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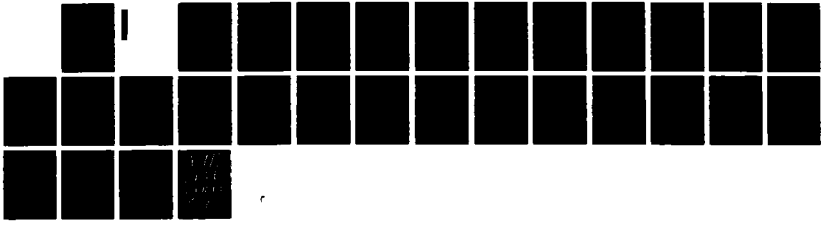

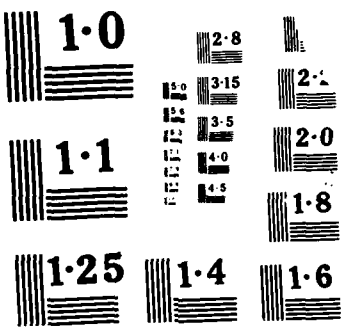
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TRAINING EFFECTIVENESS EVALUATION

OH-58D PILOT AND OBSERVER

COMBAT SKILLS INSTRUCTION

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UNITED STATES ARMY AVIATION CENTER

FORT RUCKER, ALABAMA

January 1987

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ACKNOWLEDGMENT

This evaluation was conducted by the Internal Instructional Systems Evaluation Branch, Evaluation Division, Directorate of Evaluation and Standardization of the United States Army Aviation Center.

Personnel who directed and conducted the study included COL John C. Shaw, Jr., Director, Directorate of Evaluation and Standardization; MAJ Robert J. Scurzi, Commander, Evaluation Division; CPT Roger L. Lewis, Commander, Internal Instructional Systems Evaluation Branch; CPT Richard F. Ambruster (Project Officer), Ms. Shelby Godwin (Assistant Project Officer), and SFC William A. Kruczek (Project NCO), Internal Instructional Systems Evaluation Branch. Ms. Peggy Shelley provided typing assistance for the project.

Much of the data gathered during this evaluation was made possible by the cooperative and supportive attitudes displayed by the academic instructors from Aviation Operations Branch, Department of Combined Arms Tactics (DCAT), flight instructors from C Company, 7th Aviation Training Battalion, Aviation Training Brigade (ATB), and the OH-58D project officers from Directorate of Training and Doctrine (DOTD). Significant contributions included technical assistance, subject matter expertise, interviews, and assistance with course critiques.

ABSTRACT

1. The purpose of this evaluation is to determine if the Task Force (TF) 1-112 pilots and observers receive adequate combat skills training during the OH-58D Aviator Qualification Course (AQC) and the Aerial Observer Qualification Course (AOQC).

2. These courses were designed to provide the pilot and observer with the combat skills and knowledges necessary for operation of mission equipment and accomplishment of the mission from their respective positions in the OH-58D. To accomplish this, a 23-day program of instruction (POI) consisting of 27.0 academic hours and 85.0 flight training block time hours (8.0 DF, 0.6 N, 9.1 NVG) was developed for the pilot. A 28-day POI consisting of 27.0 academic hours and 98.0 flight training block time hours (13.0 DF, 1.7 N, 4.8 NVG) was developed for the aerial observer.

3. This study was limited to data collected from the combat skills courses conducted at USAAVNC with Task Force 1-112 pilots and observers. Subject matter experts from DCAT, ATB, DGFS, and DES contributed their technical and educational expertise. The Measures of Training Effectiveness (MOTE) used to collect data were the course audit trail, student critiques, flight evaluation grade and comment slips, academic results, training materials, POIs, and interviews with instructors.

4. The evaluation produced the following major findings:

a. Research of course development documentation and interviews with course designers showed that systematic procedures were followed during the analysis, design, and development of the OH-58D systems and combat skills instruction. TRADOC guidelines were followed by the task board that was established to select the critical tasks for OH-58D aircrewmembers.

b. An evaluation of academic classroom instruction and flight training, together with a review of instructional materials and informal feedback from students and instructors, showed that training materials and procedures are adequate to accomplish the objectives.

(1) All critical tasks were represented, and objectives were consistently presented in training materials and instructional media. Lesson plans, flight training guides, and other training materials adequately support the instruction. However, the ten-hour block presented by DCAT on Organization, Mission, and Employment of Advanced Attack Helicopters does not have specific objectives that give tasks, conditions, and standards. Students are given a broad scope that tells them what will be covered by the instruction, but are not given standards that can be used to measure successful accomplishment of the tasks.

(2) Instructors are conducting training IAW established objectives and current Army doctrine and procedural guidelines. However, the training could be enhanced by providing DCAT instructors with additional technical training in the advanced aircraft, both OH-58D and AH-64.

