

ENGAGE, DESTROY, SURVIVE: CHARACTERISTICS OF U.S.
ARMY PISTOL, CARBINE, AND RIFLE DIRECT FIRE
ENGAGEMENTS IN MODERN COMBAT

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by

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ABSTRACT

ENGAGE, DESTROY, SURVIVE: CHARACTERISTICS OF US. ARMY PISTOL, CARBINE, AND RIFLE DIRECT FIRE ENGAGEMENTS IN MODERN COMBAT, by Major Matthew L. Simon, 163 pages.

With an increasing concern for hybrid, multi-domain, and even near peer threats, coupled with the complexity of urban warfare and subterranean operations in mega-cities, the U.S. Army must reevaluate and change its pistol, carbine, and rifle marksmanship training strategies, and their subsequent qualification standards, to enable Soldiers to effectively engage and destroy threats in a direct fire engagement, across the range of military operations, and win. After a comprehensive review of publications on marksmanship, 22 characteristics or marksmanship skills (variables) were selected and analyzed against 133 direct fire engagement narratives collected from 46 scholarly publications. A collective case study analysis of the Korean War, Vietnam War, Operation Iraqi Freedom, and Operation Enduring Freedom concluded that several variables were present across all case studies but were found to not be emphasized in current training strategies. Based on the gaps or shortfalls identified, the thesis provides recommendations to change certain aspects of U.S. Army marksmanship training strategies to better prepare Soldiers to engage, destroy, and survive in modern combat.

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ACRONYMS

AAR	After Action Review
ADP	Army Doctrine Publication
ARI	U.S. Army Research Institute for the Behavioral and Social Sciences
CALL	Center for Army Lessons Learned
CFF	Combat Field Fire
CQB	Close-Quarters Battle
CMH	U.S. Army Center of Military History
CSI	Combat Studies Institute
FM	Field Manual
FOUO	For Official Use Only
IPSC	International Practical Shooting Confederation
ISR	Intelligence, Surveillance, and Reconnaissance
IWTS	Integrated Weapon Training Strategy
OE	Operational Environment
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
MCOE	Maneuver Center of Excellence
MOA	Minute of Angle
MOPP	Mission Oriented Protective Posture
MMAS	Masters in Military Art and Science
NATO	North Atlantic Treaty Organization
NL/NC	Nonlinear/Noncontiguous
PFST	Pre-Live Fire Simulations Training

PMI&E	Primary Method of Instruction and Evaluation
SOP	Standard Operating Procedure
TRADOC	Training and Doctrine Command
TC	Training Circular
USAIS	United States Army Infantry School

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CHAPTER 1

INTRODUCTION

Our fundamental task is like no other - it is to win in the unforgiving crucible of ground combat. We must ensure the Army remains ready as the world's premier combat force. Readiness for ground combat is - and will remain - the U.S. Army's #1 priority.

— 39th Chief of Staff of the Army Mark A. Milley, Initial Message to the Army

Overview

Since well before the United States of America was founded, American Soldiers (colonial citizens), were called to march into battle, rifle in hand, to engage threats in ground combat. From the earliest days of militias defending the homeland against French occupation and British tyranny, to the modern Soldier of today who fights around the globe to defeat violent extremism or deter aggressors, members of the United States Army have been charged with the inherent, personal responsibility to engage threats effectively in direct fire engagements, across the range of military operations, and win.

Much has changed in warfare, in terms of technology and tactics, since the first Continental Soldiers carried their muskets to the skirmish line. The one constant though, even in today's environment, is that our Soldiers must adequately employ their personally assigned weapons in combat against a threat. With an increasing concern for hybrid, multi-domain, and near peer threats, coupled with the complexity of urban warfare and subterranean operations in mega-cities, should the U.S. Army reevaluate and change its small arms marksmanship training focus and qualification standards to enable Soldiers across the entire force to be more effective and more lethal in modern combat?

The U.S Army has committed an incalculable amount of time and resources in building overmatch and creating as much standoff distance between units and our adversaries on the battlefield to protect the force while simultaneously maintaining lethality and exploiting the initiative. But have we, as a force, adequately balanced those investments across all capabilities and U.S. Army warfighting functions? Have we invested the right time, training, and resources in small arms marksmanship as we have in the development, integration, and employment of newer technologies such as Intelligence, Surveillance, and Reconnaissance (ISR) systems, long range munitions, armor, mobility, mission command platforms, space and cyberspace capability? These technologies and their employment tactics have evolved in a short period of time, however U.S Army small arms systems and marksmanship tactics and training techniques have not. For years trends, advancements, and improvements in this arena have mostly been identified and addressed by entities outside of the U.S. Army. We as the Nation's preeminent ground force have failed to keep up with these changes.

As an Army, are we aiming to substitute small arms marksmanship with other technologies in an effort to distance the Soldier from the close-range fight? Has this created an overreliance on precision strike capability from a Hellfire Missile versus the precision strike of a 5.56mm NATO round fired by a well-trained Soldier in a direct fire engagement? Since the Vietnam War and the introduction of the M16 service rifle¹, the American Soldier has essentially carried the same rifle into over 37 campaigns.² The M9 Beretta Pistol, introduced to the U.S Army in 1985,³ participated in 19 campaigns.⁴ The OE has significantly changed since both of these weapons were introduced to the force. Yet the training strategies surrounding their employment have only gained traction at the

unit level with little change to U.S. Army doctrine. Most importantly the metrics unit commander's use to certify that their Soldiers are qualified on these weapons, has witnessed no change. An example is the rifle qualification standards that were introduced in 1955, well before the M16 was adopted, have relatively remained the standard for basic rifle qualification.

Primary Research Question

What changes are required to U.S. Army pistol and carbine/rifle training strategies in order to adequately prepare Soldiers to engage threats in modern combat?

Secondary Research Questions

1. What are the common characteristics of U.S. Army pistol and carbine/rifle engagements in modern combat?
2. Based upon the OE, what are the expected characteristics of pistol and carbine/rifle engagements in modern combat?
3. What are the current gaps or shortfalls in the U.S. Army pistol and carbine/rifle training strategies in preparing Soldiers to effectively engage threats in modern combat?

Background

As a professional fighting force, the U.S. Army continually evaluates the OE in which it fights and strives to change doctrine and training strategies to meet the demands of those contested areas. The U.S. Army recently demonstrated that commitment by publishing updates to U.S. Army Field Manual (FM) 3-0, *Operations* dated October

2017. This document sets the operational framework for how the U.S. Army will fight our Nation's conflicts today and into the near future. Focus has shifted from the conduct of counterinsurgency and stability operations in a non-contiguous environment to the execution of large scale combat operations in a contiguous environment.

The new FM 3-0 describes large scale combat operations as “intense, lethal, and brutal”⁵ where “future battles will include noncombatants, crowded in and around large cities.”⁶ The new publication acknowledges that “more than 50 percent of the world’s population lives in urban areas, and this is likely to increase to 70 percent by 2050,”⁷ which adds increased complexity to the modern battlefield. This is one of many factors that directly impacts the employment of small arms weapon systems in the OE. Units will be required to engage in “Decisive Action” against a near peer-threat by executing “well synchronized, high-tempo offensive maneuver, in the form of ground maneuver”⁸ in order to “seize the initiative” and “consolidate gains.”

