



**STRATEGY
RESEARCH
PROJECT**

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

**A PROPOSED AVIATION TRAINING STRATEGY TO ENSURE
RELEVANCY IN THE OBJECTIVE FORCE**

BY

**LIEUTENANT COLONEL ROBERT L. JOHNSON JR.
United States Army**

**DISTRIBUTION STATEMENT A:
Approved for Public Release.
Distribution is Unlimited.**

USAWC CLASS OF 2002

U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050



20020806 243

USAWC STRATEGY RESEARCH PROJECT

**A PROPOSED AVIATION TRAINING STRATEGY TO ENSURE RELEVANCY IN THE OBJECTIVE
FORCE**

by

Robert L. Johnson Jr.
Aviation

COL Greg Adams
Project Advisor

The views expressed in this academic research paper are those of the author and do not necessarily reflect the official policy or position of the U.S. Government, the Department of Defense, or any of its agencies.

U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013

DISTRIBUTION STATEMENT A:

Approved for public release.
Distribution is unlimited.

ABSTRACT

AUTHOR: Robert L. Johnson Jr.

TITLE: A Proposed Aviation Training Strategy to Ensure Relevancy in the Objective Force

FORMAT: Strategy Research Project

DATE: 09 April 2002

PAGES: 28

CLASSIFICATION: Unclassified

This essay discusses the role of Army Aviation in the Interim Force and proposes a strategy and recommendations for aviation forces to remain relevant in the Objective Force. The RAH-66 Comanche helicopter is the Army's highest aviation priority and is the centerpiece of aviation transformation. The Army Airborne Command and Control System (A2C2S) and the Army Airborne Manned/Unmanned System Technology (AMUST) are two enabling aviation centric emerging technologies that will exponentially improve the warfighting capabilities of the Objective Force. To truly enhance its relevancy, Aviation must take the time to develop leaders that are competent in an environment of ever-increasing uncertainty, complexity, volatility, and ambiguity. The successful commander must be better than his enemy at converting available combat potential into superior combat power at the critical time and place. The tactics, techniques and procedures that are developed today for the train up and fielding of the Interim Brigade Combat Teams will lay the foundation for aviation employment doctrine of the future. Several of the lessons learned from the 1962 Howze Board will be reviewed to remind us that often history repeats itself and to recommend how these lessons can be used to improve aviation integration in the transformation process.

TABLE OF CONTENTS

ABSTRACT	III
A PROPOSED AVIATION TRAINING STRATEGY TO ENSURE RELEVANCY IN THE OBJECTIVE FORCE	1
PART I - THE RAH-66 COMANCHE	1
FIELDING SCHEDULE	1
ORGANIZATIONS	2
RAH-66 CAPABILITIES	3
PART II - EMERGING AVIATION ENABLING TECHNOLOGIES	5
ARMY AIRBORNE COMMAND AND CONTROL SYSTEM (A2C2S)	5
ARMY AIRBORNE MANNED/UNMANNED SYSTEM TECHNOLOGY (AMUST)	5
PART III - HOW TO FIGHT	6
SYNCHRONIZATION OF THE COMBINED ARMS TEAM	6
AVIATION CENTRIC OPERATIONS	8
PART IV - LEADER DEVELOPMENT	9
AVIATION PROFICIENCY	9
WINNING TRAITS	11
PART V - AVIATION AND THE IBCT	13
HOWZE BOARD LESSONS LEARNED – APPLICATIONS TO ARMY TRANSFORMATION	14
CONCLUSION	15
ENDNOTES	17
BIBLIOGRAPHY	21

A PROPOSED AVIATION TRAINING STRATEGY TO ENSURE RELEVANCY IN THE OBJECTIVE FORCE

"The goal of future Army operations will be to simultaneously attack critical targets throughout the area of operations by rapid maneuver and precision fires to break the adversary's will and compel him to surrender."¹ Army Aviation is inherently designed to be a major contributor in this type of warfare. The RAH-66 Comanche can easily play the role of quarterback in the Objective Force. The Comanche will be capable of integrating all communication links, providing common operational picture updates, synchronizing joint fires and effects, providing direct fires, and serving as a platform for either support or command of ground forces. The challenge, however, lies in how well Army Aviation trains its pilots and leaders for this daunting task. Improved technology alone will not be the panacea on future battlefields. The aviation contribution to the Objective Force can only reach its full potential by parallel advances in doctrine, training, leader development, organizations, material and soldiers (DTLOMS).² This paper will review and discuss four of the DTLOMS, training, leader development, organizations and material, and will make recommendations in the four areas to ensure relevancy of Army Aviation in the Objective Force.

This essay is divided into five parts. Part I reviews RAH-66 Comanche helicopter capabilities, how Comanche units will be organized, and the latest fielding schedule. Part II describes two emerging technologies in the aviation field that will be of use on the future battlefield. Part III presents potential ways to employ aviation in the Objective Force. Part IV covers recommendations on leader development for aviation officers. Part V studies the lessons learned from the 1963 Howze board and determines if they are relevant to this discussion and how they could be applied to the aviation integration with the IBCT train-up at Fort Lewis, Washington.

PART I - THE RAH-66 COMANCHE

FIELDING SCHEDULE

The Comanche is the Army's newest reconnaissance and attack helicopter. Boeing and Sikorsky are jointly developing the aircraft. The original concept was for the RAH-66 to be an armed reconnaissance platform with the AH-64 to remain the Army's primary attack helicopter. Within the last year this concept changed, requiring the RAH-66 to perform both the attack and reconnaissance role. However, the RAH-66 is not scheduled to replace the AH-64 Apache helicopter until 2010. The AH-64 will reach the end of its service life by 2030 when many of the

airframes will be almost 50 years old.³ The Comanche is designed to play a major role in the Legacy Force, Interim Force and finally the Objective Force.