(3) Because of procurement constraints, the extremely effective OH-58D Cockpit Procedural Trainer (CPT) and Classroom Systems Trainer (CST) were not incorporated into the combat skills training. Development of these lessons was limited to the systems training phase.

(4) The training device that produces OH-58D FLIR imagery has not yet been developed; therefore, the instruction on OH-58D FLIR Target Identification was not conducted. Until the FLIR Target Identification trainer is available, this material should be incorporated into the existing trainer (CPT) that portrays Mast Mounted Sight (MMS) operations with a pictorial display. Since the training device has already been purchased, the only additional expense would be for software development to incorporate the threat imagery into the MMS videos.

(5) The training schedules were generally followed. Deviations that occurred were caused primarily by availability of aircraft, shortage of instructors, and inclement weather.

(6) Air-to-Air Stinger (ATAS) familiarization, conducted by TRADOC Systems Manager for Missiles (TSM-M) in coordination with the Weapons and Gunnery Division of DGFS, was found to be adequate. "Hands-on" training devices for the OH-58D ATAS will arrive at USAAVNC in the third quarter of FY 87.

(7) The flight evaluation given as the job performance measure for this course was extremely realistic and job oriented. However, some tasks were covered orally due to range limitations, aircraft availability, and the inability to interact with AH-64s and field artillery.

c. Overall, student and instructor perceptions, as conveyed through critiques and informal interviews, were that the course is adequate to train students to function successfully as pilots and observers in the OH-58D aircraft.

5. Recommendations:

a. That the DCAT combat skills instructors receive training in OH-58D and AH-64 systems/gunnery/combat skills and that selected OH-58D and/or AH-64 pilots with field experience be reassigned to DCAT to instruct combat skills academics.

b. That DCAT develop specific objectives for the block of instruction on Organization, Mission, and Employment of Advanced Attack Helicopters that conform with SAT procedures.

c. That ATB and DOL monitor OH-58D aircraft maintenance to ensure that contract support is adequate.

TRAINING EFFECTIVENESS EVALUATION

OH-58D PILOT AND OBSERVER COMBAT SKILLS INSTRUCTION

1. INTRODUCTION:

a. Purpose: To determine if the initial qualification combat skills instruction is adequate for Task Force 1-112 pilots and observers attending the OH-58D Aviator Qualification Course (AQC) and Aerial Observer Qualification Course (AOQC).

b. Background:

(1) The Training Effectiveness Evaluation of individual qualification training for the Attack Helicopter Company Field Evaluation (AHCFE) players (Task Force 1-112 personnel) is a continuation study resulting from the OH-58D Operational Test II (OT II). OT II results suggested that poor performance demonstrated by the observers was a result of inadequate training. The Vice Chief of Staff, U.S. Army (VCSA), directed USAAVNC to form an attack helicopter unit to validate training, both individual qualification and collective team training. The formation and objective of this unit, TF 1-112, became known as the Attack Helicopter Company Field Evaluation (AHCFE).

(2) The Directorate of Training and Doctrine (DOTD) was appointed as USAAVNC team lead for the successful completion of the AHCFE. The Directorate of Evaluation and Standardization (DES) was tasked with the responsibility of evaluating the individual qualification training. To accomplish this, the evaluation was conducted in two stages to coincide with the two phases of training that were established for the courses.

(a) The initial evaluation assessed the effectiveness of training conducted during the OH-58D systems instruction that was given by Bell Helicopter Textron, Incorporated (BHTI) at Ft Worth, Texas. Classes in session during this evaluation were AQC Class 3 and AOQC Class 1; they consisted entirely of Task Force 1-112 pilots and observers. This training was conducted April to June 1986.

(b) The second phase, which is the subject of this report, was an evaluation of combat skills training for TF 1-112 conducted at the USAAVNC from August to October 1986. Three student instructor pilots from USAAVNC received this instruction along with TF 1-112. The Aviation Training Brigade (ATB) was in charge of this training. The combat skills phase consists of 27.0 academic hours and 85.0 flight training block time hours (8.0 DF, 0.6 N, and 9.1 NVG) for the pilot course. The observer course consists of 27.0 academic hours and 98.0 flight training block time hours (13.0 DF, 1.7 N, 4.8 NVG).

2. SCOPE:

a. This evaluation of OH-58D combat skills instruction was conducted at USAAVNC from August through October 1986 and encompassed all OH-58D classes in session during this period.

b. The following assumptions were deemed necessary for the conduct of this evaluation:

(1) The students attending OH-58D qualification training meet established prerequisites and are representative of students who will be attending future classes.

(2) Institutional qualification training will be similar to that presented to TF 1-112 pilots and observers.

(3) The lessons learned from TF 1-112 field tests and evaluations will be incorporated into institutional combat skills instruction.