Although focused on actively defeating a threat, based on the OE, forces must be prepared to execute security and stability operations in order to “exploit initiative.” As forces continue to advance within the “Close Area,” new threats will present themselves in the “Consolidation Area” and Soldiers must be prepared to adequately engage those threats with effective small arms fire. Successful operations within the “Consolidation Area” is a matter of being able to “consolidate gains” that prevent large-scale combat operations to be refueled or worse, develop into a proxy war or counterinsurgency.

Prior to achieving stability within a region, it is anticipated that divisional level forces will move across the operational area by executing large-scale combat operations against a near-peer threat. Soldiers must be prepared to operate within “weapon ranges,

both direct and indirect, and [where] the mobility of formations define the characteristics of operations in the close area.”⁹ In the most challenging confrontations with threats, Soldiers will likely operate in a degraded “close area” in which the enemy exploits their cyber, electronic warfare, artillery, air defense systems (among many other capabilities). Standoff distance and the ability to maximize the effective ranges of systems is most desirable, but not necessarily achievable. Based on these conditions, Soldiers must be prepared to engage threats with their direct fire weapon systems. Preparations for this doctrinal shift in how we prepare for armed conflict comes down to training that “builds Soldiers’ confidence in their weapons and equipment, [and] their ability to fight and overcome challenge.”¹⁰

Assumptions

At the beginning of this research project an assumption was made that the U.S. Army Training and Doctrine Command (TRADOC) was not currently taking steps to change qualification standards for the service pistol and carbine/rifle. During the course of the research process, the literature review discovered that TRADOC’s proponent responsible for small arms training and doctrine, the United States Army Infantry School (USAIS) and Maneuver Center of Excellence (MCOE) at Fort Benning, Georgia, developed and tested changes to the existing carbine/rifle qualification course. These changes will be discussed briefly in the next chapter and will also be considered/analyzed, based on the research outcomes, at the conclusion of the study. The last assumption pertains to the research process itself. Assumptions were made that the collective selection of cases studies would adequately describe how the pistol and carbine/rifle are employed in combat. Assumptions were also made that the data collected

will enable conclusions that can shed light on what characteristics of direct fire engagements can be expected in future OEs and conflicts.

Definitions

Operational Environment (OE): FM 3-0, *Operations* defines the OE as “a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. An OE encompasses physical areas of the air, land, maritime, space, and cyberspace domains; as well as the information environment (which includes cyberspace); the electromagnetic spectrum (EMS), and other factors. Included within these are adversary, enemy, friendly, and neutral actors that are relevant to a specific operation.”¹¹ Without further research it is difficult to ascertain when the U.S. Army coined the phrase “Operational Environment” therefore it will be a term used consistently throughout this thesis to describe the battlefield, physical space, terrain, location, etc., (regardless of time) in which Soldiers engaged threats in combat.

Modern Combat: It has been difficult to acquire an academic definition of “modern combat.” For the purpose of this thesis, it will be defined by the operational framework that is used within FM 3-0, *Operations*, dated October 2017. “Modern Combat” is descriptive of the actions or activities by ground forces against an adversary within the Deep, Close, Support, and Consolidations Areas during the conduct of large-scale combat operations.

Close Combat: Army Doctrine Publication (ADP) 3-0 *Operations* defines Close Combat as “warfare carried out on land in a direct-fire fight, supported by direct and indirect fires and other assets. Units involved in close combat employ direct fire

weapons, supported by indirect fire, air-delivered fires, and nonlethal engagement means. Units in close combat defeat or destroy enemy forces or seize and retain ground. Close combat at lower echelons contains many more interactions between friendly and enemy forces than any other form of combat.¹² Close combat encompasses all actions that place friendly forces in immediate contact with the enemy where the commander uses direct fire and movement in combination to defeat or destroy enemy forces or seize and retain ground.”¹³

Close Quarters Engagements aka Close Quarters Battle (CQB): Per Training Circular (TC) 3-22.9 *Rifle and Carbine*, “short-range engagements are probable in close terrain (such as urban or jungle) with engagement ranges typically less than 50 meters.¹⁴ Employment skills include swift presentation and application of the shot process (such as quick acquisition of sight picture) to maintain overmatch.”¹⁵

Lethality: For this thesis lethality is defined as the employment of direct fire by a small arms weapon system or systems that results in the destruction or damage of a threat, object, or infrastructure.

Threat: FM 3-0, *Operations* defines a threat as “any combination of actors, entities, or forces that have the capability and intent to harm United States forces, United States national interests, or the homeland. Threats may include individuals, groups of individuals, paramilitary or military forces, nation-states, or national alliances. In general, a threat can be categorized as an enemy or an adversary.”¹⁶ The term threat in this thesis will be used to describe an actor or instance in which a U.S. Soldier engages (someone or something) with direct fire and with the intent to use deadly force.

Integrated Weapon Training Strategy (IWTS): According to TC 3-20.0 FINAL DRAFT, *Integrated Weapons Training Strategy (IWTS)* dated April 2018, the purpose of IWTS is to “provide a detailed description of the maneuver force’s overarching training strategy for all individual and crew-served weapons, through maneuver battalions/squadrons to achieve fire and maneuver proficiency at home station. It includes the purpose of the IWTS, its standard structure, training requirements, the integration of combined arms assets, and resource requirements for the Armored, Infantry, and Stryker brigade combat teams’ maneuver elements. It provides training principles and techniques for use by units to gain proficiency in engaging and destroying threats efficiently in any operational environment.”¹⁷

Basic Marksmanship: The minimum skill or number of skills that are required by all Soldiers (regardless of their Military Occupational Specialty (MOS)) to employ the pistol or carbine/rifle in a direct fire engagement. In many instances “basic marksmanship” is also described as “the fundamentals” or “shot process.” The skills outlined as part of “basic marksmanship” are currently assessed when a Soldier completes the current U.S. Army Pistol and Rifle Combat Qualification Course Tables. TC 3-22.9 *Carbine and Rifle* have changed from using the term basic to the “shot process” which is defined as “the basic outline of an engagement sequence all firers consider during any engagement.”¹⁸

Advanced Marksmanship: Any combination of skills an individual or units may exercise or demonstrate while employing a direct fire weapon system in a complex environment or under extreme conditions.

Rifle and Carbine: TC 3-22.9 *Rifle and Carbine* defines “the Army standard service rifle [to be] either the M16-series rifle or M4-series carbine. These weapons are described as a lightweight, 5.56-mm, magazine-fed, gas operated, air-cooled, shoulder-fired rifle or carbine. They fire in semiautomatic (single shot), three-round burst, or in automatic mode using a selector lever, depending on the variant. The weapon system has a standardized mounting surface for various optics, pointers, illuminators, and equipment, to secure those items with common mounting and adjustment hardware.”¹⁹ During the course of the research process it was determined that the carbine and rifle were employed relatively the same way, regardless of case study. Therefore, for the purpose of this study, whether describing the use of the M1-Carbine or M1 Rifle in the Korean War, or the M16 Rifle or M4 Carbine in Operation Enduring Freedom (OEF) for example, these weapon systems are considered like items. The terms carbine and rifle will be used synonymously and or interchangeably.

Limitations

This research study will not provide a comprehensive history nor will it describe the evolution of U.S Army marksmanship. Research analysis is limited to existing, published research, as well as the review of marksmanship training strategies from the Korean War to present day. The research methods for this study will focus exclusively on analyzing completed research studies and scholarly publications only. No new research will be initiated, i.e. the creation of surveys or interviews.

