

Army Aviation Systems Program Review'82

The articles on pages 3 and 9 conclude the *Aviation Digest's* coverage of the 1982 Army Aviation Systems Program Review. The first article in the series, an overview about the development of Army Aviation, appeared in the June issue. July's article covered concepts, doctrine and tactics and September's discussed organization and force structure. Copies of any of this series can be obtained by writing to Editor, P.O. Drawer P, Ft. Rucker, AL 36362.

The Training Panel

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THIS PANEL (figure 1) examined the training of U.S. Army Aviation forces in the context of the combined arms team in the AirLand Battle and discussed, investigated and evaluated deficiencies in aviation training as determined by the Army Aviation Mission Area Analysis (AAMAA). It identified 24 overall aviation training deficiencies, of which 11 major deficiencies were referred to the panel. In the course of its investigation, the panel accepted, collated, referred or rejected specific issues to arrive at five issues most in need of further resolution (figure 2).

Institutional Training Base

While addressing the training issues individually, it became clear that the deficiencies are, at least in part, the result of a much larger and more all-encompassing training problem within Army Aviation. In order to place the Training Panel issues and proposed solutions in perspective, a discussion of this larger problem is needed to understand the manner in which the panel addressed individual issues.

At any of the branch schools there is a direct tie-in between the training which takes place at the basic and advanced courses and the creation and continual evaluation of training literature. Subject matter experts who write the bulk of the training material are also instructors. In addition, they normally contribute to combat development and doctrinal matters. If, as at present, there is not an institutional base within aviation and a corps of instructors teaching tactical, materiel, logistical and administrative subjects, as well

as those associated with flying, it is impossible to train and to create the training publications that are required for aviation—except by farming them out to one of the branch schools. Consequently, the quality of training suffers from a lack of complete integration of flight training, tactical unit, and individual training and training literature.

Figure 3 depicts the very important interplay which takes place between the students in the basic course (but more especially in the advanced course) and the cadre of instructors. The student comes to school bringing experience from field units and hands-on expertise. In the communication process between instructor and student, the instructor benefits from the student and the student from the instructor.

This is fundamental to the very practical reasons which underlie the necessity of the long duration basic and advanced courses at any school rather than simply a series of short training experiences such as pre-command, refresher or other relatively short courses that specialize in a particular skill such as flying. This is especially true of the advanced course, which is the basis and heart of all of our branch schools. Without the branch advanced courses we would not have a well-rounded cadre or the necessary plant and facilities or the ability to plan, budget and provide the administration that is so necessary to our schools.

The rationale for any combat arm of the Army is keyed to a principal tactical system (which, in the case

FIGURE 1: TRAINING PANEL

MG GALVIN (CHAIRMAN)	CG, 24th ID, FORSCOM
MG PENDLETON	DIR, J-3, REDCOM
BG MOLINELLI	ACTING DUSD (TWP), USDRE
BG SUNELL	CG, USATSC, TRADOC
COL O'NEIL	ACTING DOT, DCSOPS, DA
COL ESTES	DTD, USAAVNC, TRADOC



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FIGURE 2: TRAINING PANEL ISSUES

- COMMISSIONED OFFICER AVIATOR TRAINING
- INTEGRATION OF ARMY AVIATION INTO COMBINED ARMS TRAINING
- TRAINING DEVICE DEVELOPMENT
- RANGE ADEQUACY FOR TRAINING
- SPECIAL ELECTRONIC MISSION AIRCRAFT TRAINING



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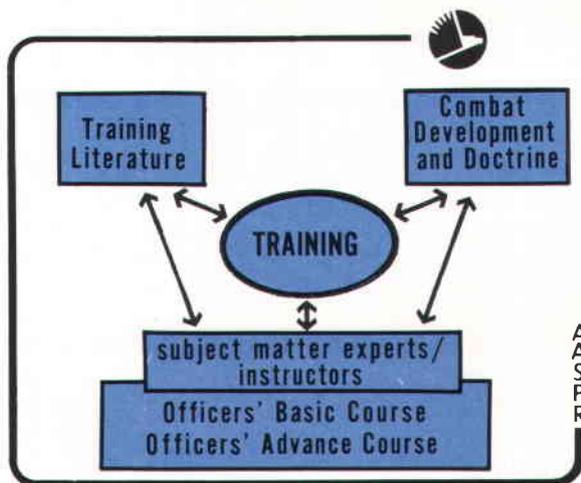


