rating   Instructor Quality

_____ Instructor appearance

_____ Enthusiasm for lesson

_____ Rapport with students

_____ Knowledge of subject matter

_____ Communication ability (vocabulary, grammar, pronunciation, etc.)

_____ Communication style (inflection, timing, eye contact, gestures, etc.)

_____ Total of Personal Qualities Ratings

_____ Total of all Ratings

_____ Number of Aspects Rated

_____ Average Instructor Observation Score

APPENDIX G

CH/MH-47 PERFORMANCE EVALUATION GRADESLIPS

CH-47 COMMANDER'S EVALUATION

Pilot_____   Evaluator_____   Date_____

UNSAT	1	2	3	4	5	6	7
Unsatisfactory Performance	Marginal	Well Below Average	Below Average	Average S&T Student	Above Average	Well Above Average	Exceptional
	Satisfactory S&T Performance						

Preflight Tasks

1. VFR Flight Planning	UNSAT	1	2	3	4	5	6	7
2. DA Form 4887-R	UNSAT	1	2	3	4	5	6	7
3. Preflight Inspection	UNSAT	1	2	3	4	5	6	7
4. Engine Start/Runup, and Before Takeoff Checks	UNSAT	1	2	3	4	5	6	7

Hovering/Taxiing

5. Ground Taxi	UNSAT	1	2	3	4	5	6	7
6. Hover Power Check	UNSAT	1	2	3	4	5	6	7
7. Hovering Flight	UNSAT	1	2	3	4	5	6	7
8. Hovering Flight NVG	UNSAT	1	2	3	4	5	6	7

In-Traffic Flight

9. Normal Takeoff	UNSAT	1	2	3	4	5	6	7
10. Normal Takeoff NVG	UNSAT	1	2	3	4	5	6	7
11. Maximum Performance Takeoff	UNSAT	1	2	3	4	5	6	7
12. Before Landing Check	UNSAT	1	2	3	4	5	6	7
13. VMC Approach	UNSAT	1	2	3	4	5	6	7
14. VMC Approach NVG	UNSAT	1	2	3	4	5	6	7
15. Roll-On Landing	UNSAT	1	2	3	4	5	6	7
16. After Landing Tasks	UNSAT	1	2	3	4	5	6	7
17. Perform Doppler Navigation	UNSAT	1	2	3	4	5	6	7

Outside Traffic

18. Slope Operations	UNSAT	1	2	3	4	5	6	7
19. Slope Operations NVG	UNSAT	1	2	3	4	5	6	7
20. Simulated Engine Failure At Altitude	UNSAT	1	2	3	4	5	6	7

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

21.	Flight With AFCS Off	UNSAT	1	2	3	4	5	6	7
22.	Flight With AFCS Off NVG	UNSAT	1	2	3	4	5	6	7
23.	Emergency Procedures	UNSAT	1	2	3	4	5	6	7
24.	Emergency Procedures NVG	UNSAT	1	2	3	4	5	6	7
25.	Unusual Attitude Recovery	UNSAT	1	2	3	4	5	6	7
26.	IFF Systems	UNSAT	1	2	3	4	5	6	7
27.	Emergency Procedure for NVG Failure	UNSAT	1	2	3	4	5	6	7
28.	Confined Area Operations	UNSAT	1	2	3	4	5	6	7
29.	Confined Area Operations NVG	UNSAT	1	2	3	4	5	6	7
30.	**Overall Evaluation**	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ]   Training Hour Level _____

CH-47 BASIC NAVIGATION EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

		UNSAT	1	2	3	4	5	6	7
1.	Oral Examination	UNSAT	1	2	3	4	5	6	7
2.	Long-Range Mission Planning	UNSAT	1	2	3	4	5	6	7
3.	VFR Flight Planning	UNSAT	1	2	3	4	5	6	7
4.	DD Form 365-4	UNSAT	1	2	3	4	5	6	7
5.	DA Form 4887-R	UNSAT	1	2	3	4	5	6	7
6.	Preflight Inspection	UNSAT	1	2	3	4	5	6	7
7.	Engine Start, Runup	UNSAT	1	2	3	4	5	6	7
8.	Pilotage and Dead Reckoning	UNSAT	1	2	3	4	5	6	7
9.	Long-Range Navigation (200 NM)	UNSAT	1	2	3	4	5	6	7
10.	Checkpoint Times (± 2 Min.)	UNSAT	1	2	3	4	5	6	7
11.	Emergency Procedures (Oral)	UNSAT	1	2	3	4	5	6	7
12.	Cockpit Teamwork	UNSAT	1	2	3	4	5	6	7
13.	VHIRP (Oral)	UNSAT	1	2	3	4	5	6	7
14.	Emergency Procedures for NVG Failure	UNSAT	1	2	3	4	5	6	7
15.	Target Time (± 30 Sec.)	UNSAT	1	2	3	4	5	6	7
16.	Before Landing Check	UNSAT	1	2	3	4	5	6	7
17.	After Landing Tasks	UNSAT	1	2	3	4	5	6	7
18.	Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ]   Training Hour Level _____