3. OBJECTIVES AND ESSENTIAL ELEMENTS OF ANALYSIS (EEAs):

a. Objective 1: Determine if the systems approach to training (SAT) procedures were followed during the analysis, design, and development phases.

(1) EEA 1: What procedures were used in selecting the training tasks?

(2) EEA 2: Are tasks selected for training adequately presented in the learning objectives and training materials?

(3) EEA 3: Do job performance measures support the learning objectives and do they adequately measure student learning/performance?

b. Objective 2: Determine if the materials and procedures used in training OH-58D combat skills are effective.

(1) EEA 1: Are the instructors training IAW established objectives and current Army doctrine and procedural guidelines?

(2) EEA 2: Is the instruction conducted according to training schedules, and does the sequence effectively present the material?

(3) EEA 3: Are learning objectives adequately covered in training materials and instructional presentations and are they consistent between materials?

(4) EEA 4: Are the students accomplishing the learning objectives?

c. Objective 3: Determine perceptions of students/instructors as to the quality and content of the courses.

(1) EEA 1: What are the students'/instructors' opinions of the quality of instruction?

(2) EEA 2: What are the students'/instructors' opinions of the course content?

4. METHODOLOGY: Data collection for this evaluation came from the following sources:

a. Objective 1, EEA 1: The course development documentation was researched and interviews were conducted with the course designers to determine if systematic procedures were followed in selecting tasks for training.

b. Objective 1, EEA 2: Training materials were reviewed to determine if tasks selected for training are adequately covered in the learning objectives and training materials.

c. Objective 1, EEA 3: Training materials and the flight evaluations were reviewed to determine if tasks are adequately presented in learning objectives and the job performance measures.

d. Objective 2, EEAs 1 and 2: The academic classes and flight training periods were monitored to determine if the instructors are training IAW established objectives and current Army doctrine and procedural guidelines, that training is conducted according to schedule, and that the sequence effectively presents the material.

e. Objective 2, EEA 3: The training materials were reviewed to determine if objectives are consistent and support the POI purpose, and if content adequately presents the learning objectives.

f. Objective 2, EEA 4: Academic instruction was monitored, course critiques and academic/flight evaluation results were reviewed, and interviews were conducted with students and instructors to determine if the students are accomplishing the learning objectives.

g. Objective 3, EEAs 1 and 2: Student critiques were reviewed and informal interviews were conducted with instructors to determine their perceptions as to the quality and content of the courses.

5. RESULTS:

a. Objective 1: Determine if systems approach to training (SAT) procedures were followed during the analysis, design, and development phases.

(1) EEA 1: Research of audit trail documentation and discussions with project officers and SMEs showed that systematic procedures were followed in selecting the tasks for training. A task selection board was convened to refine the existing aeroscout combat skills task list and incorporate tasks to cover the capabilities of the advanced systems associated with the OH-58D. This task list was approved and was incorporated into the draft POIs for both the OH-58D pilot and observer courses. The task list will be reviewed annually or as otherwise directed.

(2) EEA 2: A review of flight training guides, lesson plans, student handouts, and other training materials showed that all tasks selected for training are adequately presented in the learning objectives and are consistent in supporting the POI purpose.

(3) EEA 3: Job performance measures are tested by a "hands-on" flight evaluation conducted by a qualified OH-58D instructor pilot. This evaluation requires the pilots and observers to demonstrate proficiency of selected tasks IAW standards given in the Flight Training Guide.

b. Objective 2: Determine if the materials and procedures used in training OH-58D combat skills are effective.

(1) EEA 1: Classroom observations revealed that instruction is being presented in accordance with established objectives and current Army doctrine and procedural guidelines. All instructors have attended the Instructor Training Course or the Instructor Pilot Course and are familiar with USAAVNC training directives. The lesson plans and flight training guides were followed, and all learning objectives were addressed. Instructors from DCAT, Combined Arms Division, displayed professional attitudes and are very knowledgeable of combined arms and attack/aeroscout tactics. However, their technical knowledge of OH-58D and AH-64 aircraft and weapons, laser, TV imagery systems and capabilities was limited due to lack of technical training and experience on these systems. Without this knowledge, the discussions on the employment of advanced scout and attack helicopters, laser designation for advanced munitions, and digital message use for target handovers did not go into sufficient depth.

(2) EEA 2: The combat skills training sequence was monitored from August 1986 through October 1986. It was found that the training schedules were generally followed and that the sequence effectively presented the material. The problems associated with deviations from the schedules were related to availability of aircraft, shortage of instructors, and inclement weather. Training support was hampered because support personnel were also undergoing their own qualification on the new OH-58D systems during this timeframe.

(3) EEA 3: A review of the flight training guides, lesson plans, student handouts, and other training materials showed that all tasks are adequately presented in the learning objectives and are consistent in supporting the POI purpose. Instructional presentations that were monitored were consistent with objectives and training materials.