FIGURE 3: TRAINING BASE INTERPLAY



FIGURE 4: BATTLEFIELD DIMENSIONS

of Army Aviation, is the helicopter). In a broader sense, Army Aviation accentuates the dimension of vertical space and the critical aspect of time on the battlefield (figure 4). Just as the tank has required specialized skills and new tactics, weapon systems such as aeroscout, attack and assault helicopters have unique characteristics which require specialized skills and unlike the tank also require a three-dimensional (omni-directional) tactical approach to fire and maneuver. To meet this need in the past we have tried to train assault helicopter unit officers—since they move infantry—at the Infantry School. Likewise, attack helicopter unit officers—since they had a cavalry relationship to begin with—continue to be trained at the Armor School and so forth. So we have fractionalized a tactical area which, by its nature, should be consolidated in a single arm. It is quite apparent today that aviation cannot be managed by any single one of the other arms. That is the primary reason it has been broken up into instruction at several places. Yet, Army Aviation is a combat arm alongside Infantry, Armor,

Artillery and others. It possesses the platforms for fire and maneuver in the same kind of combination that is possessed by the other combat arms. Just as each combat arm has certain unique characteristics, aviation has the vertical dimension in which it is able to employ its purely tactical weapon systems in the same ground envelope as the other combat arms with the same principles of firepower and mobility and the same requirements for command, control, communication and training.*

Army Air Corps/Dual Qualification

Many critics of an aviation branch draw the analogy to earlier days when the Army Air Corps “drifted away” from the Army and became the Air Force. This analogy may not be as solid as it once seemed. The Air Force was created because in addition to *tactical* requirements for air support there was an overriding *strategic* requirement. Army Aviation, on the other hand, is entirely tactical and (with the exception of such actions as self-deployment for selected aircraft) it is of

no strategic consequence, although it can add significantly to the internal Army strategic and deterrent capabilities. As General John W. Vessey, Jr., now Chairman of the Joint Chiefs of Staff, has stated, Army Aviation trains ground troops who fly their fighting vehicles and operate in the ground environment as a combat arm of the Army alongside the ground maneuver arms. An old philosophy says that aviators, if they are good soldiers, should be able to operate in one of the other branches as well as in aviation. There are many examples today of successful officers who have done precisely that, and quite often they are the proponents of the present system which divides aviators among the carrier branches. However, the increasing technological challenge of aviation has made it more and more difficult for officers to master their professional requirements under the double burden of two, and in some cases three, branch responsibilities. Those aviator officers who have attained high rank today began their careers at a time when Army Aviation was infinitely smaller in size and much more limited in scope

*For a detailed discussion of weapons systems comparisons, watch for an upcoming article, “The Best Weapon: WISAWIS”

and when "training" was essentially commercial flight instruction. The Army of the late 1950s and early 1960s allowed officers to spend a good deal of time at company grade levels where they had the opportunity to command—and to learn—in both aviation and ground units. Careers at company grade move more quickly now, and the dual ground-aviation command pattern is rarely possible. There is also little time in officer careers to allow service and personal development both in the air and on the ground. The scope of aviation has grown in terms of technology and mission. An aviator now has to learn more—and keep learning more—in order to stay current. We all should recognize that the world of Army Aviation has changed, that what might have been valid 20 years ago is no longer necessarily so, and that biased analogies tend to break down under the scrutiny of logic. The bottom line is that an attack helicopter pilot today is performing many more complex things than did an L-19 (O-1) Bird Dog pilot or an OH-13 Sioux pilot just a few years ago.