CH-47 LAFS FLIGHT EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

1.	Identify the 6 LRUs	UNSAT	1	2	3	4	5	6	7
2.	Perform LAFS Turn-on and ORT	UNSAT	1	2	3	4	5	6	7
3.	Perform LAFS BIT Procedure	UNSAT	1	2	3	4	5	6	7
4.	Perform MFCU and PDU Operations	UNSAT	1	2	3	4	5	6	7
5.	Initiate Autotrack	UNSAT	1	2	3	4	5	6	7
6.	Perform LAFS Assisted Precision Hover	UNSAT	1	2	3	4	5	6	7
7.	Perform LAFS Nonprecision Hover	UNSAT	1	2	3	4	5	6	7
8.	Perform LAFS Assisted Takeoff	UNSAT	1	2	3	4	5	6	7
9.	Perform LAFS Assisted Approach	UNSAT	1	2	3	4	5	6	7
10.	Perform LAFS Assisted Terrain Flight	UNSAT	1	2	3	4	5	6	7
11.	Perform LAFS Assisted Terrain Flight Navigation	UNSAT	1	2	3	4	5	6	7
12.	Stow the TFU	UNSAT	1	2	3	4	5	6	7
13.	Turn Off the FLIR Image	UNSAT	1	2	3	4	5	6	7
14.	Turn Off the Cryogenic Cooler	UNSAT	1	2	3	4	5	6	7
15.	Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ]   Training Hour Level _____

CH-47 AWC PERFORMANCE EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

Start-up Procedures

		UNSAT	1	2	3	4	5	6	7
1.	System Status	UNSAT	1	2	3	4	5	6	7
2.	Update SCC	UNSAT	1	2	3	4	5	6	7
3.	Initiate Navigation Start Procedure	UNSAT	1	2	3	4	5	6	7

Communication Operations

		UNSAT	1	2	3	4	5	6	7
4.	Enter Radio Frequencies and Call Signs	UNSAT	1	2	3	4	5	6	7
5.	Enter Met Variables	UNSAT	1	2	3	4	5	6	7
6.	Set Radio Parameters	UNSAT	1	2	3	4	5	6	7
7.	Set ATHS Start Page Data	UNSAT	1	2	3	4	5	6	7

Navigation Operations

		UNSAT	1	2	3	4	5	6	7
8.	Enter Nav Aid Data (ADF, VOR, TACAN)	UNSAT	1	2	3	4	5	6	7
9.	Access IFF Data	UNSAT	1	2	3	4	5	6	7
10.	Zeroize Function (Oral)	UNSAT	1	2	3	4	5	6	7
11.	Enter Waypoints	UNSAT	1	2	3	4	5	6	7
12.	Generate Track Procedures (Offset, Direct To)	UNSAT	1	2	3	4	5	6	7
13.	Perform Doppler Control Procedure	UNSAT	1	2	3	4	5	6	7
14.	Perform Update Procedure	UNSAT	1	2	3	4	5	6	7
15.	Generate Hold Pattern	UNSAT	1	2	3	4	5	6	7
16.	Perform Shutdown Procedure	UNSAT	1	2	3	4	5	6	7
17.	Emergency System Operations	UNSAT	1	2	3	4	5	6	7
18.	**Overall Evaluation**	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ]   Training Hour Level _____

CH-47 AWC FLIGHT EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

Cockpit Management Systems

1. CDU Controls and Indicators	UNSAT	1	2	3	4	5	6	7
2. Scratch Pad Notations	UNSAT	1	2	3	4	5	6	7
3. Comm Control, Presets, and Test	UNSAT	1	2	3	4	5	6	7
4. Nav Control, Presets, and Test	UNSAT	1	2	3	4	5	6	7
5. IFF Control, Display, and Test	UNSAT	1	2	3	4	5	6	7
6. System Status Monitoring	UNSAT	1	2	3	4	5	6	7

HSVD

7. Controls	UNSAT	1	2	3	4	5	6	7
8. Mode Selection and Display	UNSAT	1	2	3	4	5	6	7
9. HSVD Panel NAV Sources	UNSAT	1	2	3	4	5	6	7

Mission Computer Unit

10. Initialization	UNSAT	1	2	3	4	5	6	7
11. Use of Waypoint List and Flight Plan Generation	UNSAT	1	2	3	4	5	6	7
12. Auto Sequencing and Direct-to	UNSAT	1	2	3	4	5	6	7
13. Progress Page	UNSAT	1	2	3	4	5	6	7
14. Update Procedures	UNSAT	1	2	3	4	5	6	7
15. Approach to Hover	UNSAT	1	2	3	4	5	6	7
16. Patterns	UNSAT	1	2	3	4	5	6	7
17. Annunciation Understanding	UNSAT	1	2	3	4	5	6	7