Additionally, this study is focused solely on determining which characteristics of marksmanship are present in combat. This research project will not study nor attempt to determine the effectiveness or failure of individual small arms engagements, but rather

simply understand and document the conditions surrounding the engagements. Also, due to the nature of the topic, some research material from recent conflicts are currently categorized as For Official Use Only (FOUO). Because the use of FOUO material will prevent public distribution of this study, research will be limited to open source, scholarly publications only. Personal publications, i.e. war journals or autobiographies, will also be excluded from this research project to prevent concern for exaggerated descriptions of events. Publications by valued institutions such as the U.S. Army Center of Military History (CMH) and U.S. Army Combined Arms Center Combat Studies Institute (CSI) will only strengthen the validity and accuracy of data collected from the case studies.

Finally, due to accessibility of material, this project will only look at four case studies; Korean War, Vietnam War, Operation Iraqi Freedom (OIF), and OEF. Since limiting the research to scholarly publications, this too has limited the number of available publications on notable conflicts such as Operation Urgent Fury, Operation Just Cause, Operations Desert Shield and Storm, and Operation Gothic Serpent, among others.

Delimitations

Since the *TRAINFIRE I* research study was published in October 1955 the U.S Army has engaged in countless direct fire engagements from the Vietnam War to current operations such as Operation Inherent Resolve in Iraq and Syria, Operation Resolute Support in Afghanistan, and a number of Decisive Action training missions and deterrence operations around the globe. U.S. Army Soldiers of today continue to prepare for possible future ground combat. Due to the scope of the topic and the numerous historical examples available, this thesis will be limited to a small number of case studies.

A diverse group of case samples are provided that include combat arms and combat support units operating in open, vegetated, and urban terrain, daylight and limited visibility conditions, and other conditions that provide examples of the full range of military operations. Due to the scope of the topic and the number of direct fire engagement examples recorded since the Korean War, only four cases will be selected to complete the analysis. The intent of this thesis is to focus on U.S. Army training strategies for the employment of the pistol and rifle service weapons by the American Soldier in modern combat. This thesis will not attempt to analyze, compare or contrast the lethality of weapon systems solely by themselves or analyze the ballistic capabilities of those platforms.

Significance

This thesis has significance for the entire force. The outcomes of this research study are far reaching and have great impact on shaping U.S. Army weapon training strategies for every Soldier.

Conclusion

Every Soldier, except the Chaplain, carries a firearm and has the inherent personal responsibility to confidently and competently destroy the enemy or defend themselves against threats as part of large-scale operations, small team missions, or individual combat scenarios. To prepare the force, we must attempt to evaluate and understand how the pistol and rifle have been employed in previous direct fire engagements to determine trends, exploit successes, and identify ways to better prepare for the uncertainties and challenges Soldiers will face in future ground combat. As ground forces continue to

operate in a complex and ever changing and contested OE, Soldiers must be capable of remaining lethal and decisive in the employment of their small arms platforms.

¹ Encyclopedia Britannica, “M16 Rifle,” accessed September 1, 2017, <https://www.britannica.com/technology/M16-rifle>.

² The United State Army Institute of Heraldry, “Campaign Streamers,” accessed September 1, 2017, <http://www.tioh.hqda.pentagon.mil/Catalog/HeraldryList.aspx?CategoryId=9157&grp=2&menu=Uniformed%20Services>.

³ Beretta, “M9,” accessed September 1, 2017, <http://www.beretta.com/en-us/m9/>.

⁴ The United State Army Institute of Heraldry, “Campaign Streamers.”

⁵ Headquarters, Department of the Army (HQDA), Field Manual (FM) 3-0, *Operations* (Washington, DC: Government Printing Office, 2017), 1-2.

⁶ *Ibid.*, 1-2.

⁷ *Ibid.*, 5-5.

⁸ *Ibid.*, 1-18.

⁹ *Ibid.*, 1-31.

¹⁰ *Ibid.*, 2-54.

¹¹ *Ibid.*, 1-16.

¹² Headquarters, Department of the Army (HQDA), Army Doctrine Publication (ADP) 3-0, *Operations* (Washington, DC: Government Printing Office, 2016), 1-54.

¹³ Headquarters, Department of the Army (HQDA), Field Manual (FM) 3-90, *Offense and Defense* (Washington, DC: Government Printing Office, 2013), 1-116.

¹⁴ Headquarters, Department of the Army (HQDA), Training Circular (TC) 3-22.90, *Rifle and Carbine* (Washington, DC: Government Printing Office, 2016), 7-26.

¹⁵ *Ibid.*, 7-28.

¹⁶ HQDA, FM 3-0, 1-36.

¹⁷ Headquarters, Department of the Army (HQDA), Training Circular (TC) 3-20.0 FINAL DRAFT, *Integrated Weapon Training Strategy (IWTS)*, (Washington, DC: Government Printing Office, 2017), 1-1.

¹⁸ HQDA, TC 3-22.90, Glossary-3.

¹⁹ *Ibid.*, 2-1.

CHAPTER 2

LITERATURE REVIEW

An emphasis on safety seems to be characteristic of conventional marksmanship training. The loss of realism which results from an excessive concern with safety detracts from training in requisite combat skills and risks developing in the trainee a fearful attitude regarding his weapon. The end result is a reduction in the trainee's self-confidence and thus the possibility of less efficient combat performance.¹

— Howard McFann, John Hammes, and John Taylor
TRAINFIRE I: A New Course in Basic Rifle Marksmanship

Introduction

Should the U.S. Army reevaluate and change its small arms marksmanship training focus and qualification standards to enable Soldiers across the entire force to effectively engage threats in modern combat? On January 5, 1953 a meeting was held by the Office of the Chief of Army Field Forces that would attempt to answer that question by undertaking a research project that ultimately changed basic marksmanship instruction and training.² The results of that study transformed U.S. Army training methodologies and would impact the force for the next 60 years. Since the implementation of those changes, much has changed in our OE, as well as our understanding of how Soldiers fight in those environments. More so, the understanding of how the pistol and carbine/rifle should be employed in those environments has also changed.

The purpose of this literature review is to provide context to the problem by:

1. Providing a brief history of marksmanship training from the end of World War II to present.

2. Describing current U.S. Army training methodologies for the pistol and carbine/rifle.
3. Summarizing both military and non-military professional publications that have been written on the subject.
4. Summarizing scholarly publications that describe the OE through historical case studies.

World War II – Korean War: An Evolution in
U.S. Army Marksmanship Training

In 1947, esteemed military historian Samuel Lyman Atwood (S.L.A.) Marshall published *Men Against Fire* which summarized observations and key points about leadership and combat that he witnessed during World War II. Marshall, a World War I veteran, supported both the European and Pacific Campaigns as an embed historian who adopted a Jominian type philosophy about war, in which he believed victory is rooted in ground combat.³ Marshall developed a method for collecting data from Soldiers shortly after their wartime experiences in order to more accurately paint a narrative of what occurred in ground combat.⁴

One of the most controversial observations from Marshall was that he concluded (after interviewing more than 400 infantry companies between both theaters⁵) that less than 25 percent of an infantry formation actually engaged the enemy with their direct fire weapons⁶ and in most cases, it was less than 15 percent.⁷ Marshall believed that human nature was a factor in the low percentage of reaction and or performance when an infantryman was involved in a direct fire engagement. He was convinced, however, that although humans were not born to kill per se, they could be programmed to do so through

realistic training.⁸ Marshall alluded that U.S. Army training programs (in his example the rifle range) may appear to properly prepare our Soldiers for ground combat, but when bullets start flying, the response from the rifleman is much different than when shooting at stationary bullseye targets on the flat, open home station firing range.⁹