Aviation Branch School

All of this is inextricably related to the question of aviation training. Suppose we look at what an aviation school could do. It could concentrate aviation doctrine and tactical training in one place instead of in several schools. Aviation doctrinal and training requirements can be prioritized by a single proponent (the school), and the resources necessary to produce this material can be more simply and accurately budgeted and justified. As has been pointed out, it is almost impossible to produce high quality instruction without a permanent cadre and student body that stays together long enough to constitute an appropriate environment for learning. Very few, if any, of the serious training problems of Army Aviation can be ad-

ressed until we solve the problem of the lack of a single aviation institutional base, and this seems directly related to the question of an aviation branch.

In the past, training voids have been readily identified and various Army branches and agencies moved to address them. Progress has been made to improve Army Aviation training and the closely related areas of doctrine, tactics, organizations, force structure and materiel management. The participating branches and agencies have performed as well as could be expected. Yet the sophistication of the equipment and attendant tactical employment continue to make quantum leaps. The complexity of the battlefield grows geometrically, and Army Aviation's ability to keep pace today, with the realities dictated by an extremely challenging wartime environment, falters under management by a system of diffused responsibility. With that perspective, the five training issues and opportunities follow:



The first issue addressed commissioned officer aviator training. Eighty-five percent of the commissioned aviators are accessed directly into the service. As Specialty Code 15 aviators, they attend a designated carrier branch basic course (that is, Benning, Knox, Sill or Bliss), then move to Ft. Rucker for flight training. This is followed by an assignment which is normally dependent upon the type aircraft qualification. Advanced course attendance is more than likely at the same location as the individual's basic course. What is lacking here is that aviators are not being trained by an aviation school cadre to lead and fight in aviation units. Flight training for both commissioned and warrant officers is technically or functionally oriented; that is, they learn how to fly the aircraft. The officer basic and advanced courses currently teach attendees how to operate in one of the branches.

When speaking of training commissioned aviators, a related question arises: "What about aviation warrant officers and their training?" Although issue one, as stated, deals only with the commissioned officer aviator training, a few words about the aviation warrant officer are appropriate. Aviation warrant officers also need tactics and combined arms training to some extent. Although aviation warrant officers now have an institutional base in terms of basic course (the warrant officer development phase within the Initial Entry Rotary Wing Course) and advanced course (the Aviation Warrant Officer Advanced Course), the tactics and combined arms training necessary to ensure successful employment of Army Aviation in the combined arms team are lacking in that instruction. The resolution of commissioned aviator training can reasonably be expected to have a favorable impact on resolving similar problems for the aviation warrant officer, but additional efforts to shore up this training will be required.

Figure 5 lists but a few of the things aviators are not being taught. These and other areas are currently under analysis by the U.S. Army Aviation Center at Ft. Rucker, AL, and a refined task list of what aviators should be taught is being developed to improve future aviator training. Together, the Infantry and Armor Centers are designing aviation tracks for future implementation in their respective officer basic and advanced courses. We are unsure at this juncture of the degree to which this will fill the total aviator training void, but it should help.

The Training Panel recognized a number of problems in aviation training that seem connected directly to the lack of an institutional base, or a heart—a home—for aviation individual and collective training. Therefore, the recommended solutions the panel proposed are based on the long-term assumption that the Army should establish an aviation training institution with

- LEADERSHIP TRAINING—NOT AVIATION UNIT SPECIFIC
OFFICER & WARRANT OFFICER INTENSIVE
ATYPICAL ENLISTED PROFILE
- AVIATION UNIT MANAGEMENT
FLYING HOUR PROGRAM
AVIATION UNIT TRAINING
- TACTICAL EMPLOYMENT OF AVIATION
AN 'ADD-ON'
NOT FULLY DEVELOPED



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FIGURE 5: VOIDS—AVIATOR TRAINING

aviation basic and advanced courses for commissioned officer aviators and appropriate parallel training for warrant officer aviators. Decisions to reach this goal need not be irreversible but should be geared to near-term and mid-term time frames. This is to say, an evolutionary rather than revolutionary approach is the desired course. In the early phases, aviation doctrine and organization pronency can be aggregated at the aviation institution. Pronency for all training can follow as the institution is prepared to accept it.