(a) The Flight Training Guides developed by ATB incorporated all tasks selected for training. Task descriptions were sufficiently detailed and the standards were adequate.

(b) The academic instruction on Unit Organization, Mission, and Employment of Advanced Attack Helicopters was developed, and is presented, by Combined Arms Division, DCAT. It was found through a review of the classroom instruction and training materials that the presentations were highly informative and developed mental skills in support of the flight training. However, it does not have specific objectives that give tasks, conditions, and standards.

Training materials contain a broad scope that is an overview of the selected tasks to be covered. This is not IAW the current USAAVNC Pam 310-4. The material is not tested. The basis for this instruction resulted from the field trials and lessons learned during the OH-58D Operation Test II (OT II) and limited ground school systems instruction on the advanced aircraft, AH-64/ OH-58D. The involvement of DCAT in TF 1-112's ARTEP and Follow-on Test and Evaluation (FOT&E) will contribute the lessons learned to update this instruction toward the needs of our AH-64/OH-58D aircrewmembers.

(c) OH-58D FLIR Target Identification was not taught because the training aid to produce FLIR imagery has not been developed.

(d) The Weapons and Gunnery Division of DGFS, in coordination with the TRADOC Systems Manager for Missile (TSM-M), supported an Air-to-Air Stinger familiarization lesson. The instruction was found to adequately support the flightline training. However, instructors felt a classroom training device that simulated target acquisition and launch would be an effective tool to instruct and measure student performance. Air-to-Air Stinger (ATAS) training devices, Field Handling Trainer and Captive Flight Trainer, will be incorporated into OH-58D qualification upon delivery. These devices allow "hands-on" training of preflight, target acquisition, and launch. The expected delivery of the ATAS training devices and materials is the 3rd quarter of FY 87.

(e) Training aids for combat skills are limited. The student handouts and flight training guides were adequate, but no devices were available to support "hands-on" performance other than the actual aircraft. The training aids that had been developed to conduct and support systems instruction were not integrated into combat skills instruction. A comparison of training aids for the AH-64 AQC revealed that a Classroom Systems Trainer (CST), TADS Selected Task Trainer (TSTT), Cockpit Weapons Emergency Procedure Trainer (CWEPT), and Combat Mission Simulator (CMS) are used in support of systems, weapons, and combat skills instruction.

(4) EEA 4: The pilots and observers were monitored throughout the training to assess their progress. Academic lessons were evaluated and flight evaluation results were reviewed to determine the accomplishment of the training tasks. Both pilots and observers performed satisfactorily on the flight evaluation.

c. Objective 3: Determine the perceptions of students/instructors as to the quality and content of the courses.

(1) EEA 1 and EEA 2: All students and instructors involved in the OH-58D combat skills training were surveyed to obtain feedback concerning content of the course, quality of instruction, adequacy of support and training time, and their suggestions for improvements. This feedback is shown in Annex A for students and Annex B for instructors. The following is a brief summary:

(a) Student critique comments:

1. Overall, the combat skills training was adequate to qualify students to operate the OH-58D and its mission equipment.

2. Instructors were extremely knowledgeable, highly motivated, and professional. Training materials and handouts were also outstanding.

3. Scheduled training time was adequate; however, several factors were mentioned that either prevented the training schedules from being met or hindered the training. These included: aircraft availability, limited maintenance support, weather delays, location and inadequacy of training areas, and the lack of cover aircraft.

4. Some of the DCAT employment classes were a repeat of OH-58C EAOC; however, the Laser Procedures and Hellfire classes were beneficial.

5. The quality and content of instruction was rated as outstanding by the majority of students for most tasks. Tasks rated lowest included:

a. Perform FM Radio Homing - (Currently the OH-58D aircraft are not equipped with the appropriate avionics equipment to perform this task).

b. Perform Artillery Mission - (This was difficult to perform because the artillery did not have their BCS set up to transfer digital communications. Also, there was no laser integration with artillery munitions).

c. Perform Tactical Communications Procedures/ECCM - (More emphasis is needed on using the ATHS; the aircraft lack a full avionics package).

d. Transmit Bulk Data with ATHS - (It was not realistic because there was no one responding to the message; more training is needed)

e. Perform Target Position Estimation Procedures (Full laser operation was limited on the range).

f. Transmit Reports - (More emphasis is needed on digital message transfer using ATHS).

6. Some areas were covered by IP discussion only, rather than hands-on instruction.

7. The flight evaluation was challenging, fair, and adequately covered all critical tasks.

(b) Instructor interview comments:

1. Overall, the training is adequate, but some improvements are needed.

2. Course length is sufficient to adequately train both pilots and observers.

3. Both pilots and observers performed their duties in a capable manner.

4. More emphasis is needed on ATHS digital mission handovers with the field artillery Battery Command System (BSC). Also, the range restrictions prevent realistic laser training.