Nav System Management Without MCU

18. INS Alignment, Control, Update	UNSAT	1	2	3	4	5	6	7
19. Doppler Control and Update	UNSAT	1	2	3	4	5	6	7
20. Doppler and INS Initialization After MCU Failure	UNSAT	1	2	3	4	5	6	7

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

Flight Director System

21. Flight Director Selector Panel and Mode Annunciator Panel   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

22. Alt, R Alt-Hold, VS   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

23. NAV XFR   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

24. NAV   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

25. Hdg Sel   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

26. Appr, DH Level, T-Hover, Hov Aug   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

Weather/Search Radar

27. Preflight of Components and Safety Considerations   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

28. Mode Selector Positions   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

29. Range Selector Positions   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

30. Scan/Stab Selector   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

31. Tilt Control   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

32. Overall Evaluation   UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ]   Training Hour Level _____

CH-47 OMEGA PERFORMANCE EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

1. Perform Start Procedure	UNSAT	1	2	3	4	5	6	7
2. Initialize System	UNSAT	1	2	3	4	5	6	7
3. Enter Waypoints	UNSAT	1	2	3	4	5	6	7
4. Select Flight Plan	UNSAT	1	2	3	4	5	6	7
5. Edit Flight Plan	UNSAT	1	2	3	4	5	6	7
6. Enter Fuel Data	UNSAT	1	2	3	4	5	6	7
7. Perform Direct-To Operation	UNSAT	1	2	3	4	5	6	7
8. Change Track Change Mode	UNSAT	1	2	3	4	5	6	7
9. Manually Override Ramp Protection	UNSAT	1	2	3	4	5	6	7
10. Change Display to Night Vision Mode and Display ETA to Next Waypoint	UNSAT	1	2	3	4	5	6	7
11. Manually Enter True Airspeed	UNSAT	1	2	3	4	5	6	7
12. Perform Position Update to Flight Plan Waypoint	UNSAT	1	2	3	4	5	6	7
13. Perform System Shutdown	UNSAT	1	2	3	4	5	6	7
14. Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ] Training Hour Level _____

CH-47 BMQ MISSION BRIEFING EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

I. SITUATION

A. Enemy Force	UNSAT	1	2	3	4	5	6	7
B. Friendly Forces	UNSAT	1	2	3	4	5	6	7
C. PAO Guidance	UNSAT	1	2	3	4	5	6	7
D. EEI/EEFI	UNSAT	1	2	3	4	5	6	7

II. MISSION

	UNSAT	1	2	3	4	5	6	7

III. EXECUTION

A. Commander's Intent	UNSAT	1	2	3	4	5	6	7
B. Concept of the Operation	UNSAT	1	2	3	4	5	6	7
C. Sub Unit Missions	UNSAT	1	2	3	4	5	6	7
D. FSB/Airhead Operations	UNSAT	1	2	3	4	5	6	7
E. Flight Route	UNSAT	1	2	3	4	5	6	7
F. Landing Area Procedures	UNSAT	1	2	3	4	5	6	7
G. Departure Airhead Procedures	UNSAT	1	2	3	4	5	6	7
H. Coordinating Instruction	UNSAT	1	2	3	4	5	6	7

IV. SERVICE SUPPORT

A. Class I	UNSAT	1	2	3	4	5	6	7
B. ALSE	UNSAT	1	2	3	4	5	6	7
C. Medivac/Medical Support	UNSAT	1	2	3	4	5	6	7
D. Maintenance	UNSAT	1	2	3	4	5	6	7
E. Special Equipment	UNSAT	1	2	3	4	5	6	7

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

V. COMMAND AND SIGNAL

A. Command	UNSAT	1	2	3	4	5	6	7
B. Signal	UNSAT	1	2	3	4	5	6	7
VI. SAFETY	UNSAT	1	2	3	4	5	6	7
OVERALL EVALUATION	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ]   Training Hour Level _____

CH-47 BMQ NVG FLIGHT EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

Preflight Tasks

1. Oral Exam	UNSAT	1	2	3	4	5	6	7
2. Terrain Flight Planning	UNSAT	1	2	3	4	5	6	7
3. DD Form 365-4	UNSAT	1	2	3	4	5	6	7
4. DA Form 4887-R	UNSAT	1	2	3	4	5	6	7
5. Preflight Inspection	UNSAT	1	2	3	4	5	6	7
6. Engine and Equipment Start/Runup	UNSAT	1	2	3	4	5	6	7
7. Data Entry	UNSAT	1	2	3	4	5	6	7

