*A rocket is fired during a live-fire training at Fort Sill, Okla. (Courtesy photo)*

# Transformation through rigor

## Field Artillery AIT

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"Rigor," is a term that has become a trademark for the Center of Initial Military Training, and carries a complexity of implications for training, educating and inspiring future Field Artillerymen and women. The "increase rigor" initiative became the launching point for refocusing the development of Soldiers on basic warrior tasks and battle drills which has driven the Army's success in near-peer operational environments (OE). As the world's conflicts change, it has become incumbent upon the U.S. Army to change with them. The Army has adapted over the last 18 years to a global strategic en-

vironment that is unpredictable, increasingly volatile[1] and extremist driven. However, our near-peer adversaries have trained and developed their military formations, and are increasingly capable of contention with the United States Armed Forces in large-scale combat operations (LSCO).

The Field Artillery (FA) recognized the need for development in Advanced Individual Training (AIT) to prepare Soldiers for the rigors of future combat. In an article, *Meeting the Challenge of Large-Scale Combat Operations Today and Tomorrow*[2] LTG Michael D. Lundy states, "Mastering the skills and experiences acquired during training, education and operations requires repetition. Sustaining and improving what we are doing now is our challenge." The 1st Battalion, 78th Field Artillery, *Teamwork Battalion* accepted that challenge.

The 1-78th FA is the home to Field Artillery AIT. Its mission is to create future Field Artillerymen and women to enter the combat force, ready to provide effective and timely fires and fire support. Field Artillery initial military training is currently transforming to match the intensity, rigor, and complexity of Multi-Domain Operations.[3] TRADOC Commander GEN Paul E. Funk II deemed the primary goal of training to be "tenacity," as the operational force recognizes its need for development. Tenacity builds the necessary resiliency in individual Soldiers to maximize readiness, and to equip Soldiers for an increasingly complex OE. Field Artillery Commandant, BG Stephen G. Smith, echoed that guidance in 2018 with a directive to increase rigor across the U.S. Army Field Artillery School by getting trainees back in the field. The Field Artillery must prepare to provide fires and fire support in degraded, denied and disrupted OEs. Technical competency is no longer the primary key to success for the Artillery, but tenacity, resiliency and readiness are the key to victory. In 2018, 1-78th FA received the directive to increase rigor in AIT and to re-enforce the need for tenacity within the Field Artillery community.

The 1-78th FA pushed forward in FY19 to increase rigor in AIT by introducing a culminating training exercise into every 13 series MOS training schedule, adding academic rigor through a reconstruction of the program of instruction (POI), and refocusing on degraded operations.

To initiate transformation, 1-78th FA introduced a four-day, three-night field training exercise for all 13 series AITs, called the culminating training exercise (CTE). The CTEs placed increased attention on the rigors of near-peer combat through the implementation of foot marches, artillery skill proficiency tests (ASPT), an engagement skills trainer (EST), a combat obstacle course, terrain navigation, and live-fire operations. The new CTE added a significant amount of rigor in contrast to the limited field time in AIT before November 2018.

Cannon Crewmember (13B) AIT incorporated training on firing point occupation, survivability drills and defensive operations to develop 13Bs with combat functionality. Foot marches to and from firing points in conjunction with this training added rigor that simulated the intensity of combat. The 13Bs were no longer merely pulling the lanyard, but there was now a revitalized effort to create Cannoneers capable of conducting mission command at the lowest level. The 13Bs were able to shoot, move and communicate to support maneuver elements in combat aggressively.

Joint Fire Support Specialist (13F) AIT introduced a CTE that physically challenged students to meet the requirements of intense ground combat. This CTE required a more intensive focus on the fundamentals of combat: basic Soldier tasks and battle drills, foot marches, basic rifle marksmanship, observation post (OP) selection and occupation, and land navigation with an M2 compass. The 13F schoolhouse matched the increased rigor of the CTE with an intensified train-up before the field exercise that would prepare Soldiers for quality training. The 13F POI expanded to include High Physical Demands Tests (HPDT) consisting of a 12-mile foot march with OP occupation, a hand grenade course, land navigation testing, and a live graded call-for-fire exercise. These training objectives accurately tested 13F students' ability to endure rigorous physical, mental and emotional challenges. The future fight will likely demand "FISTERS" who can move tactically and efficiently, and provide fire support under rigorous conditions.