The first flight of the RAH-66 took place on January 4, 1996. The Department of Defense approved an operational capability program requiring six additional helicopters to be manufactured in 2001 for operational testing by the Army. The Army's original plan was to acquire a total of 1,213 Comanches at an acquisition rate of 62 a year beginning in FY 2010.⁴ However, the FY 03-07 Program Objective Memorandum (POM) included the production ramp up to a rate of 96 aircraft per year.⁵ This ramp up will allow all 1,213 aircraft to be acquired seven years earlier than originally planned (FY18 vs FY25). Currently the low rate initial production (LRIP) runs from FY05 through FY07 with full rate production beginning in FY08.

ORGANIZATIONS

The design of the Objective Force is currently envisioned to be composed of Units of Action and Units of Employment. The Units of Action will most likely be an Infantry centric brigade size unit with organic fighting vehicles, unmanned aerial vehicles, artillery, combat support and combat service support units. The Units of Employment will most likely be similar to the division or corps type structure that we have today. Aviation will work closely with the Units of Action but be assigned to the Units of Employment. The most recent aviation modernization plan will be adequate for the Legacy Force and Interim Force but may require modifications after we train and experiment with aviation employment in the Interim Brigade Combat Teams.

Until recently, Army Aviation had planned on implementing a multifunctional battalion concept. This model would have structured most battalions with a mix of ten AH-64s, ten UH-60s and ten OH-58Ds. The OH-58Ds would have been replaced with RAH-66s as they were fielded. After much review the branch decided that pure fleet battalions is a better solution. This decision was based on several factors. One is the increased challenge associated with maintaining three separate aircraft in one organization. A second reason is the professional development challenges for officers and non-commissioned officers.⁶ The amount of academic and flight training required to train the leaders on three very different airframes would be extremely time consuming and expensive. The sheer complexity of maintaining proficiency in more than one advanced aircraft requires more flight time than is available in most units today.

The newest structure is a pure fleet design that has fewer aircraft in each unit and a more robust maintenance capability per aircraft. With the increase in aircraft mechanics, aviation

hopes to reach a 90 percent operational readiness rate versus the current 75 percent readiness goal.⁷ The chart below shows the new resource rules.⁸

	<u>Today</u>	<u>Interim</u>	<u>Objective</u>
Corps	3X8 (64A/64D)	3X7 (64D)	2X8 (RAH)
Heavy Div Attack	3X8 (64A/64D)	2X9 (64D)	2X8 (RAH)
Heavy Div Recon	2X8 (58D)	2X8 (58D)	2X8 (RAH)
Light Div Attack	3X8 (58D)	3X8 (58D)	2X8 (RAH)
Light Div Recon	2X8 (58D)	2X8 (58D)	2X8 (RAH)
ARNG Attack	3X8 (AH-1)	2X9 (64D)	2X8 (RAH)
ARNG Recon	2X8 (AH-1)	2X8 (58C)	2X8 (RAH)

The army aviation modernization plan provides the legacy and interim force a winning structure because of its streamlined and functional organization. Army National Guard and Reserve Component units are particularly fortunate in this distribution plan. Many ARNG/RC units are composed of very old and antiquated aircraft and would most likely never be considered for deployment in a major theater of war. To modernize the ARNG/RC, the active duty units take a fairly significant reduction in total aircraft. Of the approximate 4,500 aircraft currently in the inventory, 1,000 aircraft will be eliminated by 2004. There will be a 600 aircraft reduction in the reserve component and a 400 more aircraft reduction in the active component.⁹ The reduction should result in a better-maintained, relevant and affordable aviation force. The backbone of the new organization will be the Comanche, which provides a much-improved capability over the AH-64 and OH-58D.

RAH-66 CAPABILITIES

The aircraft in our current aviation organizations are utilizing 1970's and 80's technology. The RAH-66 will keep aviation in line and sometimes ahead of technological advances that are necessary to be relevant in the objective force. The system configuration of the RAH-66 "includes twin turbine engines, a single bearingless main rotor, ducted fan (FANTAIL) anti-torque system, and a fly-by-wire Flight Control System (FCS)."¹⁰ The cockpit will have a digital map and flat panel displays. Weaponization will include a 20mm gun and a retractable missile launch system that can accommodate a mix of Hellfire, Stinger, and 2.75 inch rocket munitions.¹¹ The primary mission configuration will be 320 rounds of 20mm, four Hellfire missiles and two air to air Stinger missiles.¹²

A number of significant improvements have been made to the RAH-66 that is not available on current generation airframes. "The aircraft is equipped with a Mission Equipment Package (MEP) that contains night pilotage (FLIR and Image Intensification), communication, navigation, target acquisition/designation/identification (FLIR and DAY TV) and survivability equipment."¹³ The Comanche's Electro-Optical Sensor System (EOSS) includes both the Night Vision Pilotage System (PVPS) and the Target Acquisition System (TAS). Second generation Forward Looking Infrared (FLIR) sensors provide 40 percent greater range and 35 percent greater field of view than is available on current aircraft. The TAS provides a high speed wide area automatic search, aided target detection/classification, image store and recall, automatic target tracking and backup plotage.¹⁴ This improved technology will greatly reduce the potential for fratricide in the close fight. The fire control will fuse all sensor data, conduct high-speed analysis and correlate the data. The analyzed data is then presented to the crew on the cockpit displays or transmitted to other airborne or ground forces, providing direct relay of near time intelligence.¹⁵

The onboard communications system will provide compatibility and interoperability with combined arms, joint, and allied forces through HF, VHF-FM, VHF-AM, and UHF radios. SATCOM, Link 16, and constant source antenna provisions will also be available. A digital messaging capability will be incorporated to transfer coordinates, types of targets, and other digital data either manually or automatically and will also be tactical internet compliant. Comanche will also have the capability to receive standard broadcast (Constant Source) and to transmit and receive SATCOM voice and digital data.¹⁶ This combination of sensors and communication capabilities should give the crew the situational awareness and understanding to either take command of both ground fires and joint forces or be in support of a particular mission.¹⁷

Aircraft survivability characteristics for the RAH-66 include chemical and electromagnetic energy protection, ballistic protection, electro-optic and electronic countermeasures. It will be the only Army aircraft that can successfully operate in, detect, and report biological and chemical contaminants, with an Environmental Control System (ECS) that provides over-pressurization of the cockpit and air filtration for the crew.¹⁸

With auxiliary tanks installed the Comanche is projected to have a self-deployment range of 1,200 nautical miles.¹⁹ As for its transportability, up to eight aircraft can be loaded onto a C-5 or four aircraft onto a C-17 with a load time of 155 minutes. Twenty-five aircraft could be loaded on a Roll On Roll Off (RORO) ship.²⁰ A limitation of the RAH-66 is that it is not C-130 transportable. However, this is not a relevancy issue since only the units of action (Brigade Combat Teams) in the objective force are required to be C-130 transportable.