Hovering/Taxiing

8. Ground Taxi	UNSAT	1	2	3	4	5	6	7
9. Hovering Flight	UNSAT	1	2	3	4	5	6	7
10. Hover Power Check	UNSAT	1	2	3	4	5	6	7

In-Traffic Flight

11. Normal Takeoff	UNSAT	1	2	3	4	5	6	7
12. Before Landing Check	UNSAT	1	2	3	4	5	6	7
13. Approach	UNSAT	1	2	3	4	5	6	7

Outside Traffic

14. Perform Doppler Navigation	UNSAT	1	2	3	4	5	6	7
15. Pilotage and Dead Reckoning	UNSAT	1	2	3	4	5	6	7
16. Terrain Flight	UNSAT	1	2	3	4	5	6	7
17. Terrain Flight Navigation	UNSAT	1	2	3	4	5	6	7
18. VHIRP	UNSAT	1	2	3	4	5	6	7
19. Perform OMEGA Nav	UNSAT	1	2	3	4	5	6	7
20. Multiaircraft Operations	UNSAT	1	2	3	4	5	6	7

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

		1	2	3	4	5	6	7
21. Cockpit Teamwork	UNSAT	1	2	3	4	5	6	7
22. Emergency Procedures	UNSAT	1	2	3	4	5	6	7
23. Fuel Management Procedures	UNSAT	1	2	3	4	5	6	7
24. NVG Failure	UNSAT	1	2	3	4	5	6	7
25. Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ]   Training Hour Level _____

A P P E N D I X   H

UH/MH-60 PERFORMANCE EVALUATION GRADESLIPS

UH-60 COMMANDER'S EVALUATION

Pilot_____   Evaluator_____   Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

Preflight Tasks

1. VFR Flight Planning	UNSAT	1	2	3	4	5	6	7
2. DA Form 4887-R	UNSAT	1	2	3	4	5	6	7
3. Preflight Inspection	UNSAT	1	2	3	4	5	6	7
4. Engine Start/Runup	UNSAT	1	2	3	4	5	6	7

Hovering/Taxiing

5. Before Takeoff Checks	UNSAT	1	2	3	4	5	6	7
6. Ground Taxi	UNSAT	1	2	3	4	5	6	7
7. Hover Power Check	UNSAT	1	2	3	4	5	6	7
8. Hovering Flight	UNSAT	1	2	3	4	5	6	7
9. Hovering Flight NVG	UNSAT	1	2	3	4	5	6	7

Traffic Pattern Flight

10. Normal Takeoff	UNSAT	1	2	3	4	5	6	7
11. Normal Takeoff NVG	UNSAT	1	2	3	4	5	6	7
12. Maximum Performance Takeoff	UNSAT	1	2	3	4	5	6	7
13. Before Landing Check	UNSAT	1	2	3	4	5	6	7
14. VMC Approach	UNSAT	1	2	3	4	5	6	7
15. VMC Approach NVG	UNSAT	1	2	3	4	5	6	7
16. Roll-On Landing	UNSAT	1	2	3	4	5	6	7
17. Roll-On Landing NVG	UNSAT	1	2	3	4	5	6	7
18. Radio Communication Procedures	UNSAT	1	2	3	4	5	6	7
19. After Landing Tasks	UNSAT	1	2	3	4	5	6	7
20. Simulated Engine Failure at Altitude	UNSAT	1	2	3	4	5	6	7
21. Degraded AFCS	UNSAT	1	2	3	4	5	6	7
22. ECU Lockout Operations	UNSAT	1	2	3	4	5	6	7

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

23. Stabilator Malfunction Procedures	**UNSAT**	1	2	3	4	5	6	7
24. Emergency Procedures	**UNSAT**	1	2	3	4	5	6	7

Outside Traffic

25. Slope Operations	**UNSAT**	1	2	3	4	5	6	7
26. Slope Operations NVG	**UNSAT**	1	2	3	4	5	6	7
27. Confined Area Operations	**UNSAT**	1	2	3	4	5	6	7
28. Confined Area Operations NVG	**UNSAT**	1	2	3	4	5	6	7
29. Instrument Approach	**UNSAT**	1	2	3	4	5	6	7
30. VHIRP	**UNSAT**	1	2	3	4	5	6	7
31. Command Instrument Systems Operations	**UNSAT**	1	2	3	4	5	6	7
32. IFF Systems	**UNSAT**	1	2	3	4	5	6	7
33. Emergency Procedure for NVG Failure	**UNSAT**	1	2	3	4	5	6	7
34. Overall Evaluation	**UNSAT**	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ] Training Hour Level _____