In the 1982 to 1984 time frame, review of education and training of officers to determine company grade, field grade and warrant officer aviator tasks should continue; efforts to shore up carrier branch basic and advanced courses with aviation tracks should be intensified to ensure early implementation; the Initial Entry Rotary Wing program of instruction should be realigned to teach more combined arms and aviation unit tactics and leadership subjects; and, finally, milestones and the resources required to establish an aviation basic and advanced course at the Aviation Center should be established under an aviation branch with appropriate central pronency.



No less far-reaching than the first issue, the second—combined arms training—involved the core of an officer's education. However, current train-

ing programs and literature have not adequately integrated aviation. Specifically, the proponent branch officer basic and advanced courses do not adequately develop the application of aviation. The Combined Arms Center at Ft. Leavenworth, KS, recognizing this need, is progressing through a 3-year curriculum modification program to ensure that the Command and General Staff Course fully addresses all elements of combat power.

As a stopgap measure, 19 aviation shared tasks (figure 6) have been developed and are being incorporated into branch basic and advanced courses. These are tasks which all officers should know how to perform. Since our original analysis of this area in 1979, training center commanders have assisted immeasurably by increasing their instruction in aviation subjects up to fourfold.

In a separate but related effort, the Combined Arms Center recently completed a combined arms sufficiency study to determine in a systematic fashion which subjects should be identified as combined arms subjects and what constitutes a sufficient level of proficiency in these subjects for company grade officers.

Among more than 160 areas evaluated in this study, Army Aviation was one of eight subject areas where the sufficiency level indicated inadequate attention was being given. Additionally, most of the

other areas (figure 7) are not of the same category of importance as aviation. Although progress continues to be made to shore up this training void, the Training Panel questioned whether we are moving far enough and fast enough in training the combined arms team to fully capitalize on and employ Army Aviation. The initial lack of aviation unit training facilities at the National Training Center was symptomatic of this deficiency, and those facilities are being modified to include aviation forces (by direction of General Vessey during the AASPR-82). How we train is how we will fight; so the opportunities to solve this deficiency rest in intelligent application of aviation in combined arms scenarios and consistent employment of aviation as an integral part of the combined arms team.



The third issue concerned training device development. Historically, training devices, especially flight simulators, have routinely been introduced several years after the aircraft was fielded. So development programs have not been sufficiently responsive to support the introduction of new aircraft systems. Additionally, initial design of training devices often has not accurately represented the functions of replicated aircraft systems. Although the Army's goal is to field training devices concomitantly with the prime system, we have not been able to accomplish this. But the following actions could rectify training device development deficiencies:

- Earlier interface between training developers and other life cycle management participants.
- Update and consolidate life cycle systems management model and training device publications.
- Fund training devices (less flight simulators) with the same priority as the parent aircraft and designate the prime systems project manager.

responsible for their development.

- Establish a method for more intensive management of the flight simulator program.
- And, finally, fund the Aviation Training Research Simulator (ATRS) project.



Issue four examined range adequacy for training. Given the training the Army is required to conduct, this issue concerns the adequacy of the various kinds of training ranges. Force modernization (new combat vehicles, combined arms interface) requirements have placed new demands on commanders who must provide for the greatly increased capabilities of weapons and support systems. In aviation's case, this means new considerations must be made for the establishment of training ranges for the AH-1S fully modernized Cobra, the AH-64 Apache with its HELLFIRE missile and laser designator, and the AHIP Scout with its laser designator. Specifically, our ranges need to be more realistic in design and usage and meet these minimum requirements for a modern, well-designed range:

- The targets should realistically appear, move and respond to fire.
- The effect of exposure to enemy fire must be accurately assessed.
- Our forces should be able to maneuver and fire as they would in combat.
- Casualty assessment of both forces must be immediate.
- Weapons characteristics must be duplicated realistically on the range.