One of the world's leading experts on the psychology and physiology of both killing and combat, Lieutenant Colonel (Retired) Dave Grossman¹⁰, defends S.L.A Marshall's findings. Grossman is best known for his works *On Killing* and *On Combat* where he covers extensively the way people respond both physically and mentally during stressful and violent encounters. Grossman emphasizes that Marshall's research results created a shift in the way the U.S. Army would prepare for future combat.¹¹

If we expect our warriors to be capable of using the weapons they have been issued, they must practice on realistic simulators that replicate what they are going to face. Men and women who served in the U.S. military since the Vietnam era were universally taught to shoot at man-shaped silhouettes that popped up in their field of view, thus ingraining in them a conditioned response.¹²

What Grossman refers to are the changes to marksmanship training and qualification standards that would be introduced in 1955. Marshall's observations from *Men Against Fire* likely made an impact on U.S. Army leadership, but a shift in training methodologies wouldn't be considered until after the Korean War. After three years of grueling, large-scale combat operations, a research committee was formed to address why the rifle, "the basic weapon of the United States Army, has in recent years been used relatively ineffectively in combat."¹³ The study ultimately wanted to create realistic combat conditions in training through "practical marksmanship instruction."¹⁴ The results of the research study demonstrated that the experimental training and evaluation criteria

produced higher results. Trainees were more effective in range estimation, target detection, and engaging and hitting targets.¹⁵

What was also significant about the study was that it acknowledged that both the OE and small arms technology and tactics evolved since World War II. “The effectiveness of modern small arms partially forced the adoption of increased dispersion and intensive use of cover and concealment as principal tactics”¹⁶ in the Korean War. Targets were well hidden and not as exposed. The study described a significant decline in marksmanship skills during World War II (an observation possibly influenced by Marshall’s research) where forces leveraged artillery, air power and tanks more so than ever before. The increased reliance on combined arms capability supplemented the common use of small arms weapon systems – making the rifle no longer decisive in battle. The report also emphasized the decline, following World War II, in adequate “training facilities” and “qualified instructors,”¹⁷ which may have been a contributing factor to small arms performance during the Korean War. The 1955 report along with After Action Reports (AARs) may have gone so far as to influence President Dwight Eisenhower to establish the U.S. Army Marksmanship Unit in 1956, an effort to improve marksmanship across the force.¹⁸

AARs and interviews with troops who were in combat in Korea would force several questions on the effectiveness of the Army’s small arms training. One critical question was “how well is [the Soldier] trained to fire under the difficult conditions of battle?”¹⁹ Just as in World War II, S.L.A Marshall covered the Korean War extensively and would revisit the controversial topic regarding a Soldier’s willingness to participate in a direct fire engagement. In 1952, using the same research methods applied in World

War II,²⁰ he published *Infantry Operations and Weapons Usage in Korea* and described that “willing participation is more than double World War II averages.”²¹ Marshall attributed these numbers to several factors, one being that Soldiers and their leaders were more aware of the dangerous fighting being encountered in Korea in which units were commonly overwhelmed by significantly superior size ground forces. The other was the influence of his observations from the previous war that changed the way units were training and preparing for ground combat.²²

As the U.S. Army attempted to capitalize on its successes from World War II and its failures in the Korean War, it began to shift focus to substituting precision fire with volume fire. Soldiers had been thrown into an entirely new OE in which large-scale, brutal, close-in fighting and engagements in restricted terrain and limited visibility conditions were common. The machine gun would still hold its vital position within the formation, but the U.S. Army would soon realize a capability gap and an “awakened interest and a renewed emphasis upon individual marksmanship”²³ was established. Ultimately, an analysis of performance in the Korean War led to changes to marksmanship training strategies. One study introduced the “whole method” approach in which trainees would be taught all marksmanship techniques in an “integrated” way. This would be comparable to the progressive training models the U.S. Army commonly uses today.²⁴ Research would continue to demonstrate that additional training time and ammunition would also contribute to better marksmanship results. But there was something even more critical missing in marksmanship; a training model that replicated combat.²⁵ *TRAINFIRE I* was supposed be “an initial attempt to develop and evaluate a rifle marksmanship training program designed for maximum, rapid transfer to combat

conditions.”²⁶ Instead of a temporary solution, it has relatively remained the standard for rifle qualification for the last 60 years.

It is important to note that although the pistol is not weighted on the same marksmanship scale to that of the carbine/rifle, its training methodologies also evolved with the adaptation of *TRAINFIRE I*. Newly designed reactive target systems were incorporated into the new training strategies for the carbine/rifle and those tools migrated their way to pistol training and qualification. Just as with the rifle qualification, the combat pistol qualification standards stagnated and have remained the standard for the last 30 years.

Summary of Marksmanship Standards After the Korean War

In 2010 the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) published a report summarizing research that evaluated how basic trainees performed on a new rifle marksmanship course of fire known as the Combat Field Fire (CFF). The CFF differed from the existing Combat Rifle Qualification Course as it proposed a different target array, the use of barricades, magazine changes, and engagements that required multiple hits on certain targets prior to them falling.²⁷

The 2010 research report (among many other reports that will be discussed later in this chapter) highlights that there has been reoccurring interest in trying to understand the current training and qualification standards and determining whether or not they are adequate for the OE. Secondly, there was a desire to know if new standards or a new qualification course is appropriate and achievable. Additionally, the 2010 research report developed a thorough chronological table of the changes to qualification standards for the rifle since the introduction of *TRAINFIRE I* in 1955. Using data points from the 2010

research report, Appendix A was developed after this literature review was completed using the historical research material developed as part of the 2010 research report. Additionally, Appendix A lists the manuals and standards for the carbine/rifle that have been added after 2008. A historical analysis of pistol marksmanship has not been completed by ARI, therefore, Appendix B provides a chronological summary of pistol training and qualification standards since the adaptation of *TRAINFIRE I* to present day. The major conclusions drawn from analyzing the former FMs is that major changes were made after the *TRAINFIRE I* research, however strategies and standards stagnated through the Vietnam War. Even today, very little changes have been adopted since the late 1970's to early 1980's.

Current U.S. Army Pistol and Carbine/Rifle Weapon Training Strategies

In May 2016 the Rifle and Carbine manual received a major overhaul. One year later, in May 2017 the Pistol followed suit. Now referred to as Training Circulars (TCs), the overarching purpose of the Rifle and Carbine manual, TC 3-22.9, is to “provide Soldiers the critical information on their rifle or carbine to properly and effectively engage and destroy threats in a direct fire engagement.”²⁸ The Pistol manual, TC 3-23.35, is not as prescriptive as the Rifle and Carbine TC, but generally emphasizes that “each Soldier must place accurate fires on threat targets with their individual weapon.”²⁹ Figure 1 below outlines the existing standards for Rifle and Carbine Qualification:

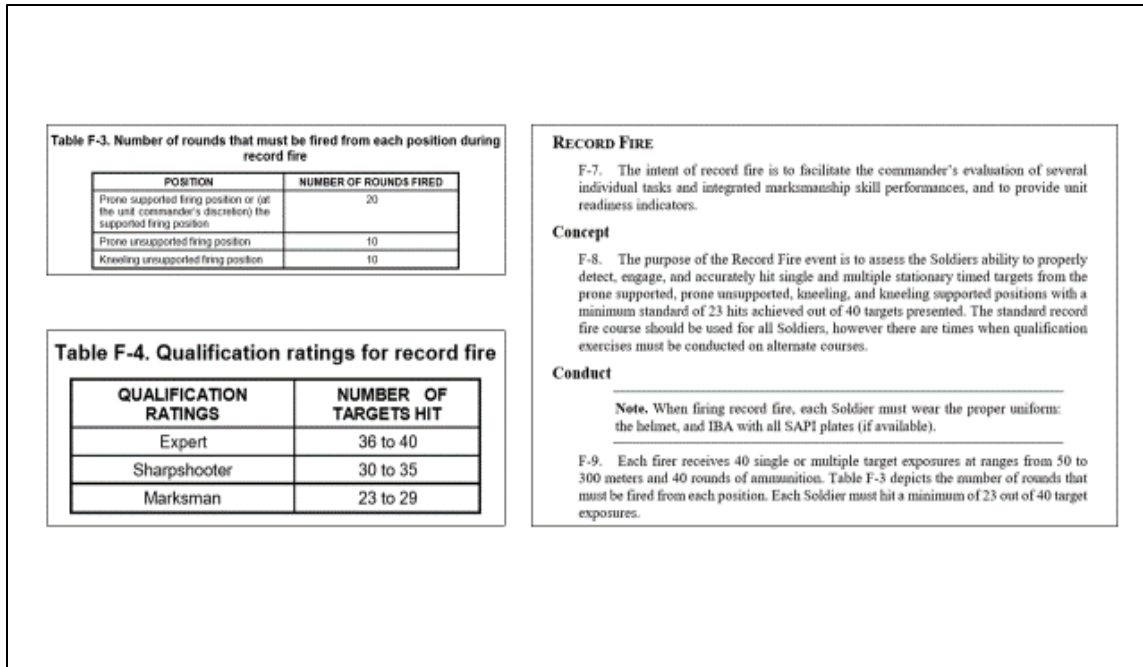


Figure 1. Qualification Standards for the Rifle and Carbine

Source: Headquarters, Department of the Army, Training Circular 3-22.9, *Carbine and Rifle* (Washington, DC: Government Printing Office, 2016), F-2, F-4.

Generally, a Soldier must attempt to engage 40 out of 40 reactive targets from the prone supported, prone unsupported, and kneeling positions. Targets are presented from ranges of 50 meters to 300 meters. A single round impacting a target, accurately, will cause the target to fall, ultimately being counted as a hit. There are timed target exposures for all engagements, and in some cases a Soldier must engage more than one target.

The Pistol Qualification consists of seven tables that include firing with a protective mask and a night fire. Tables I-VI include firing at targets ranging from 10 meters to 25 meters (figure 2). Similar to the Rifle and Carbine Qualification, there are timed target exposures for all engagements, and in some cases a Soldier must engage

more than one target. An additional characteristic of the Pistol Qualification is that it includes timed magazine reloads during Tables III and V.

<p>TABLE I--DAY STANDING</p> <p>E-8. For this table, the firer receives one magazine with seven rounds in it. Five targets (single) are exposed. The firer assumes the standing firing position at the firing line and holds the weapon at the ready. The tower operator sets the target sequence.</p> <p>TABLE II--DAY STANDING</p> <p>E-9. For this table, the firer receives two magazines: one containing one round, and the other containing seven rounds. Six targets (four single and one set of two) are exposed:</p> <p>First Magazine</p> <p>E-10. The firer loads the first magazine (containing one round). One target is exposed.</p> <p>Second Magazine</p> <p>E-11. After firing the round in the first magazine, the firer must change magazines at once. The firer has eight seconds to load the second magazine (containing seven rounds) and prepare to fire before the next target is exposed. Once it appears, the firer must engage in the three seconds before it is lowered. Failure to do so is scored as a miss.</p> <p>TABLE III--DAY STANDING</p> <p>E-12. For this table, the firer receives one magazine containing seven rounds. Five targets (three single and one set of two) are exposed.</p> <p>TABLE IV--DAY STANDING</p> <p>E-13. For this table, the firer receives one magazine containing five rounds. Four targets (two single and one set of two) are exposed.</p>	<p>TABLE V--DAY MOVING OUT</p> <p>E-14. For this table, the firer receives three magazines: one each with one, seven, and five rounds. Ten targets are exposed. The firer begins 10 meter behind the firing line, in the middle of the trail. They take the following steps:</p> <ul style="list-style-type: none"> • The firer loads the first magazine (containing one round) and places the second magazine (containing seven rounds) in the magazine pouch closest to his or her firing hand. The firer places the third magazine (containing five rounds) in the magazine pouch farthest from his or her firing hand. • (When the firer reaches the firing line, a single target is exposed. The firer has two seconds to hit it before it is lowered. Then has eight seconds to load the second magazine (containing seven rounds). • At the end of eight seconds, another single target is exposed to the firer. If the firer has not loaded the second magazine in time to engage this target, this round is scored as a miss. • When the tower operator is sure that the firing line has completed the magazine change, the tower operator commands MOVE OUT. Two multiple targets are the exposed, one after the other, at various ranges from the firer. • After two sets of multiple targets are exposed, the Soldier is commanded to load the five-round magazine. After the command MOVE OUT is given, the remaining targets are presented to the firer in sequence. After the last targets are hit or lowered, the firer clears the weapon. • The firer holds the weapon in the raised pistol position with the slide to the rear. The firer returns to the starting point and unloads and shows clear and reholsters the pistol. Any excess ammunition is turned in to the ammunition point. On hearing the order to do so, he or she moves to the firing line. <p>TABLE VI--DAY STANDING, CBRN</p> <p>E-15. All firers will wear protective masks with hoods. For this table, the firer receives one magazine containing seven rounds. Five targets (three single and one set of two) are exposed.</p> <p>TABLE VII--NIGHT STANDING</p> <p>E-16. For this table, the firer receives one magazine containing five rounds. Four targets (two single and one set of two) are exposed.</p> <p><i>Note.</i> Commanders may use the Engagement Skills Trainer 2000 to conduct Firing Tables VI and VII (CBRN and night fire).</p>
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Figure 2. Qualification Standards for the Pistol

Source: Headquarters, Department of the Army, Training Circular 3-23.35, *Pistol* (Washington, DC: Government Printing Office, 2016), E-2, E-4.

With the implementation of TRADOC's new IWTS, the U.S. Army is attempting to improve its progressive training model for both individual and collective training. This new approach sub-divides training requirements into a series of streamlined gates. Each training requirement now follows a six step or table model. The pistol and carbine/rifle (i.e. individual weapons) are key components to foundational training that leads to collective training. The tables for individual weapons training includes initial instruction on the weapon system known as Table I, Preliminary Marksmanship Instruction and

Evaluation (PMI&E), followed by Table II, Pre-Live Fire Simulations Training (PLFS) which primarily leverages simulations training. Table III consists of individual drills to build proficiency. Table IV continues with basic live fire training that includes weapon zeroing. Table V includes a practice qualification and Table VI culminates with a record qualification using the existing standards that were discussed in this chapter. Figure 3 provides a visual aid as to how individual weapons training aligns with the rest of the IWTS requirements.³⁰