UH-60 BASIC NAVIGATION EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

1. Oral Examination	UNSAT	1	2	3	4	5	6	7
2. Long-Range Mission Planning	UNSAT	1	2	3	4	5	6	7
3. VFR Flight Planning	UNSAT	1	2	3	4	5	6	7
4. DD Form 365-4	UNSAT	1	2	3	4	5	6	7
5. DA Form 4887-R	UNSAT	1	2	3	4	5	6	7
6. Preflight Inspection	UNSAT	1	2	3	4	5	6	7
7. Engine Start, Runup	UNSAT	1	2	3	4	5	6	7
8. Pilotage and Dead Reckoning	UNSAT	1	2	3	4	5	6	7
9. Long-Range Navigation (200 NM)	UNSAT	1	2	3	4	5	6	7
10. Checkpoint Times (± 2 Min.)	UNSAT	1	2	3	4	5	6	7
11. Fuel Management Procedures	UNSAT	1	2	3	4	5	6	7
12. Emergency Procedures (Oral)	UNSAT	1	2	3	4	5	6	7
13. Cockpit Teamwork	UNSAT	1	2	3	4	5	6	7
14. VHIRP	UNSAT	1	2	3	4	5	6	7
15. Emergency Procedures for NVG Failures	UNSAT	1	2	3	4	5	6	7
16. Target Time (± 30 Sec.)	UNSAT	1	2	3	4	5	6	7
17. Before Landing Check	UNSAT	1	2	3	4	5	6	7
18. After Landing Tasks	UNSAT	1	2	3	4	5	6	7
19. Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ] Training Hour Level _____

UH-60 LAFS FLIGHT EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

1.	Identify the 6 LRUs	UNSAT	1	2	3	4	5	6	7
2.	Perform ORT	UNSAT	1	2	3	4	5	6	7
3.	Perform BIT	UNSAT	1	2	3	4	5	6	7
4.	Perform HNVS Avionics Interface	UNSAT	1	2	3	4	5	6	7
5.	Initiate Autotrack	UNSAT	1	2	3	4	5	6	7
6.	Select Hover Mode	UNSAT	1	2	3	4	5	6	7
7.	Perform Precision Hover	UNSAT	1	2	3	4	5	6	7
8.	Perform Nonprecision Hover	UNSAT	1	2	3	4	5	6	7
9.	Perform HNVS Takeoff to Cruise	UNSAT	1	2	3	4	5	6	7
10.	Select Cruise Mode	UNSAT	1	2	3	4	5	6	7
11.	Select Acquisition Mode	UNSAT	1	2	3	4	5	6	7
12.	Select Transition Mode	UNSAT	1	2	3	4	5	6	7
13.	Select Position Mode	UNSAT	1	2	3	4	5	6	7
14.	Use HNVS to Assist in ACP Identification	UNSAT	1	2	3	4	5	6	7
15.	Perform HNVS Approach	UNSAT	1	2	3	4	5	6	7
16.	Perform Instrument Flight	UNSAT	1	2	3	4	5	6	7
17.	Stow the TFU	UNSAT	1	2	3	4	5	6	7
18.	Turn Off the FLIR Image	UNSAT	1	2	3	4	5	6	7
19.	Turn Off the Cryogenic Cooler	UNSAT	1	2	3	4	5	6	7
20.	Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ] Training Hour Level _____

MH-60 CMS PERFORMANCE EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

Start-up Procedures

1. System Status	UNSAT	1	2	3	4	5	6	7
2. Update SCC	UNSAT	1	2	3	4	5	6	7
3. Initiate Navigation Start Procedure	UNSAT	1	2	3	4	5	6	7

Communication Operations

4. Enter Radio Frequencies and Call Signs	UNSAT	1	2	3	4	5	6	7
5. Enter Met Variables	UNSAT	1	2	3	4	5	6	7
6. Set Radio Parameters	UNSAT	1	2	3	4	5	6	7
7. Set ATHS Start Page Data	UNSAT	1	2	3	4	5	6	7

Navigation Operations

8. Enter Nav Aid Data (ADF, VOR, TACAN)	UNSAT	1	2	3	4	5	6	7
9. Access IFF Data	UNSAT	1	2	3	4	5	6	7
10. Zeroize Function (Oral)	UNSAT	1	2	3	4	5	6	7
11. Enter Waypoints	UNSAT	1	2	3	4	5	6	7
12. Perform Doppler Control Procedure	UNSAT	1	2	3	4	5	6	7
13. Perform Update Procedure	UNSAT	1	2	3	4	5	6	7
14. Perform Shutdown Procedure	UNSAT	1	2	3	4	5	6	7
15. Emergency System Operations	UNSAT	1	2	3	4	5	6	7
16. Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ] Training Hour Level _____

UH-60 CMS FLIGHT EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

Cockpit Management Systems

1.	CDU Controls and Indicators	UNSAT	1	2	3	4	5	6	7
2.	Scratch Pad Notations	UNSAT	1	2	3	4	5	6	7
3.	Comm Control, Presets, and Test	UNSAT	1	2	3	4	5	6	7
4.	Nav Control, Presets, and Test	UNSAT	1	2	3	4	5	6	7
5.	IFF Control, Display, and Test	UNSAT	1	2	3	4	5	6	7
6.	System Status Monitoring	UNSAT	1	2	3	4	5	6	7
7.	Zeroize Procedures	UNSAT	1	2	3	4	5	6	7
8.	Doppler Control Procedure	UNSAT	1	2	3	4	5	6	7
9.	Use of Waypoint List	UNSAT	1	2	3	4	5	6	7
10.	Use of Flight Plan Generation	UNSAT	1	2	3	4	5	6	7
11.	Progress Page	UNSAT	1	2	3	4	5	6	7
12.	Update Procedures	UNSAT	1	2	3	4	5	6	7
13.	Annunciation Understanding	UNSAT	1	2	3	4	5	6	7
14.	**Overall Evaluation**	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ] Training Hour Level _____