Fire Control Specialists (13Js) shifted from a classroom-based focus on the Advanced Field Artillery Tactical Data System (AFATDS) to training that placed students in a field environment conducting skill level 10 tasks, degraded operations, foot marches, and fire direction center (FDC) occupation drills. These radical shifts successfully added rigor and created 13Js who could effectively control and deliver fires in contested domains.

M270 Multiple Launch Rocket System/High Mobility Artillery Rocket System [MLRS/HIMARS] Crewmember (13M) and Firefinder Radar Operator (13R) AITs introduced rigor within CTEs by introducing foot marches, marksmanship training, ASPTs, basic warrior tasks and battle drills, and dismounted land navigation. The launching of rockets during MLRS and HIMARS live-fire has also provided the opportunity for students to witness the technical proficiency required to safely deliver and observe live rockets.

The 1-78th FA challenged schoolhouses to integrate training

1 Meeting the Challenge of Large-Scale Combat Operations Today and Tomorrow
2 Ibid
3 TRADOC Pamphlet 525-3-1 (The U.S. Army in Multi-Domain Operations 2028)

across MOSs, to maximize training value in the field. The Field Artillery is comprised of multiple skillsets all geared toward one joint mission; to destroy, neutralize or suppress the enemy by cannon, rocket and missile fire and to help integrate all fire support assets into combined arms operations.[4] The battalion integrated training by allowing 13Js to conduct fire direction, while 13Rs and 13Fs observe during 13M MLRS and HIMARS live-fire operations. The 13J students have the opportunity to operate the AFATDS with close supervision and gain practical experience. During Howitzer live-fire operations, 13F students conduct call-for-fire operations, establish communications with 13J students operating in the FDC, and observe live rounds from 13Bs on the gunline. Through the integration of CTEs, students witness the complex coordination required to accurately deliver fires in near-peer combat.

The second line of effort to increase rigor was to restructure POI across the battalion to maximize academic rigor. Limited contingency operations[5] over the last 17 years allowed the FA to focus on technological advancement, improvement of intelligence, reconnaissance and surveillance capabilities, and close-range counter-fire operations. This focus geared FA AIT toward creating technically proficient trainees, ready to provide fires and fire support for counter-insurgency operations while enjoying the luxuries of multi-domain superiority. Now our near-peer adversaries have worked to match our capabilities. Necessarily, the FA mindset is shifting to a focus on LSCO. Such combat requires FA Soldiers to be proficient in the basic skills that they are trusted to employ. The 1-78th FA has restructured POI to increase technical proficiency in AIT graduates and prepare them for near-peer combat.

To do this, POI became less focused on automated systems, and more focused on basic Soldier tasks. Schoolhouses adjusted POI to create technical competence within the classroom by training on all level 10 ASPTs in conjunction with technical MOS training. The skill level 10 ASPT tasks are specific to each MOS and are essential for building combat-ready Field Artillerymen and women. All 13 series MOSs partially covered these tasks before the reconstruction, but with a heightened demand for proficiency, FA AITs added all ASPT tasks to the POI.

The 13M schoolhouse added dismounted navigation with the Defense Advanced GPS Receiver (DAGR) and operation of the AN/VRC-104 HARRIS radio to the POI. The 13R schoolhouse added OE-254 set-up, M2A2 Aiming Circle training and map reading. Although the modifications to the 13M and 13R POIs seemed minimal; the reconstruction of lesson plans, resources and instructor certification proved to be both challenging and progressive.

The 13B AIT added POI that would serve to add both physical and academic rigor. The 13B HPDTs grew to include a hand grenade throw, sled drag, sandbag carry and an M107, 155 mm projectile ammunition carrier load test. The ammunition load test proved to be the most critical evaluation point for students by setting a new standard for 13B combat readiness. These changes in the 13B POI served to challenge the physical ability of the students and added practical combat-focused rigor.