PART II - EMERGING AVIATION ENABLING TECHNOLOGIES

ARMY AIRBORNE COMMAND AND CONTROL SYSTEM (A2C2S)

To date the Army has developed two mobile command posts, with each being on UH-60 Black Hawk helicopters. One of the prototypes is with the 4th Infantry Division and the second one went to the 101st Airborne Division. Over the next five years the Army plans to spend \$240 million to build and install more than 100 A2C2Ss for UH-60 aircraft. Each aircraft will have five terminals connected to a host computer and a communications suite of radio terminals.²¹ The system will include a Joint Combat Information Terminal (JCIT) which will allow the fielding of the first software programmable radio hardware years before the new Joint Tactical Radio System (JTRS) arrives.²²

With the A2C2S, the maneuver commander can be in the air or on the ground and digitally linked to the aircraft. The host computer on the aircraft has six cards with each running a different piece of the Army Battle Command System (ABCS) software. The ABCS combines eleven different programs and replaces six full-size computers.²³ The A2C2S could eliminate the need for bulky tactical operations centers and allow maneuver commanders to command and control from their Interim Armored Vehicle (IAV) or a fighting vehicle in the Future Combat System (FCS).

ARMY AIRBORNE MANNED/UNMANNED SYSTEM TECHNOLOGY (AMUST)

"Unmanned Aerial Vehicles have become one of the most dynamic areas of development in aerospace in the past few years, spurred on by their use in recent peacekeeping operations."²⁴ The success of UAVs against the Taliban in Afghanistan, especially the successful employment of missile firing UAVs, will likely increase the research and development of more advanced and versatile unmanned systems. AMUST is an effort by the Army to develop concepts and technology to team helicopters and UAVs in flight. This effort could greatly increase the combat effectiveness of the entire combat arms team. On a recent test with an AH-64D Apache Longbow and a Hunter UAV, the AH-64 crew was able to control all of the Hunter's functions except for its takeoff and landing.²⁵ This teaming effort will greatly increase the survivability, efficiency and capability of Army helicopters. Future technologies could eventually allow the RAH-66/UAV team to conduct self-jamming and suppression against enemy air defenses (SEAD), thereby reducing the requirement for Air Force and Navy assets during deep attack missions. When the Comanche is employed independent of the unit of

action in the objective force, AMUST will ensure survivability and improve the intelligence gathering and target destruction capability of Army aviation.

PART III - HOW TO FIGHT

SYNCHRONIZATION OF THE COMBINED ARMS TEAM

A constant after action theme during combat training center rotations (CTC's) is how maneuver brigades and battalions are unable to truly synchronize and mass combined and joint fires.²⁶ The reasons for this reduction in warfighting skill are numerous and include loss of training areas, increased OPTEMPO, multiple Operation Other than War (OOTW) deployments, fewer CTC rotations, and restrictions on Joint Air Attack (JAAT) training. Our cold war designed equipment (extremely heavy but highly survivable) may have lulled us into a false sense of security. The lethality and survivability of our current equipment often allows the ground maneuver commander to enjoy an overwhelming combat power force ratio against the enemy without having to coordinate and rely on joint forces. With M-1 tanks, AH-64D attack helicopters and MLRS artillery in the close fight, it is often a distracter for the ground maneuver commander to shut down his direct and indirect fires to conduct a JAAT with a lightly armed A-10 attack aircraft.

The Legacy Force may be able to survive on the battlefield without synchronized fires but the Interim and Objective Force probably will not. The Future Combat System (FCS) is relying on breakthrough technological improvements in weaponry and munitions that will have the capability of destroying enemy formations at longer ranges, with smaller caliber weapons, greater precision, and more devastating target effects.²⁷ Hopefully, this technology will become available for the FCS, but it definitely will not be available on the Interim Armor Vehicle because of the requirement to use basically an off the shelf vehicle in the IBCTs. Additionally the IBCT will be relying on a Towed 155 howitzer for its organic artillery support. According to the IBCT Operational and Organizational Concept, the primary mission of the 155 is counter-fire versus shaping the battlefield.

The objective force is relying on improved Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) for its lethality and survivability instead of the firepower centric weapons in our inventory today. Aviation is following the same strategy with the Comanche that is designed to carry only six hellfire missiles, while the Apache can carry 16. The pure gun to gun formula used to determine the ratio for attack and defense criteria would have to be modified for future warfighting. Improved weapon technology should increase the probability of kill (PK) ratio and alleviate some of this

problem. Aviation Branch, however, is planning to develop attack variants of the Comanche with an additional wing to carry another eight hellfire missiles.²⁸

Aviation can play a lead role in providing direction and synchronization to a dispersed and high tempo Objective Force Unit. These coordination tasks will be very challenging but will be absolutely critical for success. To win on the future battlefield, the Objective Force "commander must be more able to convert combat potential he has into superior relative power in the situation he faces."²⁹ In a recent White Paper, Army Chief of Staff General Eric Shinseki states that Objective Force tactical level "operations will be characterized by developing situations out of contact; maneuvering to positions of advantage; engaging enemy forces beyond the range of their weapons; destroying them with precision fires; and, as required, by tactical assault at times and places of our choosing."³⁰ Obviously these operations will only succeed if the commander can see the enemy first and understand his intentions.