UH-60 OMEGA PERFORMANCE EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
				Satisfactory S&T Performance			

		UNSAT	1	2	3	4	5	6	7
1.	Perform Start Procedure	UNSAT	1	2	3	4	5	6	7
2.	Initialize System	UNSAT	1	2	3	4	5	6	7
3.	Enter Waypoints	UNSAT	1	2	3	4	5	6	7
4.	Select Flight Plan	UNSAT	1	2	3	4	5	6	7
5.	Edit Flight Plan	UNSAT	1	2	3	4	5	6	7
6.	Enter Fuel Data	UNSAT	1	2	3	4	5	6	7
7.	Perform Direct-To Operation	UNSAT	1	2	3	4	5	6	7
8.	Change Track Change Mode	UNSAT	1	2	3	4	5	6	7
9.	Manually Override Ramp Protection	UNSAT	1	2	3	4	5	6	7
10.	Change Display to Night Vision Mode and Display ETA to Next Waypoint	UNSAT	1	2	3	4	5	6	7
11.	Manually Enter True Airspeed	UNSAT	1	2	3	4	5	6	7
12.	Perform Position Update to Flight Plan Waypoint	UNSAT	1	2	3	4	5	6	7
13.	Perform System Shutdown	UNSAT	1	2	3	4	5	6	7
14.	Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ] Training Hour Level _____

UH-60 BMQ MISSION BRIEFING EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

I. SITUATION

A. Enemy Force	UNSAT	1	2	3	4	5	6	7
B. Friendly Forces	UNSAT	1	2	3	4	5	6	7
C. PAO Guidance	UNSAT	1	2	3	4	5	6	7
D. EEI/EEFI	UNSAT	1	2	3	4	5	6	7

II. MISSION

	UNSAT	1	2	3	4	5	6	7

III. EXECUTION

A. Commander's Intent	UNSAT	1	2	3	4	5	6	7
B. Concept of the Operation	UNSAT	1	2	3	4	5	6	7
C. Sub Unit Missions	UNSAT	1	2	3	4	5	6	7
D. FSB/Airhead Operations	UNSAT	1	2	3	4	5	6	7
E. Flight Route	UNSAT	1	2	3	4	5	6	7
F. Landing Area Procedures	UNSAT	1	2	3	4	5	6	7
G. Departure Airhead Procedures	UNSAT	1	2	3	4	5	6	7
H. Coordinating Instruction	UNSAT	1	2	3	4	5	6	7

IV. SERVICE SUPPORT

A. Class I	UNSAT	1	2	3	4	5	6	7
B. ALSE	UNSAT	1	2	3	4	5	6	7
C. Medivac/Medical Support	UNSAT	1	2	3	4	5	6	7
D. Maintenance	UNSAT	1	2	3	4	5	6	7
E. Special Equipment	UNSAT	1	2	3	4	5	6	7

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

V. COMMAND AND SIGNAL

A. Command | UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

B. Signal | UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

VI. SAFETY | UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

OVERALL EVALUATION | UNSAT | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ] Training Hour Level _____

UH-60 BMQ NVG FLIGHT EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

Preflight Tasks

1. Oral Exam	UNSAT	1	2	3	4	5	6	7
2. Terrain Flight Planning	UNSAT	1	2	3	4	5	6	7
3. DD Form 365-4	UNSAT	1	2	3	4	5	6	7
4. DA Form 4887-R	UNSAT	1	2	3	4	5	6	7
5. Preflight Inspection	UNSAT	1	2	3	4	5	6	7
6. Engine and Equipment Start/Runup	UNSAT	1	2	3	4	5	6	7
7. Data Entry	UNSAT	1	2	3	4	5	6	7

Hovering/Taxiing

8. Ground Taxi	UNSAT	1	2	3	4	5	6	7
9. Hovering Flight	UNSAT	1	2	3	4	5	6	7
10. Hover Power Check	UNSAT	1	2	3	4	5	6	7

In-Traffic Flight

11. Normal Takeoff	UNSAT	1	2	3	4	5	6	7
12. Before Landing Check	UNSAT	1	2	3	4	5	6	7
13. Approach	UNSAT	1	2	3	4	5	6	7
14. Terrain Flight Takeoff	UNSAT	1	2	3	4	5	6	7
15. After Landing Tasks	UNSAT	1	2	3	4	5	6	7

Outside Traffic

16. Perform Doppler Navigation	UNSAT	1	2	3	4	5	6	7
17. Pilotage and Dead Reckoning	UNSAT	1	2	3	4	5	6	7
18. Terrain Flight	UNSAT	1	2	3	4	5	6	7
19. Terrain Flight Navigation	UNSAT	1	2	3	4	5	6	7
20. VHIRP	UNSAT	1	2	3	4	5	6	7
21. Perform OMEGA Nav	UNSAT	1	2	3	4	5	6	7