5. Aircraft availability is marginal. Other problems encountered were stagefield, maintenance, and bus support, as well as restricted range facilities.

6. CONCLUSIONS:

a. Research of course development documentation and interviews with course designers showed that systematic procedures were followed during the analysis, design, and development of the OH-58D systems and combat skills instruction. TRADOC guidelines were followed by the task board that was established to select the critical tasks for OH-58D aircrewmembers.

b. An evaluation of academic classroom instruction and flight training, together with a review of instructional materials and informal feedback from students and instructors, showed that training materials and procedures are adequate to accomplish the objectives.

(1) All critical tasks were represented, and objectives were consistently presented in training materials and instructional media. Lesson plans, flight training guides, and other training materials adequately support the instruction. However, the ten-hour block presented by DCAT on Organization, Mission, and Employment of Advanced Attack Helicopters does not have specific objectives that give tasks, conditions, and standards. Students are given a broad scope that tells them what will be covered by the instruction, but are not given standards that can be used to measure successful accomplishment of the tasks.

(2) Instructors are conducting training IAW established objectives and current Army doctrine and procedural guidelines. However, the training could be enhanced by providing DCAT instructors with additional technical training in the advanced aircraft, both OH-58D and AH-64.

(3) Because of procurement constraints, the extremely effective OH-58D Cockpit Procedural Trainer (CPT) and Classroom Systems Trainer (CST) were not incorporated into the combat skills training. Development of these lessons was limited to the systems training phase.

(4) The training device that produces OH-58D FLIR imagery has not yet been developed; therefore, the instruction on OH-58D FLIR Target Identification was not conducted. Until the FLIR Target Identification trainer is available, [illegible] should be incorporated into the existing trainer (CPT) that presents [illegible] operations with a pictorial display. Since the training device has already been purchased, the only additional expense would be for software development to incorporate the threat imagery into the MMS videos.

(5) The training schedules were generally followed. Deviations that occurred were caused primarily by availability of aircraft, shortage of instructors and inclement weather.

(6) Air-to-Air Stinger (ATAS) familiarization, conducted by TRADOC Systems Manager for Missiles (TSM-M) in coordination with the Weapons and Gunnery Division of DGFS, was found to be adequate. "Hands-on" training devices for the OH-58D ATAS will arrive at USAAVNC in the third quarter of FY 87.

(7) The flight evaluation given as the job performance measure for this course was extremely realistic and job oriented. However, some tasks were covered orally due to range limitations, aircraft availability, and the inability to interact with AH-64s and field artillery.

c. Overall, student and instructor perceptions, as conveyed through critiques and informal interviews, were that the course is adequate to train students to function successfully as pilots and observers in the OH-58D aircraft.

7. RECOMMENDATIONS:

a. That the DCAT combat skills instructors receive training in OH-58D and AH-64 systems/gunnery/combat skills and that selected OH-58D and/or AH-64 pilots with field experience be reassigned to DCAT to instruct combat skills academics.

b. That DCAT develop specific objectives for the block of instruction on Organization, Mission, and Employment of Advanced Attack Helicopters that conform with SAT procedures.

c. That ATB and DOL monitor OH-58D aircraft maintenance to ensure that contract support is adequate.

ANNEX A

STUDENT CRITIQUE COMMENTS

STUDENT CRITIQUE COMMENTS

1. General: This annex presents the significant ratings and comments from a critique given to the OH-58D students in combat skills qualification training during September and October 1986. A total of six TF 1-112 pilots and observers and three USAAVNC student instructor pilots received this training.

2. The questions asked to the students are listed below, along with the summarized responses.

a. What is your overall opinion of the course?

(1) Three students rated the course as good.

(2) Two students felt the tactics instruction from DCAT was a repeat from OH-58C EAOC tactics instruction.

(3) Two students stated that the DCAT Laser Procedures and Hellfire classes were very beneficial.

(4) One student stated that the course was very good and highlights the major differences in tactics between the OH-58C and OH-58D.

(5) One student stated that the training support was poor. The NOE area, stagefield selection, and range times were not adequate--"It seems the OH-58D student plays second fiddle."

b. What is your overall opinion of the instructors?

All students rated the instructors as outstanding--extremely knowledgeable, highly motivated, and professional.

c. Do you feel the flight evaluation is challenging, fair, and adequately covers the critical tasks?

All students who had received a flight evaluation felt it was adequate and keyed on all the requirements.

d. Do you feel the length of this course is appropriate for the amount of instruction received?

(1) Five students stated that the amount of training time is adequate, but maintenance and weather problems hinder the daily schedule.

(2) Three students felt the course was three to five days too long.

e. Were you provided with proper support to complete the scheduled training?