Tier		Table I	Table II	Table III	Table IV	Table V	Table VI	
		PREREQ	PREREQ	PREREQ	Collective Task Proficiency	COORD / Rehearsal / Practice	Live Fire Proficiency Gate	
		CRAWL	CRAWL	WALK	RUN	RUN	RUN	
COLLECTIVE	1	Battalion	TEWT <i>Live</i>	STAFFEX <i>Blended</i>	CPX <i>Live</i>	FTX <i>TADSS</i>	FCX <i>Blended</i>	CALFEX <i>Live Fire</i>
		Company	TEWT <i>Live</i>	STX-V <i>Virtual</i>	STX <i>TADSS</i>	FTX <i>TADSS</i>	FCX <i>Live Fire</i>	CALFEX <i>Live Fire</i>
	2	Platoon	CLASS SOP <i>Live</i>	STX-V <i>Virtual</i>	STX <i>TADSS</i>	FTX <i>TADSS</i>	FCX <i>Live Fire</i>	LFX <i>Live Fire</i>
		Section						
FOUNDATION	3	Squad	GST <i>Live</i>	STX-V <i>Virtual</i>	STX <i>TADSS</i>	Basic <i>Live Fire</i>	Practice <i>Live Fire</i>	Qualification <i>Live Fire</i>
		Crew Platform						
	4	Mortar	PMI&E <i>Live</i>	PLFS <i>Virtual</i>	Drills <i>TADSS</i>	Basic <i>Live Fire</i>	Practice <i>Live Fire</i>	Qualification <i>Live Fire</i>
		Individual Weapons						
	Crew Served Weapons							
	Special Purpose Weapons							
Legend: CALFEX combined arms live-fire exercise COORD coordination CPX command post exercise EXEVAL external evaluation FCX fire coordination exercise FTX field training exercise GST gunnery skills test LFX live-fire training exercise PLFS preliminary live-fire simulations PMI&E preliminary marksmanship instruction and evaluation PREREQ prerequisite SOP standard operating procedure STAFFEX staff exercise STX situational training exercise TADSS training aids, devices, simulators, and simulations TEWT tactical exercise without troops V virtual training environment								

Figure 3. Integrated Weapons Training Strategy (IWTS) Structure

Source: Headquarters, Department of the Army, Training Circular 3-20.0, FINAL DRAFT, *Integrated Weapon Training Strategy (IWTS)* (Washington, DC: Government Printing Office, 2018), 1-4.

With the overhaul of the pistol and carbine/rifle TC's, training aids and skills have been added to individual training publications to better assist unit commanders in executing the IWTS. Below are a series of figures from those TC's. The new zero and marksmanship target (figure 4) improves training as part of Table IV of individual weapons training. TC 3-22.9 *Carbine and Rifle* also improves the understanding of ballistics with the explanation of Minute of Angle (MOA) and provides better, detailed instruction on firing positions (figure 5). TC 3-23.35 *Pistol* has made significant breakthroughs in the instruction of marksmanship skills. The 2017 dated publication is the first of its kind to provide instruction on the pistol draw from a holster as well as instruction on the two-handed group (figure 6), both considered critical skills in pistol marksmanship.

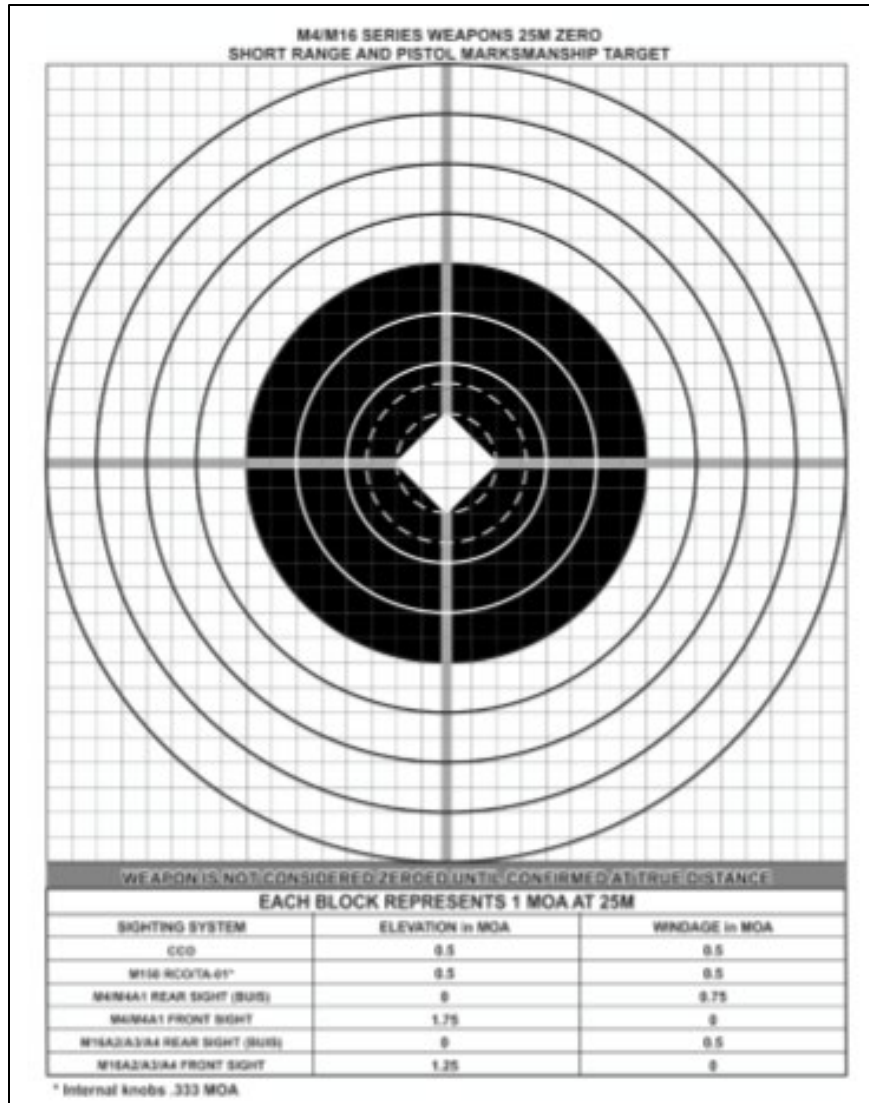


Figure 4. New Carbine/Rifle Zero and Pistol Marksmanship Target

Source: Headquarters, Department of the Army, Training Circular 3-22.9, *Carbine and Rifle* (Washington, DC: Government Printing Office, 2016), E-6.