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

		UNSAT	1	2	3	4	5	6	7
22.	Cockpit Teamwork	UNSAT	1	2	3	4	5	6	7
23.	Emergency Procedures	UNSAT	1	2	3	4	5	6	7
24.	Fuel Management Procedures	UNSAT	1	2	3	4	5	6	7
25.	NVG Failure	UNSAT	1	2	3	4	5	6	7
26.	Perform Fast Rope Approach	UNSAT	1	2	3	4	5	6	7
27.	**Overall Evaluation**	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ]   Training Hour Level _____

A P P E N D I X   I

MH-6 PERFORMANCE EVALUATION GRADESLIPS

MH-6 TRANSITION FLIGHT EVALUATION

Pilot_____   Evaluator_____   Date_____

UNSAT **Unsatisfactory Performance**	**1** Marginal	**2** Well Below Average	**3** Below Average	**4** Average S&T Student	**5** Above Average	**6** Well Above Average	**7** Exceptional
	Satisfactory S&T Performance						

Preflight Tasks

1. Oral Examination	UNSAT	1	2	3	4	5	6	7
2. Premission Planning	UNSAT	1	2	3	4	5	6	7
3. Perform Preflight Inspection	UNSAT	1	2	3	4	5	6	7
4. Perform Engine Start and Runup	UNSAT	1	2	3	4	5	6	7

Hovering/Taxiing

5. Hovering Flight	UNSAT	1	2	3	4	5	6	7
6. Perform Hover Power Check	UNSAT	1	2	3	4	5	6	7
7. Perform Hover Flight	UNSAT	1	2	3	4	5	6	7
8. Perform Hover OGE Check	UNSAT	1	2	3	4	5	6	7
9. Perform Before Takeoff Check	UNSAT	1	2	3	4	5	6	7
10. Perform Normal Takeoff	UNSAT	1	2	3	4	5	6	7

Outside Traffic Pattern Flight

11. Normal Takeoff	UNSAT	1	2	3	4	5	6	7
12. Perform Slope Operations	UNSAT	1	2	3	4	5	6	7
13. Perform Terrain Flight Takeoff	UNSAT	1	2	3	4	5	6	7
14. Perform Terrain Flight	UNSAT	1	2	3	4	5	6	7
15. Perform NOE Deceleration	UNSAT	1	2	3	4	5	6	7
16. Perform or Describe VHIRP	UNSAT	1	2	3	4	5	6	7
17. Perform Masking and Unmasking	UNSAT	1	2	3	4	5	6	7
18. Confined Area Operations	UNSAT	1	2	3	4	5	6	7
19. Terrain Flight Navigation	UNSAT	1	2	3	4	5	6	7
20. Action on Contact	UNSAT	1	2	3	4	5	6	7

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
				Satisfactory S&T Performance			

Approaches

21. Perform Before Landing Check	UNSAT	1	2	3	4	5	6	7
22. Perform VMC Approach	UNSAT	1	2	3	4	5	6	7
23. Perform Terrain Flight Approach	UNSAT	1	2	3	4	5	6	7
24. Perform a Shallow Approach to a Running Landing	UNSAT	1	2	3	4	5	6	7
25. Perform After Landing Tasks	UNSAT	1	2	3	4	5	6	7

Emergency Procedures

26. Perform Standard Autorotation	UNSAT	1	2	3	4	5	6	7
27. Perform Low-Level Autorotation	UNSAT	1	2	3	4	5	6	7
28. Perform Low-Level, Low-Airspeed Autorotation	UNSAT	1	2	3	4	5	6	7
29. Perform Standard Autorotation With Turn	UNSAT	1	2	3	4	5	6	7
30. Perform Simulated Antitorque Malfunction (Fixed Pedal Setting)	UNSAT	1	2	3	4	5	6	7
31. Perform Hovering Autorotation	UNSAT	1	2	3	4	5	6	7
32. Perform Simulated Engine Failure at Altitude	UNSAT	1	2	3	4	5	6	7
33. Perform Simulated Engine Failure at a Hover	UNSAT	1	2	3	4	5	6	7
34. Perform or Describe Emergency Procedures	UNSAT	1	2	3	4	5	6	7
35. **Overall Evaluation**	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ]   Training Hour Level _____

MH-6 NVG QUALIFICATION EVALUATION

Pilot_____   Evaluator_____   Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
				Satisfactory S&T Performance			