It will remain important to have a man-in-the-loop quality that Comanche brings to the fight that cannot be replaced solely by a UAV. The human dimension will help "counter decoys and deception, validate and/or clarify other source, and enable instant decision making to respond to surprise and opportunity."³¹ A RAH-66 teamed with a UAV can provide real time reconnaissance and surveillance information that allows for rapid development of the situation and hasty attacks when opportunities arise. In addition, data fusion from aviation, ground sensors, embedded C4ISR, Special Operations Forces, and long range Surveillance Detachments can provide the decision-makers with a common operational picture (COP).³² The COP will enable units to fight in deliberate rather than hasty settings. Deliberate attacks will allow for the synchronization of combined arms and joint fires. Aviation will be a unit of employment asset that will complement a weakness or vulnerability within the unit of action (FCS) and set the conditions for synchronization. "Overall, Comanche's multifunctional capabilities permit it to act as an intelligence, surveillance, and reconnaissance (ISR) and engagement integrator of Army, joint, and multinational assets for all forms of operational and tactical maneuver."³³

Information dominance will be required to achieve decisive outcomes. "Instantaneous dissemination of commander's intent coupled with broad access to the COP on a non-contiguous battlefield will provide unprecedented opportunities for decentralized decision-making."³⁴ Subordinates will be able to use initiative within the commander's intent to exploit opportunities to destroy the enemy. Sound tactical decisions must be made at the lowest possible level to ensure success in the high tempo operations that we can expect to face in future conflicts. This decentralized warfighting technique is a shift in what is actually practiced

in most units today. It will take a dedicated effort by future commanders to avoid micro-managing subordinates with this increase in available battlefield information.

AVIATION CENTRIC OPERATIONS

In addition to employing aviation in direct support of the ground maneuver brigade commander, the division or corps aviation units can be organized to lead a combined arms organization for engaging enemy targets in what is now called the deep battle area. Currently some divisions and almost all corps have a standing deep operations cell (DOC) whose main mission is to influence the close fight by destroying the enemy's artillery and follow on maneuver echelons. Artillery, aviation and military intelligence are the key players in the DOC. In the past this committee approach to attacking the enemy deep has been very successful in synchronizing fires but has been criticized for lack of responsiveness against targets of opportunity. Regardless, the forecasted advancements in technology, primarily in sensors and longer range and more lethal suppressive systems, will transform current methods for attacking deep targets that should allow division and corps commanders to give force oriented missions directly to artillery and aviation organizations. If aviation and artillery are properly task organized, they can be given force oriented missions to fight combined arms engagements in depth in the same manner ground maneuver units are given missions in the close fight. Aviation based units will normally be more successful against mobile forces while artillery units will be more successful against more stationary or static targets.³⁵

The minimum essential organic combined arms package must include the following capabilities:

- Access to higher level intelligence / information for analysis and cueing.
- Control over long range reconnaissance sensors to ensure timely maneuver and positioning.
- Control over lethal and suppressive systems against key enemy capabilities.
- Be able to plan, control, and maneuver to positions of advantage for ambush like attacks.
- Be able to maintain superb situational awareness.³⁶

Within the next few years technology will allow for this combined arms concept to become a reality. Tactics, techniques and procedures (TTP) should be developed to ensure better integration of Army aviation, long range artillery and missile fires. Some missions will also require the use and integration of naval gun fire and Marine, Navy, or Air Force strike aircraft as in Joint Air Attack Tactics (JAAT).³⁷

PART IV - LEADER DEVELOPMENT

The environment our young officers will face during their military career will be somewhat different than our current senior leader's experience. It will likely be a high tech environment characterized by constant change. At the tactical level, the requirement to move, shoot and communicate will remain the same, but advancements in technology will provide new tools to perform this mission. Leading and motivating soldiers involved in this new environment may require different leadership skills than are used today. In addition to warfighting, leaders at all levels "must be able to deal with the increased political and cultural complexities of peace operations, stability and support operations, humanitarian intervention, forward presence and engagement, homeland defense, and more."³⁸ The Army should expect and prepare for the types of missions it has assumed since the end of the Cold War to continue or even increase.³⁹ Aviation can and will bring an enormous capability to both warfighting and peace operations. The challenge lies in the development of competent leaders who must be able to safely fly a high tech aircraft while simultaneously performing multiple tasks in an increasingly complex environment. Two critical components that will be required in the development of leadership skills in future Aviation commissioned officers are aviation proficiency and winning traits.

AVIATION PROFICIENCY

Several issues came out of the lessons learned from the 1999 Task Force Hawk deployment to Albania. Many of the problems were specific to Germany based units, i.e. no NVGs, reduced night flight experience because of midnight quiet hours, and no available mountain flight training areas. However, the lack of flight experience, especially in the commissioned officer ranks, is an area that is an Army wide problem. "A review of the aviators in the 2-6 and 6-6 Cavalry squadrons found that 65 percent of the assigned aviators had fewer than 500 flying hours under their belts, and none were Night Vision Goggles-qualified in the co-pilot gunner position."⁴⁰ Additionally, none of the company commanders or platoon leaders had achieved pilot-in-command (PIC) status.⁴¹ As a comparison, the battalion that I commanded (3rd Battalion, 229th Attack Helicopter Regiment stationed at Fort Bragg, NC), had the following statistics at the time of BG Cody's initial AAR: 46% of the aviators had less than 500 AH-64 flight hours, only two CPGs were NVG current, no company commanders were PICs and only one platoon leader was a PIC. It is important for the small unit direct leadership to demonstrate proficiency in their assigned aircraft and be given PIC responsibility because it facilitates understanding the medium and the equipment.

Brigadier General Dick Cody, who spent more than six weeks with TF Hawk and is now the 101st Airborne Division commander, stated that we are not growing our young leaders well enough in the first three years after flight school. "The results are young captains emerging from the Advance Course with little flight experience and little aviation savvy on what right looks like, and we are placing them and their unit at risk when we have to ramp up for a real-world crisis."⁴² Lieutenants coming directly from flight school often get only 12 months of platoon leader time and then are assigned to battalion or brigade staff positions. Most first assignment lieutenants quickly become overwhelmed with additional duties, troop leading procedures and trying to progress through mandatory Aviator Readiness Levels. BG Cody suggests that lieutenants not be pulled from the flight line until they achieve pilot-in-command status and have logged 500+ flight hours.⁴³ This suggestion is a great goal but is extremely hard to achieve with our current organizational design. A possible solution would be to change current table of organizations to allow new lieutenants to be section leaders for 12 months and then moved into a platoon leader position for the next 18 to 24 months. This change would allow commissioned officers to build a base line level of pilot proficiency and flight line knowledge.