(1) Three students stated that adequate support was provided.

(2) Four students stated that aircraft availability and maintenance did not support the daily student load.

(3) Two students stated that stagefields, training areas, and cover aircraft were not dedicated and were sometimes inadequate.

3. The second section of the student critique asked the student to rate the quality and content of training to accomplish the listed critical tasks. A summarization of the students' ratings and supporting comments is listed below:

TASK/TITLE		NO. OF STUDENTS	RATING	COMMENTS
5001	Perform Terrain Flight Mission Planing	8	Outstanding	
		1	Adequate	
5010	Perform Terrain Flight Approach	6	Outstanding	I'm not sure this task should be in combat skills.
		1	Inadequate	
5011	Perform FM Radio Homing	1	Outstanding	Currently, the OH-58D aircraft are not configured with the appropriate avionics equipment to perform this task.
		2	Adequate	
		6	Inadequate	
5013	Perform Tactical Communications Procedures/ECCM	4	Outstanding	
		4	Adequate	Need more emphasis on utilizing ATHS.
		1	Inadequate	Aircraft lack a full avionics package.
5015	Perform Terrain Flight	8	Outstanding	
		1	Adequate	
5016	Perform Aerial Observation	8	Outstanding	
		1	Adequate	
5017	Transmit Reports	5	Outstanding	
		4	Adequate	Need more emphasis on digital message transfer using ATHS. There should be at least one whole period devoted to ATHS messages with aircraft on the ramp.
5018	Perform Evasive Maneuvers	2	Outstanding	
		3	Adequate	

TASK/TITLE		NO. OF STUDENTS	RATING	COMMENTS
5019	Operate Radar Warning Receiver			All students stated that oral discussion with IPs was adequate, but equipment was not installed in aircraft for "hands-on" operation.
5024	Perform Techniques of Movement	4 3	Outstanding Adequate	
5031	Perform Actions on Contact	3 4	Outstanding Adequate	
5033	Negotiate Wire Obstacles			All students stated that oral discussion with IPs was adequate.
5036	Perform as a Crewmember	8 1	Outstanding Adequate	
5049	Perform Route Reconnaissance	5	Outstanding	
5050	Perform Zone Reconnaissance	5	Outstanding	
5051	Perform Area Reconnaissance	5	Outstanding	
5057	Operate ANVIS	5 1	Outstanding Adequate	
5129	Transmit Bulk Data with ATHS	4 3 1	Outstanding Adequate Inadequate	 But was not realistic because there was no one responding to message. More training is needed.
5131	Review Received Messages with ATHS	7 2	Outstanding Adequate	 But, we never had anyone to talk to.
5134	Perform Downed Aircraft Procedures			All students stated that oral discussion with IPs was adequate

TASK/TITLE		STUDENTS	RATING	COMMENTS
5137	Employ ATHS Message	7	Outstanding	
		2	Adequate	But, more time is needed to explain the capabilities and limitations of ATHS.
5138	Select Observation/ Designation Position	6	Outstanding	
		3	Adequate	
6013	Select/Recommend LZ/PZ	5	Outstanding	
		1	Adequate	
		1	Inadequate	
6014	Select/Recommend Holding Area	4	Outstanding	
		2	Adequate	
6015	Select Attack Helicopter Battle Positions	6	Outstanding	
		1	Adequate	
6015.1	Select Attack Helicopter Firing Positions	5	Outstanding	
		2	Adequate	
6016	Perform Target Handover to Attack	4	Outstanding	Utilizing two aircraft--one acting as the attack, was very beneficial.
		1	Adequate	
		1	Inadequate	Did not have anyone to send the handover to.
6021	Perform Security Mission	2	Outstanding	
		2	Adequate	
6025.1	Perform Artillery Mission	1	Outstanding	
		7	Adequate	This was difficult to perform because the artillery did not have their BCS set up to transfer digital communications. Also, there was no laser integration with artillery munitions, i.e., copperhead, etc.
6089	Perform Target Position Estimation Procedures	2	Outstanding	
		5	Adequate	Full laser operations of the task was limited on this range

b. This section of the student critique was for general comments that are listed below:

(1) The instruction overall has been outstanding.

(2) Several areas were covered in discussion only and not in an aircraft.

(3) Training materials and handouts have been outstanding.

(4) The IPs are great instructors, but they cannot do their jobs without adequate maintenance support.

(5) The DCAT employment classes are a review from OH-58C EAOC; however, the Laser Procedures and Hellfire classes from DCAT were helpful.

(6) Comments concerning Fort Rucker's range limitations are listed below:

(a) The laser range has only a maximum range of 2100M.

(b) Some fields of fire are only one degree wide.

(c) Artillery still uses those tired 105s that don't have laser munitions.

(d) The terrain is very poor for Mast Mounted Sight operations.