1. Perform Runup	UNSAT	1	2	3	4	5	6	7
2. Perform Hovering Flight	UNSAT	1	2	3	4	5	6	7
3. Perform OGE Hover Check	UNSAT	1	2	3	4	5	6	7
4. Perform NVG Takeoff	UNSAT	1	2	3	4	5	6	7
5. Perform NVG Traffic Pattern Flight	UNSAT	1	2	3	4	5	6	7
6. Perform Confined Area Operations	UNSAT	1	2	3	4	5	6	7
7. Perform Slope Operations	UNSAT	1	2	3	4	5	6	7
8. Perform or Describe Emergency Procedures	UNSAT	1	2	3	4	5	6	7
9. Perform Actual or Simulated NVG Failure	UNSAT	1	2	3	4	5	6	7
10. Perform Terrain Flight Navigation	UNSAT	1	2	3	4	5	6	7
11. Perform Terrain Flight	UNSAT	1	2	3	4	5	6	7
12. Perform Masking and Unmasking	UNSAT	1	2	3	4	5	6	7
13. Perform NOE Deceleration	UNSAT	1	2	3	4	5	6	7
14. Perform Before Landing Check	UNSAT	1	2	3	4	5	6	7
15. Perform NVG Approach	UNSAT	1	2	3	4	5	6	7
16. Perform Go-Around	UNSAT	1	2	3	4	5	6	7
17. Perform After-Landing Tasks	UNSAT	1	2	3	4	5	6	7
18. Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ] Training Hour Level _____

MH-6 BMT MISSION BRIEFING EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

INTRODUCTION	UNSAT	1	2	3	4	5	6	7
I. SITUATION								
A. Enemy Force	UNSAT	1	2	3	4	5	6	7
B. Friendly Forces	UNSAT	1	2	3	4	5	6	7
C. PAO Guidance	UNSAT	1	2	3	4	5	6	7
D. EEI/EEFI	UNSAT	1	2	3	4	5	6	7
II. MISSION	UNSAT	1	2	3	4	5	6	7
III. EXECUTION								
A. Commander's Intent	UNSAT	1	2	3	4	5	6	7
B. Concept of the Operation	UNSAT	1	2	3	4	5	6	7
C. Sub Unit Missions	UNSAT	1	2	3	4	5	6	7
D. Contingencies	UNSAT	1	2	3	4	5	6	7
E. Coordinating Instruction	UNSAT	1	2	3	4	5	6	7
IV. SERVICE SUPPORT								
A. Class I	UNSAT	1	2	3	4	5	6	7
B. Class III	UNSAT	1	2	3	4	5	6	7
C. ALSE	UNSAT	1	2	3	4	5	6	7
D. Medivac/Medical Support	UNSAT	1	2	3	4	5	6	7
V. COMMAND AND SIGNAL								
A. Command	UNSAT	1	2	3	4	5	6	7
B. Signal	UNSAT	1	2	3	4	5	6	7
VI. SAFETY	UNSAT	1	2	3	4	5	6	7
OVERALL EVALUATION	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ] Checkride [ ] Hot Bench [ ] Training Hour Level _____

MH-6 BMT FLIGHT EVALUATION

Pilot_____ Evaluator_____ Date_____

UNSAT Unsatisfactory Performance	1 Marginal	2 Well Below Average	3 Below Average	4 Average S&T Student	5 Above Average	6 Well Above Average	7 Exceptional
	Satisfactory S&T Performance						

		UNSAT							
1.	Oral Examination	UNSAT	1	2	3	4	5	6	7
2.	Premission Planning	UNSAT	1	2	3	4	5	6	7
3.	Preflight/Cockpit Procedures	UNSAT	1	2	3	4	5	6	7
4.	Normal Takeoff	UNSAT	1	2	3	4	5	6	7
5.	ATC Procedures	UNSAT	1	2	3	4	5	6	7
6.	NVG Failure	UNSAT	1	2	3	4	5	6	7
7.	Terrain Flight	UNSAT	1	2	3	4	5	6	7
8.	Blade Drill	UNSAT	1	2	3	4	5	6	7
9.	Blind Cockpit Drill	UNSAT	1	2	3	4	5	6	7
10.	Quick Start	UNSAT	1	2	3	4	5	6	7
11.	Formation Flight	UNSAT	1	2	3	4	5	6	7
12.	Pilotage and Dead Reckoning	UNSAT	1	2	3	4	5	6	7
13.	Navigation Lead	UNSAT	1	2	3	4	5	6	7
14.	Navigation NOT Lead	UNSAT	1	2	3	4	5	6	7
15.	Checkpoint Time (± 2 Min.)	UNSAT	1	2	3	4	5	6	7
16.	Fuel Management	UNSAT	1	2	3	4	5	6	7
17.	VMC Approach	UNSAT	1	2	3	4	5	6	7
18.	Target Time (± 30 Sec.)	UNSAT	1	2	3	4	5	6	7
19.	Cockpit Teamwork	UNSAT	1	2	3	4	5	6	7
20.	Overall Evaluation	UNSAT	1	2	3	4	5	6	7

Type Evaluation (Check one): Put-Up [ ]   Checkride [ ]   Hot Bench [ ] Training Hour Level _____