The proficiency of company commanders is becoming increasingly important. A shortage of captains has forced many units to place captains into company command who have only four to five years of experience. "Research on human performance indicates that an individual needs about a decade to master a complex set of skills."⁴⁴ About eight years of aviation experience in a battalion before taking command is probably the best solution to allow aviation officers to stay competitive with other branches in the selection for promotion to major and Command and General Staff College. The aviation captain's career course must firmly ground officers in the fundamentals of tactics, technology, and leadership. However, the best place to learn about the Army profession and immediately apply the lessons learned is in the field, not in a TRADOC school. An area that requires much emphasis but is extremely hard to fix is the unit Officer Development Program (OPD). We have paid lip service to this program over the past few years simply because we have convinced ourselves that we are too busy to make it happen. The Army must work hard at slowing the unit OPTEMPO to allow time for this type of training and structure a model to track and document training. Through distance learning, brown bag lunches and mentorship programs, a solid OPD program can help produce a much more tactically, technically and operationally proficient officer.

There is no substitute for flight experience in the complex and technologically advanced aircraft we fly today. The implementation of Flight School XXI at Fort Rucker will help to alleviate some of the experience problems, but is probably not enough. Compared to present

levels, Flight School XXI will give flight students two to three times as much flight time in their advanced aircraft. Basic flight skills that used to be taught in a non-modernized OH-58 or UH-1 will now be taught in the aircraft that they will be flying in their first duty assignment.

Additionally, the increased use of simulators will improve collective and combined arms training. While this initiative at flight school will provide the field with a better initial product, the training and experience the new aviator receives at his first duty assignment will be the key element in building that base line of flight proficiency required to win on the battlefield. Pulling these young officers out of the cockpit to build Power Point slides in the S-3 shop is truly a disservice to the warrant officers and soldiers that the officer will be required to lead later in his career. Aviation NCOs are more than capable and completely competent in handling the day to day staff functions.

WINNING TRAITS

One of the themes in Doug Macgregor's book Breaking the Phalanx is how during peacetime training the conservative officer who makes the fewest mistakes is often the one rewarded with higher rank and increased responsibility. To succeed on the future battlefield or during peace operations, the objective force officer will be required to be mentally agile, intuitive, adaptive and a risk taker. New aviation simulators will greatly increase the ability to train crews and small unit leadership in a complex environment. Longbow Apache pilots and leaders can already train in the mobile Longbow Collective Training System (LCTS).⁴⁵ The LCTS has 12 networked crew stations and is able to train with other aviation and ground elements through the Distributed Interactive Simulation protocol and Higher Level Architectures.⁴⁶ Our old AH-64 Combat Mission Simulator could only provide 10 interactive threats while the new system can provide up to 100 interactive threats that can change their behavior each time a scenario is played.⁴⁷ New technologies should make the Comanche simulation capability even more capable of training and evaluating leader decision-making.

Being able to make and communicate decisions faster than the enemy is important, but it is even more important that leaders understand their own capabilities, draw useful inferences from less than complete information, and make the best possible decisions in a limited time.⁴⁸ "Leaders will be educated for rapid tactical decision making – this means changing from plan-centric to intent-centric operations; changing from physical rehearsals to virtual rehearsals; and changing from static command posts to command and control on the move."⁴⁹ The deliberate military decision making process (MDMP) will still be a valid process especially by higher level staffs, however leaders at every level must learn to think quickly, adapt to changing

circumstances, and drop plans that seldom survive first contact with the enemy.⁵⁰ Technology should greatly reduce the time required to plan. Web based command and control systems will enable commanders to reduce decision cycles by engaging subordinate commanders and staffs in collaborative planning and decision making.⁵¹ More emphasis should be placed on the development of branches and sequels. "A rapidly decisive battle depends on being able to exploit the success of each engagement as rapidly as possible to create the conditions for an even more decisive success in the next engagement."⁵² A clear understanding of commander's intent will allow subordinates to make the right decisions in the absence of orders.

Battlefield intuition, defined as immediate cognition without rational thought, cannot be learned in a classroom. Only tough and realistic training can accustom leaders to succeed in complex situations. "Tactical training which emphasizes speed of movement, simple rehearsed battle drills in response to predictable situations, and rapid improvisation in the face of the unexpected is the first step toward preparing soldiers in peacetime for the conduct of dominating maneuver in wartime."⁵³ Aircraft simulators can help build individual and crew skills, but deploying to the field for combined and joint level training against an opposing force should be conducted as often as possible.

The aviation battalion and brigade commanders in the interim and objective force may no longer assume they know what all of their subordinates are doing or trying to do. Even though the basics are the same, leaps in technology and the rate of change in Tactics, Techniques and Procedures (TTP) will dictate that subordinates must know more about their job than the boss.⁵⁴ Even at the company and platoon level, aviation should analyze what areas we require our officer to be knowledgeable and proficient. For example, does a platoon leader really need to know more than his platoon sergeant about how to perform PMCS on his assigned ground vehicles? Tradeoffs will have to be considered if we want officers to be truly proficient in all aviation and warfighting tasks. To receive job satisfaction our leaders need to be constantly challenged, know the organization's mission, believe in it, receive constant training, and see results.⁵⁵

Safety must always remain paramount in training. In my opinion, a disciplined and well-trained unit is a much safer unit than a very conservative unit that is reluctant to conduct realistic and demanding training. The Army must start rewarding the leaders who are willing to think out of the box and take risk when appropriate. Unfortunately, the Combat Training Centers (CTC) do not reinforce this notion. At the end of countless CTC rotations, how many commanders routinely stand in front of their troops and praise unit performance, even when the unit likely lost most or all of the force on force battles? Expecting units to win every battle at the CTC is

unrealistic, but leaders that do extremely well should be rewarded and leaders that do poorly should be replaced. Most of today's soldiers are very bright and perceptive. They instinctively understand the fundamental fact of military life that in combat, winning is everything!⁵⁶