(e) It takes 35 minutes to get to the NOE area; then you fly to Hatch for gas, which results in 15 minutes in the NOE area out of a two-hour flight.

(f) Move the OH-58Ds and AH-64s to a better training area that can perform laser operations with advanced munitions (Hellfire and Copperhead) for autonomous designations and handovers.

(g) Need additional time for ATHS artillery handovers with the BCS.

(7) The non-availability of OH-58D aircraft hinders the training syllabus.

(8) There should be four to five additional hours of emergency aircraft handling for the observers.

ANNEX B

INSTRUCTOR INTERVIEW COMMENTS

INSTRUCTOR INTERVIEW COMMENTS

1. GENERAL: This annex presents the significant comments from the three qualified instructor pilots who taught OH-58D Combat Skills at Aviation Training Brigade during September and October 1986.

2. Questions asked the instructors and their responses are listed below:

a. What is your opinion of the Combat Skills training?

(1) "Not bad, considering the course is in its infancy."

(2) "Overall good, but the course could be shortened by two day and one night flight periods."

(3) "Instructor pilot training is sufficient as long as the student meets the course prerequisites and has IP experience in an Air Cavalry or Attack unit."

b. Are the critical tasks/tasks selected for training adequate?

(1) "No. More emphasis should be placed on ATHS digital mission handovers with the field artillery Battery Command System (BSC). Also, range restrictions prevent realistic training. The current laser range does not allow for any live laser designations for artillery or attack helicopter munitions. This major aircraft capability cannot be adequately trained at the USAAVNC facility."

(2) The other two instructors replied that the task list was sufficient.

c. Are both pilots/AOs capable of performing required duties in a safe/professional manner?

All instructors replied that the pilots and AOs were capable and adequate.

d. What would you add/delete from the course?

(1) See items 2a(2) and 2b(1).

(2) "The flight line is responsible for teaching all academics and cannot devote enough time to this important area; therefore, emphasis should be placed on developing additional classroom instruction."

e. Is the course long enough to thoroughly train students, both pilots and AOs?

All instructors replied "yes."

f. Does the systems training phase adequately prepare pilots/AOs for combat skills?

(1) "Yes, but the ATHS lessons are limited. I'm still learning more and more capabilities and limitations of this system."

(2) "All technical aspects, yes."

(3) "No. The course conducted by Bell Helicopter Textron, Inc., did not conduct contact maneuver training the approved Army way, and the pass/fail criteria on academic tests was too easy."

g. Are aircraft and other required support readily available to accomplish the prepared syllabus?

(1) "No, facilities were not adequate. Aircraft availability is marginal. There are only four aircraft in the school inventory; the TF 1-112 owns the remaining ones."

(2) "Stagefield and bus support is poor."

(3) "Maintenance cannot supply ground power units for each aircraft when needed for run-up and data entry."

ANNEX C

[illegible] COMBAT SKILLS INSTRUCTION

STUDY PLAN

OH-58D COMBAT SKILLS INSTRUCTION

STUDY PLAN

1. Background:

a. This Training Effectiveness Evaluation of individual qualification training for Task Force 1-112 personnel is a continuation study resulting from the OH-58D Operational Test II (OT II). Test results suggested that poor performance demonstrated by the OT II observers was a result of inadequate training. The Vice Chief of Staff, U.S. Army (VCSA), directed Headquarters to form an attack helicopter unit to validate training. The formation and objective of this unit (Task Force 1-112) became known as the Attack Helicopter Company Field Evaluation (AHCFE).

b. The Directorate of Training and Doctrine (DOTD) was appointed the USAAVNC team lead for the successful completion of the AHCFE. The Directorate of Evaluation and Standardization (DES) was tasked with the responsibility of evaluating the individual qualification training. A Training Effectiveness Evaluation for the AHCFE personnel will be conducted to evaluate the individual qualification courses. This evaluation will address the individual Combat Skills (ICS) training of the pilots and crew members completing OH-58D AQC and ANOC.

2. References:

a. TRADOC Regulation 350-4, the TRADOC TEA System, May 1985.

b. TRADOC Regulation 350-7, A Systems Approach to Training, 3 May and 1982.

c. TRADOC Regulation 350-19, TRADOC Training Evaluation, Standardization, and Feedback Program, 12 Jul, 1985.

d. TRADOC Regulation 351-1, Training Requirements Analysis System (TRAS), 16 January 1984.

e. TRADOC Regulation 351-4, Job and Task Analysis, 9 March 1979.

f. Combined Pamphlet 310-4, Preparation and Use of Lesson Plans in Institutional Courses, November 1985.

g. TRADOC Pamphlet 351-30, Instructional Systems Development, 1 August 1979.

h. TRADOC Training Effectiveness Handbook (draft).

i. OH-58D EAOC Program of Instruction (draft).

j. OH-58D AQC Program of Instruction (draft).

k. Audit trail or course development documentation material.

l. Internal Instructional Systems Evaluation Branch Standing Operating Procedures Guide.

m. MFR, USAAVNC Commander, 9 Jan 86, Subject: Attack Helicopter Company Field Evaluation (AHCFE) Center Team Responsibilities.

n. MFR, USAOTEA Commander, 1 Jul 86, Subject: Operational Assessment of OH-58D Instructor and Key Personnel Training (IKPT).