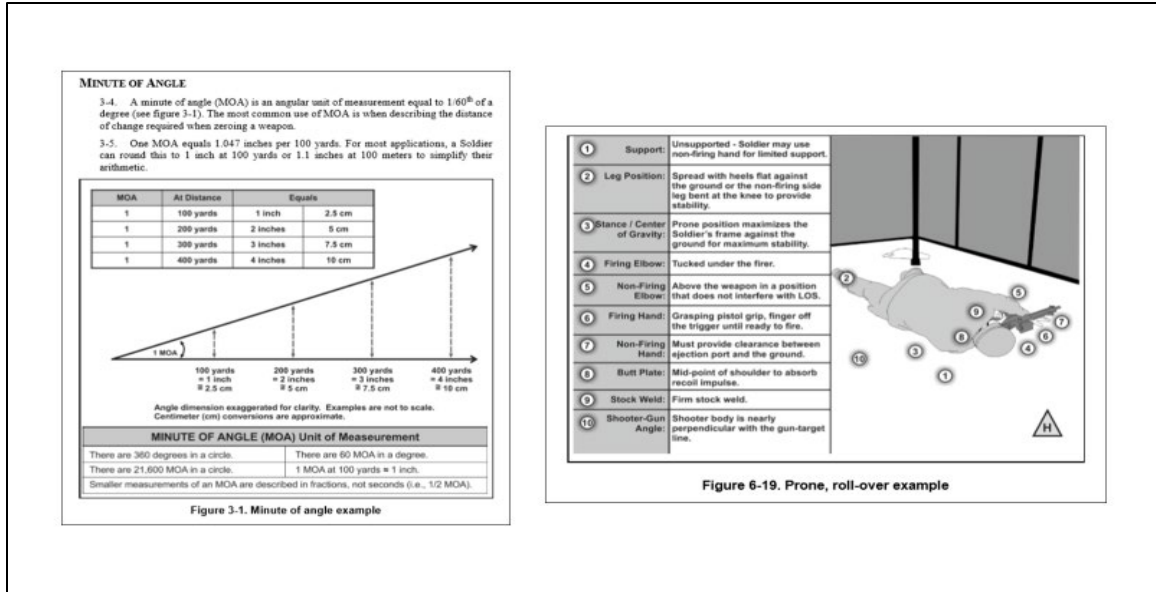


Figure 5. Improvements to Carbine/Rifle Training

Source: Headquarters, Department of the Army, Training Circular 3-22.9, *Carbine and Rifle* (Washington, DC: Government Printing Office, 2016), 3-2, 6-26.

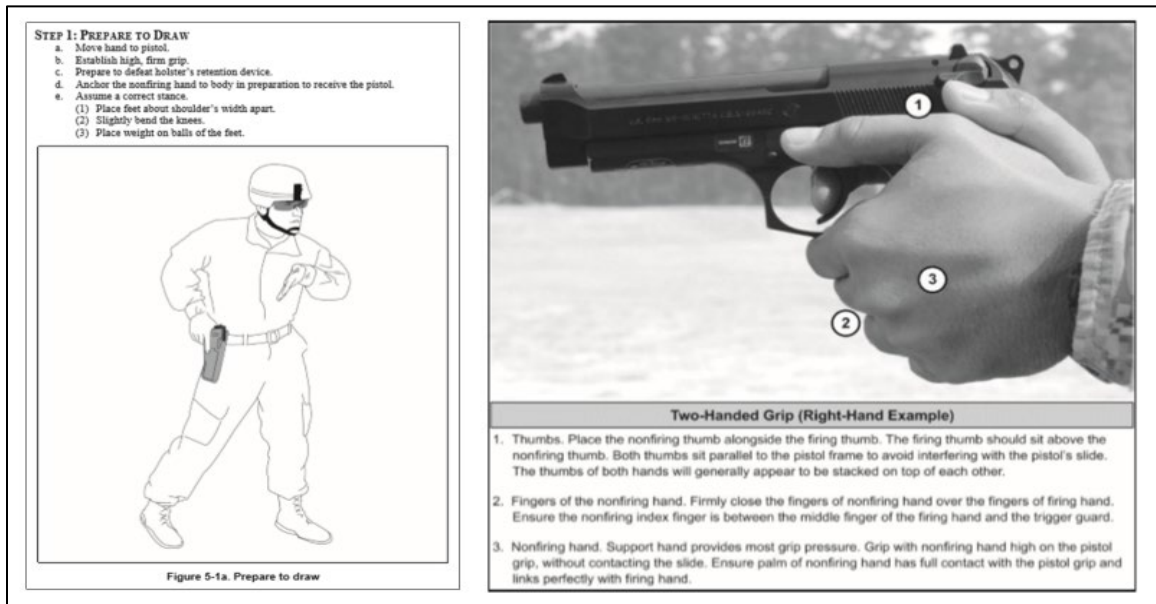


Figure 6. Improvements to Pistol Training

Source: Headquarters, Department of the Army, Training Circular 3-23.35, *Pistol* (Washington, DC: Government Printing Office, 2017), 5-6, 6-8.

Changes to the U.S. Army Rifle and Carbine Qualification Course

As discussed in Chapter I, during the course of this research project the U.S. Army announced pending changes to the carbine/rifle qualification course. Figure 7 illustrates the new course of fire. Major differences to that of the current qualification standards are:

1. Added table for the standing firing position.
2. Inclusion of a barricade that firers use to support employment of the carbine/rifle in the prone supported, kneeling supported, and standing support positions.
3. Changes to target exposure sequencing, and in some iterations, the presentation of up to four targets at once.
4. Mandatory reloads between tables with limited delay between tables.

Modified Record Fire (Barricade)																
Phase 1 Prone Unsupported (1x10)				Phase 2 Prone Supported (1x10)				Phase 3 Kneeling Supported (1x10)				Phase 4 Standing supported (1x10)				
T G I	Range (m)	Time (sec)	5 Sec Delay Between Tables	T G I	Range (m)	Time (sec)	8 Sec Delay Between Tables	T G I	Range (m)	Time (sec)	8 Sec Delay Between Tables	T G I	Range (m)	Time (sec)		
1	50 (L)	3		11	300	6		1	50 (R)	1		50 (L)	6	1	50 (L)	6
2	150	5		12	150	8		2	200	14		2	100	3	100	6
3	200	5		13	300	8		3	250	8		3	100	4	150	6
4	100	13		14	200	8		4	50 (L)	8		4	150	5	50 (R)	11
5	150			15	300	8		5	200	8		5	100	6	100	11
6	200	19		16	250	17		6	150	14		6	150	7	150	11
7	100			17	300			7	250			8	50 (L)	8	100	
8	150			18	150			9	200			9	100	10	100	
9	200	19		19	250	10		250	10	150		11	150	11	150	
10	250			20	300											

TARGET TOTALS BY RANGE			
300 M	5	150 M	9
250 M	6	100 M	7
200 M	8	50 M	5
Total: 40			

MAGAZINE TOTAL	
Four magazines of 10 rounds each. Soldier automatically changes magazine and position on command "Ten".	

MRF STANDARDS		
Category	Hits	Percentage
Expert	36 - 40	90% - 100%
Sharp Shooter	32-35	80% - 87.5%
Marksman	28 - 31	75% - 77.5%
Qualified	23 - 27	57.5% - 72.5%

Figure 7. Approved Changes to the Carbine/Rifle Qualification Standards

Source: The 82nd Airborne Division Small Arms Master Gunner, "Modified Record Fire (Barricade)," accessed January 16, 2018, Facebook.