PART V - AVIATION AND THE IBCT

Maximizing Aviation's future role in the Objective Force is hampered by current organizational inefficiencies in transformation. Training and Doctrine Command (TRADOC) has been designated by the CSA as the lead agency for transformation of the Infantry brigades at Fort Lewis, Washington. The commanding general of TRADOC established a Brigade Coordination Cell (BCC) comprised of representatives from various TRADOC schools and centers, Army Material Command (AMC), and Army Testing and Evaluation Command (ATEC). The BCC's primary task is to synchronize and integrate all aspects of IBCT DTLOMS issues and report to the TRADOC Deputy Commanding General for Transformation. However, I Corps and Forces Command remain responsible for day to day operations. This split in supervisory responsibility has caused several problems between the two major commands with the IBCT caught in the middle. A clear chain of command would improve the transformation implementation.⁵⁷ Another pitfall of the current design is the lack of input from the joint community and the geographic CINC's. Buy-in is an important element of change management. The Department of Defense must work harder to ensure the sister services completely understand the transformation efforts. Hopefully the newly formed Office of Force Transformation at DoD, led by retired Admiral Arthur Cebrowski, will help to synchronize transformation efforts between the different services instead of becoming just another layer of bureaucracy.

The IBCTs are supposed to be able to rapidly respond to full spectrum operations, therefore they are designed to deploy anywhere in the world in 96 hours. The Army's intent is to field brigades that are strategically responsive, rapidly deployable, agile, versatile, lethal, survivable and sustainable.⁵⁸ The real issue for debate is whether a stand alone IBCT meets that intent. A recent RAND study indicates that initially deploying forces would be much more effective against enemy armor units if they traded some of their close-in firepower for a deep capability.⁵⁹ The optimum early entry capability could be created by pushing Apache or Comanche attack helicopters and long range artillery down to the separate brigade size units.⁶⁰ Simulations have shown that a brigade armed with 25 kilometer capable deep strike and ISR asset will have a more manageable and winnable close-in fight. "Unless new technology can provide a medium-weight armored vehicle every bit as well protected as the Army's heavy M-1

tank, the survival of medium-weight units will depend importantly on their being linked into a C4ISR web that lets them see and strike enemy forces at great depth.”⁶¹

Chief of Staff of the Army GEN Shinseki intends to use the lessons learned from the IBCT training at Fort Lewis to help inform the Army about successful training and leader development training.⁶² The risk here is that the Army could learn the wrong lessons. Currently there is only one rated aviator representing Army Aviation at Fort Lewis and he is located in the Training Division of the Brigade Coordination Cell that reports directly to the DCG of TRADOC. This single officer is responsible for advising the IBCT on aviation employment and is helping to develop tactics, techniques and procedures (TTP) for warfighting and peacekeeping operations. There is not an aviation unit at Ft. Lewis to actually validate the concepts. IBCTs and their supporting aviation units will likely deploy and fight with little preparation time. As a result, these units must train together to develop and practice their combined arms SOPs, establish habitual relationships, resolve any key coordination conflicts and gain knowledge of each other’s capabilities and limitations. Since the decision has been made for aviation to be organic to the unit of employment level instead of the unit of action level, aviation must make the best of this situation. Plug and play versus organically owned employment of combat assets has traditionally not been very successful. A solution could be the assignment of an experienced aviator (senior captain) to each IBCT as the Brigade Aviation Liaison Officer. Aviation could experiment with this concept to determine the LNO personnel and equipment requirements for the objective force. To ensure success, only the very best aviation officers should be selected for these critical positions.

HOWZE BOARD LESSONS LEARNED – APPLICATIONS TO ARMY TRANSFORMATION

Reviewing some of the lessons learned from the 1962 U.S. Army Tactical Mobility Requirements Board, better known as the Howze Board, can be useful for implementing changes to the IBCT charter. The board came about after the President of the United States, John F. Kennedy charged a new Secretary of Defense, Robert S. McNamara, “to determine what forces were required and to procure and support them as economically as possible.”⁶³

McNamara established a board and directed that it report directly to the top levels of the Army to eliminate conservative rewriting in the layers of staff that most studies pass through. Lieutenant General Hamilton Howze, who at the time was commanding XVIII Airborne Corps at Fort Bragg, North Carolina, was appointed as the chairman of the board. LTG Howze was given 13 general officers, six high-ranking civilian research officials, and 30 experienced staff officers.⁶⁴

Many of the relevancy issues that are being debated today on the IBCT concept were similarly debated about the air mobile concept. "While the testing went on, tactical opinions polarized around two groups: the "Heavies" insisted that the air mobile units would lack the staying power to stand up against regular infantry units in a hard fight, whereas the "Lights" were convinced that air mobility would open up the battlefield, force the enemy to deploy to cover everything at once, and provide his air mobile opponent with the advantage of being able to strike at the enemy's weakest, most vulnerable points."⁶⁵ Simulations made it clear that the real answer was a combination of the heavy and light view. The battlefield required a mix of tanks, helicopters, air force tactical fighter-bombers, as well as all the other power that could be brought to bear in the combat zone.⁶⁶ The goal during the Howze Board, and as it should be with the TRADOC BCC, is to find the best combination of forces for the anticipated enemy that will engage them in battle.

One of the most important recommendations of the Howze Board was the requirement for complete integration of air mobility into the force structure in balance with the tactical concepts. LTG Howze emphasized the lessons learned after World War I when every country built tanks but only Germany integrated the tanks into a well-planned organizational concept.⁶⁷ Integration of all future combat systems in the objective force will be equally as critical in our Army of the future.

CONCLUSION

Aviation will be a key component of the interim and objective force. To ensure synchronization and total integration, aviation must play a more active role with the IBCTs to help shape the objective force doctrine, and TTP development. We do not want to go back to the days when Army aviation guidance was an afterthought and placed in an aviation annex instead of the scheme of maneuver portion of the operations order. Leader development will be critical to ensure future aviation and army leaders are prepared for the dramatic changes and challenges that will face the military and the nation. Victory in future wars will probably not be a direct result of the victor's superior technology alone. It would be naive however not to take full advantage of the amazing evolution in technology and its application to warfare. The key to success lies in the parallel advancement of doctrine, training, leader development, organizations, material and soldiers (DTLOMS).