The 13F AIT adjusted POI to match the need for proficiency in the fundamentals of joint fire support. Combat against a near-peer adversary requires an intensive understanding of basic fire support concepts such as special munitions employment, foreign enemy vehicle identification and OP selection and occupation. The 13F students are now required to complete all of these tasks in conjunction with the graded call-for-fire, as a graduation requirement. In addition to the new required tasks, 13F AIT expanded POI to include graded land navigation, Laser Designator Range Finder set-up and operation, and operation of the RT-1523 SINCGAR and AN/VRC-117G HARRIS radio. The 13F POI updates serve as the starting point to produce fire supporters capable of flexible fire support in a contested OE.

All of the 1-78th FA POI updates were challenging, but necessary for adding rigor and effecting change. POI updates have continued as training is implemented, evaluated and refined. Leaders in the battalion are constantly gathering data to determine where modifications to POI would best add rigor and maximize training value for AIT students.

In a final effort to add rigor, 1-78th FA placed an increased emphasis on the importance of degraded operations to prepare for the certainty of disrupted operations in contested domains. While the technological capabilities of the FA are vast, operational success has been overly reliant upon domain superiority across multiple domains; namely, air, space, cyberspace and the electromagnetic spectrum (ES).[6] The U.S. Army and the Field Artillery can no longer assume domain superiority against near-peer adversaries[7]; therefore, artillery systems must maintain the capability to operate degraded. All members of the "Kill Chain," from the 13F to the 13B, must be prepared to fight and win in degraded, disrupted and denied operations.

The 13J fire control specialist training was focused on gaining expertise and competence on automated gunnery systems before the rigor initiative; namely, the AFATDS. The 13J POI focused heavily on operating the AFATDS

4 FM 6-20 Chapter 2 FIELD ARTILLERY RESPONSIBILITIES
5 Meeting the Challenge of Large-Scale Combat Operations today and tomorrow
6 TRADOC Pamphlet 525-3-1 (The U.S. Army in Multi-Domain Operations 2028)
7 Ibid.

*A student of the Field Artillery School's Advanced Individual Training course observes an impact area. (Courtesy photo)*

to minimize reaction time while enjoying domain superiority in cyberspace and the ES. In the future, technological degradation will demand 13Js who are highly proficient in the fundamentals of manual gunnery. The increase of manual gunnery was the largest attempt at academic reconstruction within the 13J schoolhouse. Delta Battery executed a mass purchase of graphical site tables (GST) and graphical firing tables (GFT) in 2019. GST and GFT are used for manual computation of firing data for Howitzer systems. Additionally, the training emphasized firing chart proficiency, which is commonly referred to as "charts and darts."

The 13F AIT refocused on light infantry-style training by eliminating M7 Bradley Fire Support Vehicle utilization, and increasing focus on dismounted fire support. The 13F land navigation training was GPS aided with a DAGR, before the increase rigor modifications. Now unaided land navigation with an M2 compass is a graduation requirement for every 13F AIT student. Graded foot-marches, graded live call-for-fire, and degraded call-for-fire with special munitions have all aided the simulation of disrupted operations. In a future OE with disrupted air, ground and sea domains, these skills must be trained, refined and perfected.

The 13Bs added Howitzer emplacement evaluations and degraded mission processing as graduation requirements for cannon crewmember students. While students continue to train Howitzer operations with the Digital Fire Control System; there is an increased focus on ensuring proficiency while operating the M109A6, M119A3 and M777A2 Howitzers in a degraded environment.

To conclude, the developments made in 13 series AIT have initiated the push for cultural change within the Field Artillery community. The 1-78th FA pushed to increase the rigors of AIT by introducing a CTE across all MOSs, increasing academic rigor through POI updates, and refocusing on degraded operations. All of these implementations serve the primary purpose of increasing rigor and preparing Soldiers for combat. These developments are the beginning stages for creating Field Artillery Soldiers ready and eager to join our formations. While the Field Artillery continues to adapt, and doctrinal updates emerge, the 1st Battalion, 78th Field Artillery Battalion will continue to educate, train and inspire Field Artillery trainees.

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