3. Terms of Reference:

a. Purpose. To determine if the Task Force 1-112 pilots and observers receive adequate combat skills training during the OH-58D Aviator Qualification Course (AQC) and the Enlisted Aerial Observer Course (EAOC).

b. Scope.

(1) This evaluation of OH-58D combat skills instruction for the TF 1-112 pilots and observers will be conducted at USAAVNC from August to November 1986. Data will be collected from, but not limited to, AQC Class #1 and EAOC Class #1.

(2) The following assumptions are deemed necessary for the conduct of this evaluation:

(a) All TF 1-112 pilots and observers attending the OH-58D training meet the course prerequisites and are representative of students who will be attending future classes.

(b) Institutional qualification training will be similar to that presented to TF 1-112 pilots and observers.

(c) The lessons learned from TF 1-112 field tests and evaluations will be incorporated into institutional combat skills instruction.

c. Objectives and Essential Elements of Analysis (EEAs): The following study objectives were designed for the OH-58D combat skills training.

(1) Objective 1: Determine if systems approach to training (SAT) procedures were followed during the analysis, design, and development phases.

(a) EEA 1: What procedures were used in selecting the training tasks?

(b) EEA 2: Are the tasks selected for training adequately presented in the learning objectives and training materials?

(c) EEA 3: Do job performance measures support training objectives and do they adequately measure student learning/performance?

(2) Objective 2: Determine if the materials and procedures used in training on-job combat skills are effective.

(a) EEA 1: Are the instructors training IAW established objectives and current Army doctrine and procedural guidelines?

(b) EEA 2: Is the instruction conducted according to training schedules and is the sequence effective in presenting the materials?

(c) EEA 3: Are learning objectives adequately covered in training materials and instructional presentations and are they consistent between materials?

(d) EEA 4: Are the students accomplishing the learning objectives?

(3) Objective 3: Determine perceptions of students/instructors as to the quality and content of the courses.

(a) EEA 1: What are the students'/instructors' opinions of the quality of instruction?

(b) EEA 2: What are the students'/instructors' opinions of the course content?

c. Measures of Training Effectiveness (MOTE):

(1) Student critique sheets.

(2) Flight evaluation grade and comment slips.

(3) Audit trail for course development documentation.

(4) Knowledge test results.

(5) Lesson plans, student handouts, tests, flight training guides, and POIs.

(6) Interviews with students and instructors.

e. Methodology:

(1) Objective 1, LEA 1: The course development documentation will be researched and interviews will be conducted with the course designers to determine if systematic procedures were followed in selecting tasks for training.

(2) Objective 1, LEA 2: Training materials will be reviewed to determine if tasks selected for training are adequately covered in the learning objectives.

(3) Objective 1, LEA 3: Training materials and flight evaluations will be reviewed to determine if tasks are adequately presented in learning objectives and the job performance measures.

(4) Objective 2, LEA 1 and LEA 2: The academic classes and flight training periods will be monitored to determine if the instructors are training IAW current Army doctrine and procedural guidelines, that training will be conducted according to schedule, and if the sequence effectively presented the materials.

(5) Objective 2, LEA 3: The training materials will be reviewed to determine if objectives are consistent and support the POI purpose, and if content adequately presents the learning objectives.

(6) Objective 2, LEA 4: Academic instruction will be monitored; course critiques and academic/flight evaluation results will be reviewed; and interviews will be conducted with students and instructors to determine if the students accomplish learning objectives.

(7) Objective 3, LEAS 1 and 2: Course critiques will be reviewed and informal interviews will be conducted with instructors to determine their perceptions as to the quality and content of the courses.

4. Support:

a. That an individual internal Instructional Systems Evaluator plan, conduct, and analyze each of the required course evaluations.

b. That the Flight Standardization Division of ATS provide limited subject matter expertise on the AHIP and flight evaluations when required.

5. Administration:

a. Study schedule milestones:

(1) Study Plan complete: 15 Aug 86.

(2) All OH-58D Combat Skills courses will be monitored at USAAVNC during August to November 1986.

(3) Data collection will be conducted during courses in session from August through October 1986.

(4) Final study report completed by 28 November 1986.

b. Project Officer: CPT Richard Ambruster, Internal Instructional Systems Evaluation Branch, Evaluation Division, Directorate of Evaluation and Standardization, extensions 0571/4091.

END

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