The major focus of Army transformation is the Interim Brigade Combat Team (IBCT) and the Future Combat System (FCS). For transformation to be successful the Army must take a

much broader perspective and include all the combat arms, combat support, and combat service support branches as well as the joint community.

The lessons learned from the Howze Board are no less applicable today. Aviation must be integrated early into ongoing transformation efforts. If visionaries like BG (retired) Huba Wass de Czege and COL Doug Macgregor are correct in their view of future wars, Army aviation will be a key player on the battlefield. The proper employment of the RAH-66 Comanche and unmanned aerial vehicles will allow the maneuver commander to be better than his enemy at turning all of his available combat potential into superior relative combat power.

As we transform the Army, now is the time to take an in-depth look at our leader development strategies. Our school systems have not dramatically changed in many years, but the employment of our armed forces has changed drastically since the end of the Cold War. Our officer and NCO education system is probably the easiest and cheapest area in the DTLOMS to fix. The return of investment would be high and the results could be realized quickly. As in any organization, civilian or military, the people are always the key ingredient in success or failure. In the words of former Army Chief of Staff Creighton W. Abrams: "People are the heart of our preparedness...and this preparedness - as a nation and as an Army - depends upon the spirit of our soldiers. It is the spirit that gives the Army...life. Without it we cannot succeed."⁶⁸

WORD COUNT = 6,709

ENDNOTES

¹ Department of the Army, The Army, Field Manual 1 (Washington, D.C.: Headquarters Department of the Army, 14 June 2001), 37.

² General Eirc K. Shinseki, Concepts for the Objective Force, United States Army White Paper.

³ Neil Baumgardner, "Heavy Comanche' to Replace Apache, Army Officials Say," Defense Daily, vol. 212, no. 30 (13 November 2001): 2.

⁴ Marc Strass, "Army Proposes Accelerating RAH-66 Procurement." Comanche Courier, (Third Quarter, 2001): 1.

⁵ Neil Baumgardner, "Army Long-Term Spending Plan Adds \$3.2 Billion for BCT's," Defense Daily, vol. 212, no. 26 (6 November 2001): 2.

⁶ BG(P) Raymond P. Odierno, "Aviation Modernization Acceleration," Transcript of Army Aviation Announcement on Accelerating Aviation Transformation, (7 July 2001): 7.

⁷ *Ibid.*, 5.

⁸ "Aviation Transformation," briefing slides to prepare CSA for congressional committees, Pentagon, 6 September 2001.

⁹ Odierno, 7.

¹⁰ Chuck Baker, "Comanche Familiarization," Boeing Sikorsky, 1-1.

¹¹ *Ibid.*, 2-3.

¹² *Ibid.*, 1-2.

¹³ *Ibid.*, 1-1.

¹⁴ *Ibid.*, 1-5.

¹⁵ "RAH-66 Comanche – Reconnaissance/Attack Helicopter, USA," available from <http://www.army-technology.com/projects/comanche>. Internet. Accessed 10 December 2001.

¹⁶ Baker, 1-7.

¹⁷ Baumgardner, "Heavy Comanche to Replace Apache, Army Officials Say," 2.

¹⁸ "Program Overview: Why Comanche," available from <http://www.RAH66COMANCHE.com>. Internet Accessed 10 December 2001.

¹⁹ Comanche briefing slides found on Comanche Resource/Training CD, developed by Fort Rucker.

²⁰ Ibid.

²¹ Sandra I Erwin, "Airborne Command Post keeps Information Flowing," National Defense, October 2001, 24.

²² Anthony Badolato, "NRL Ready for Production of Key Command and Control," C4I News, 21 October 1999, 1.

²³ Ibid., 2.

²⁴ Steven J. Zaloga, "UAVs Gain Luster After Combat, Peacekeeping Performance," Aviation Week & Space Technology, 15 January 2001, 109.

²⁵ "AMUST Test Flight Successfully Carried Out," Defense Daily, 7 August 2000, 1.

²⁶ "Trends Attack Helicopter Battalions," available from <http://www.irwin.army.mil>. Internet accessed 14 February 2002.

²⁷ Shinseki, 12.

²⁸ Baumgardner, "Heavy Comanche to Replace Apache, Army Officials Say," 1.

²⁹ BG (Ret) Huba Wass de Czege, "New Paradigm Tactics and Tactical Organizations: How to think about designing and fighting the Future Combat System based tactical organizations," 22.

³⁰ Ibid., 6.

³¹ TRADOC Pamphlet 525-3-0 (Draft), "The United States Army Objective Force Operational and Organizational Concept," 1 November, 2001, 32.

³² BG (Ret) Huba Wass de Czege, 7.

³³ TRADOC Pamphlet 525-3-0 (Draft), 32.

³⁴ Shinseki, 7.

³⁵ Wass de Czege, 50-51.

³⁶ Ibid., 52.

³⁷ Ibid.

³⁸ Jeffrey D. McCausland and Gregg F. Martin, "Transforming Strategic Leader Education for the 21st-Century Army," Parameters 31 (Autumn 2001): 18-19.

³⁹ Ibid., 20.

⁴⁰ Erwin Q. Winograd, "4th ID Deputy CG Says Task Force Hawk Has Exposed Aviation Weaknesses," Inside the Army, 21 June 1999, 1.

⁴¹ Ibid.

⁴² Ibid.

⁴³ Ibid., 2.

⁴⁴ BG (Ret) Huba Wass de Czege and MAJ Jacob D. Biever, "Soldiers-Not Technology-Are the Key to Continued Superiority," Army, March 2001, 8.

⁴⁵ Frank Colucci, "Longbow Apache Trainer: First Deployable Simulator for Army," National Defense, November 2001, 51.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Wass de Czege, 23.

⁴⁹ Shinseki, 19.

⁵⁰ Douglas A. Macgregor, Breaking the Phalanx (Westport, CT: Prager Publishers, 1997), 162.