Obviously, neither an engagement simulation range nor a live-fire range alone will satisfy all of these requirements. The U.S. Air Force recognized this deficiency years ago. Its study of aircraft losses over North Vietnam reflected that 80 percent of the losses were experienced during the first 10 sorties. Therefore, a training complex was developed at Reno, NV, where the Air Force

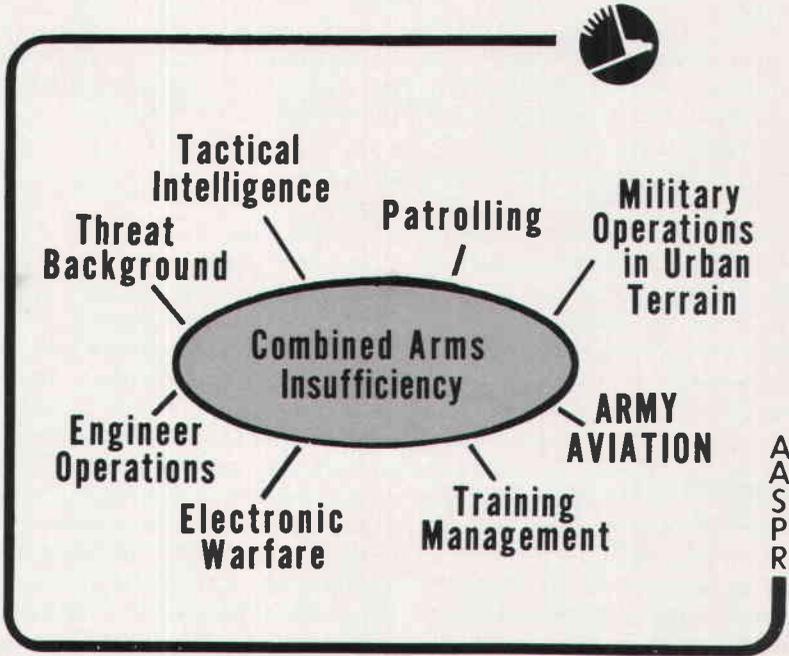


FIGURE 6

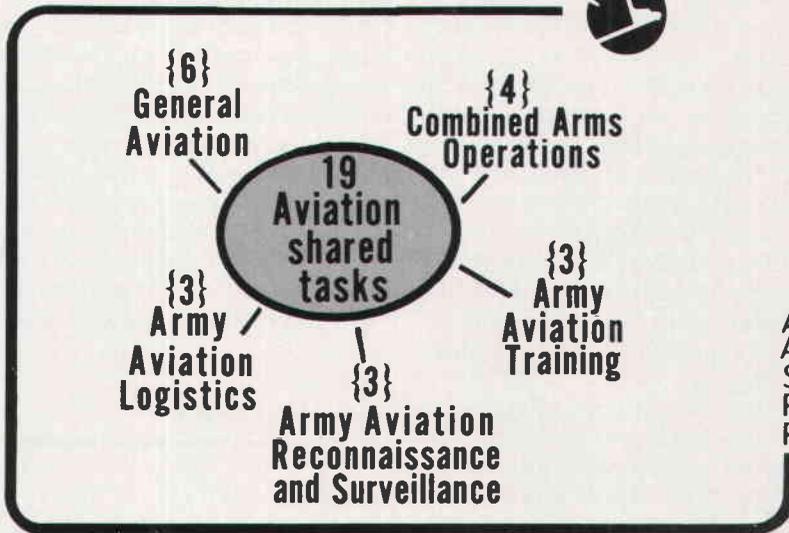


FIGURE 7

trains its pilots to get their first few realistic wartime sorties under their belts in order to be better prepared for war. This is "Red Flag."

Opportunities to address this issue involve U.S. Army Training and Doctrine Command's (TRADOC's) Directorate for Army Ammunition, Ranges and Targets (DAART) which was recently formed to respond to the Army's live-fire range needs. DAART has proposed a system of multipurpose range com-

plexes (MPRC) for simultaneous live-fire exercises for all members of the Army's combined arms team.

Additionally, an engagement simulation system is required to fill the other range requirements for real time, force on force and casualty assessment. The Multiple Integrated Laser Engagement System (MILES) technology now in the field will provide a good capability for local training, especially when the Air-to-Ground Engagement System