⁵¹ Shinseki, 19.

⁵² Wass de Czege, 40.

⁵³ Macgregor, 163.

⁵⁴ Peter F. Drucker, Management Challenges for the 21st Century, (Harper Collins Publishers, Inc., 1999), 19.

⁵⁵ Ibid., 21.

⁵⁶ Macgregor, 162.

⁵⁷ COL Edward J. Filiberti, COL James R. Oman, and COL James H Thomas, The Army Transformation: A Case Study (Carlisle Barracks: U.S. Army War College, 12 October 2001), 24-25.

⁵⁸ Annex to the Army Transformation Campaign Plan, Initial Brigade Combat Team (IBCT) Charter, available from <<http://www.lewis.army.mil/transformation/document/charter.htm>>. Internet; accessed 5 December 2001, 1.

⁵⁹ Thomas McNaugher, David Johnson, and Jerry Sollinger, Agility by a Different Measure Creating a More Flexible Army (Rand Issue Paper, Arroyo Center, 2000), 3.

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Shinseki, 19.

⁶³ LTC (R) Thomas L. Hendrix, Air Assault on the Pentagon: Army Airmobility, the Howze Board, and Implementing Change, (Carlisle Barracks: U.S. Military History Institute, 19 December 1997), 4.

⁶⁴ John R. Galvin, Air Assault the Development of Airmobile Warfare, (New York, New York: Hawthorne Books, 1969), 276.

⁶⁵ Ibid., 277.

⁶⁶ Ibid.

⁶⁷ Ibid., 279.

⁶⁸ Department of the Army, Army Leadership, Field Manual 22-100 (Washington, D.C.: Headquarters Department of the Army, 31 August 1999), 3-1.

BIBLIOGRAPHY

- "AMUST Test Flight Successfully Carried Out." Defense Daily. 7 August 2000.
- "Annex to the Army Transformation Campaign Plan." Initial Brigade Combat Team (IBCT). Available from <http://www.lewis.army.mil/transformation/documentation/charter.htm>. Internet. Accessed 5 December 2001.
- "Aviation Transformation." Briefing slides to prepare the CSA for congressional committees. Pentagon. 6 September 2001.
- "Program Overview: Why Comanche." Available from <<http://www.RAH66COMANCHE.com>>. Internet. Accessed 10 December 2001.
- "RAH-66 Comanche – Reconnaissance/Attack Helicopter, USA." Available from <<http://www.army-technology.com/projects/comanche>>. Internet. Accessed 10 December 2001.
- "Trends Attack Helicopter Battalions." Available from ><http://www.irwin.army.mil>. Internet. Accessed 14 February 2002.
- Badolato, Anthony. "NRL Ready for Production of Key Command and Control." C4I News, October 2001, 1.
- Baker, Chuck. "Comanche Familiarization." Boeing Sikorsky: 1-1.
- Baumgardner, Neil. "Army Long-Term Spending Plan Adds \$3.2 Billion for BCT's." Defense Daily, vol. 212, no 26 (6 November 2001): 2.
- Baumgardner, Neil. "'Heavy Comanche' to Replace Apache, Army Official Say." Defense Daily, vol. 212, no 30 (13 November 2001): 2.
- Colucci, Frank. "Longbow Apache Trainer: First Deployable Simulator for Army." National Defense, (November 2001): 48-52.
- Comanche briefing slides found on Comanche Resources/Training CD, developed by Fort Rucker.
- Drucker, Peter F. Management Challenges for the 21st Century. New York: Harper Collins Publishers Inc., 1999.
- Erwin, Sandra I. "Airborne Command Posts Keeps Information Flowing." National Defense, (October 2001): 24.
- Filiberti, Edward J., James R. Oman, and James H. Thomas. The Army Transformation: A Case Study. Carlisle Barracks: U.S. Army War College, 12 October 2001.
- Gavin, John R. Air Assault the Development of Airmobile Warfare. New York: Hawthorne Books, 1969.

- Hendrix, Thomas L. Air Assault on the Pentagon: Airmobility, the Howze Board, and Implementing Change. Carlisle Barracks: U.S. Military History Institute, 19 December 1997.
- Macgregor, Douglas A. Breaking the Phalanx. Westport, CT: Prager Publishers, 1997.
- McCausland, Jeffrey D., and Gregg F. Martin. "Transforming Strategic Leader Education for the 21st Century Army." Parameters 31 (Autumn 2001): 18-22.
- McNaugher, Thomas, David Johnson, and Jerry Sollinger, Agility by a Different Measure Creating a More Flexible Army. Rand Issue Paper, Arroyo Center, 2000.
- Odinero, Raymond P. "Aviation Modernization Acceleration." Transcript of Army Aviation Announcement on Accelerating Aviation Transformation, 7 July 2001.
- Shinseki, Eric K. Concepts for the Objective Force. United States Army White Paper.
- Strass, Marc. "Army Proposes Accelerating RAH-66 Procurement." Comanche Courier. (Third Quarter 2001).
- U.S. Army Training and Doctrine Command. TRADOC Pamphlet 525-3-0 (Draft). "The United States Army Objective Force Operational and Organizational Concept." Fort Monroe, Virginia. 1 Nov 2001.
- U.S. Department of the Army. Army Leadership, Field Manual 22-100. Washington D.C.: Headquarters Department of the Army, 31 August 1999.
- U.S. Department of the Army. The Army, Field Manual 1. Washington D.C.: Headquarters Department of the Army, 14 June 2001.
- Wass de Czege, Hubba, and Jacob D. Biever. "Soldiers-Not Technology-Are Key to Continued Superiority." Army. March 2001.
- Wass de Czege, Hubba. "New Paradigm Tactics and Tactical Organizations: How to think about designing and fighting the Future Combat System based tactical organizations." 6-52.
- Winograd, Erwin Q. "4th ID Deputy CG Says Task Force Hawk Has Exposed Aviation Weaknesses." Inside the Army, 21 June 1999, 1-2.
- Zaloga, Steven J. "UAV's Gain Luster After Combat, Peacekeeping Performance." Aviation Week & Space Technology, 15 January 2001.