In the Spring 2018 issue of the *Infantry Bugler* the Chief of Infantry, Brigadier General Christopher T. Donahue, announced the pending changes to the carbine/rifle qualification standards and how it is aligned with supporting the new IWTS. He stated that “the existing qualification standards fail to accurately reflect the basic tactical employment skills”³¹ and “this new and improved marksmanship training increases Soldier lethality and enhances Soldier’s ability to fight, win and survive on the battlefield.”³²

The Marksmanship Debate: Necessary Change

Small Arms marksmanship training and lethality has remained a debated topic within the operational force. Many current and former service members (both U.S. Army and Inter-Service) have published papers through professional military educational institutions (i.e. Captain’s Career Course, Command and General Staff College, School for Advanced Military Studies) and professional journals (i.e. *Infantry Magazine*) to share insights on the marksmanship topic. The below table lists the publications that were reviewed as part of this research:

Table 1. List of Military Professional Publications		
Title	Author	Publication, Date
<i>How to Improve Rifle Marksmanship in the United States Army</i>	CPT John Lauterbach (US Army)	Advanced Infantry Officer's Course, 1954
<i>Moving Personnel Targets and the Combat Infantryman</i>	Major Bruce Wilson (US Army)	US Army Command & General Staff College, 1971
<i>Close Quarters Combat Training - Using the IDPA System</i>	Captain Jay Shebuski (US Army)	Infantry Magazine, 2004
<i>Current Inadequacy of Small Arms Training for all Military Occupational Specialties in the Conventional Army</i>	MAJ Issac Ellison (US Army)	US Army Command & General Staff College, 2005
<i>Improving Army Marksmanship: Engaging the Initiative in the Infantryman's Half Kilometer</i>	Lieutenant Colonel David Liwanag (US Army)	Infantry Magazine, 2006
<i>Increasing Small Arms Lethality in Afghanistan: Taking Back the Infantry Half Kilometer</i>	Major Thomas Ehrhart (US Army)	School for Advanced Military Studies, 2009
<i>Closing a Critical Gap: Enhancing Small Arms Combat Skills Training</i>	Lieutenant Colonel(Retired) James C. Crowley and CPT Daniel Wilcox (US Army)	Infantry Magazine, 2015
<i>Squad Overmatch - Software Before Hardware</i>	Sergeant First Class(Retired) Mike Lewis (US Army)	Infantry Magazine, 2016

Source: Created by author.

The overarching theme from these publications, regardless of the years in which they were published, is change. More specifically, all authors expressed some sort of need to either change marksmanship training methods, weaponry, range equipment, and qualification standards. Most interestingly, all of these works were published during or shortly after some form of armed conflict.

In 1954, Captain Lauterbach, a member of the second class of the Infantry Officers Advance Course at Fort Benning, Georgia wrote in his monograph that “the practical work of firing is so limited that the ability to shoot never reaches the stage of automatic performance. It is required that every man fire his basic weapon annually; however, the brief time allotted serves little more than a reintroduction of performance, constant practice is axiomatic.”³³ Lauterbach’s monograph primarily encourages change

(as it relates to the time period) to instruction and coaching of basic marksmanship and the need for more range time to improve marksmanship performance and proficiency. A precursor to the research done in 1955 with *TRAINFIRE I*, Lauterbach's monograph inadvertently exposes the way of thinking for the time period. It appears that Lauterbach expresses that there should be a degree of separation between what must be taught as part of basic marksmanship and what is required to replicate combat.

Contrary to Lauterbach's monograph, Major Wilson's 1971 Master's in Military Art and Science (MMAS) thesis emphasizes that rifle training standards are too basic and don't adequately reflect combat. One could argue that U.S. Army marksmanship experienced somewhat of a revolution between the time Lauterbach wrote his monograph in 1954 and when Wilson introduces drastic changes to training and qualification standards. Results from the Korean War led to the *TRAINFIRE I* research as well as the development of two new battle rifles (the M14 and M16). After more than six years with American involvement in the Vietnam War, Wilson writes "failure to emphasize marksmanship training designed to prepare a rifleman to hit battlefield targets seems to be both illogical and irresponsible on the part of the Army."³⁴ His thesis focuses on the need for "exposure to realistic moving target situations" which "could ease the Soldier's transition from the rifle range to the battlefield."³⁵ He determined that certain conditions, such as moving targets, needs to be reflected in marksmanship training strategies. The data in his research is convincing, however it was not enough for the U.S. Army to change their qualification standards.

In 2005 Major Isaac Ellison published a MMAS thesis at the U.S. Army Command and General Staff College that argues that small arms weapons training and its

associated qualifications are focused largely on preparing Soldiers for the defense and lack preparation for operations in a “dynamic nonlinear/noncontiguous (NL/NC) asymmetrical battlefield.”³⁶ Ellison’s thesis was published after the U.S. Army had been involved in OEF for almost five years and in OIF for a little over two years. The impact of conducting de-centralized operations in an urban area (such as a Baghdad) was suddenly being felt by the conventional force, and Ellison was concerned that the U.S. Army was not addressing the importance of incorporating advanced marksmanship into training programs for all Soldiers, regardless of their Military Occupational Specialty. Although it was described as defensive in nature, Ellison believed that the existing basic marksmanship programs were still relevant in teaching the fundamentals of shooting, but significantly lacked the adequate doctrinal tasks to prepare Soldiers for “engagement ranges of 0 to 100 meters.”³⁷

In 2009 Major Thomas Ehrhart published a monograph at the School of Advance Military Studies, U.S. Army Command and General Staff College that analyzed the effectiveness of the Infantryman in Afghanistan. His major argument in his research is the lack of lethality beyond 300 meters with the existing M4/M16 variant rifle. Additionally, Ehrhart argues for changes to the current rifle qualification standards. Just like previous authors, he echoes similar sentiment; the qualification course is outdated, it is not dynamic enough, and does not replicate combat. Some of the characteristics he proposes for the rifle qualification include:

Engagements from 3 to 500 meters; include multiple types of terrain requiring different shooting positions; a combination of moving and stationary targets; engagements from differing elevation and a scoring system which rewards shot placement in vital areas. Any of these characteristics can be added to the current qualification.³⁸

Despite efforts to communicate the need for change to better prepare the warfighter for combat, these professional publications have not swayed significant changes to marksmanship training for all Soldiers in the U.S. Army, nor have they significantly impacted changes to qualification standards for both the carbine/rifle and the pistol.

U.S. Army Sponsored Research on Marksmanship

Marksmanship Research has continued since the implementation of *TRAINFIRE I* in 1955 and has consistently focused on enhancing Soldier lethality on the battlefield. A 1987 report by ARI emphasized that “the Infantry Soldier must be able to engage personnel targets under all combat conditions. The battlefield will test each Soldier in all of his learned skills. Soldiers can expect to be confronted by multiple moving personnel targets, hindered by darkness, and forced to perform in a chemically contaminated environment.”³⁹ After review of the earlier works, it is apparent that marksmanship training research following Vietnam and prior to Desert Storm, identified critical skills and requirements to prepare Soldiers for combat, and those conclusions subdivided training into three categories, basic, advanced, and unit marksmanship.⁴⁰ Perhaps this subdivision is due to the number of skills required to effectively engage threats in combat, but also, in part, due to the time it takes to learn and apply these skills. This research also assumed that certain branches would only train on basic marksmanship. These subdivisions have served as the foundational training strategies for the last 30 years.

As the United States became involved in two conflicts (OEF and OIF) the U.S. Army began to invest in learning and understanding new strategies to meet the demands

of the OE. As new strategies presented themselves, the challenge was tracking implementation and ultimately their effectiveness in combat. A RAND Corporation study in 2014 determined:

Assessing alternative weapon training strategies is complicated by the fact that the Army does not have a system for knowing how closely units follow current weapon training strategies, the degree to which they meet standards, or how well current standards relate to combat success...no systematic data are available to answer this question and support Maneuver COE [Center of Excellence] training development efforts to improve small-arms training strategies.⁴¹

In 2016, ARI conducted a comprehensive survey of Soldiers (combat veterans) to determine what changes were needed to marksmanship. Based on Soldier input, the study also determined “there is merit to re-examining qualification again”⁴² as Soldiers in the study expressed there are “skills not in the common set of requirements reflected in the current qualification course-of-fire, primarily engaging moving targets, firing from different positions, and discriminating between friendly, enemy and noncombatants.”⁴³

These studies have been valuable in providing analysis and recommendations to improving marksmanship training strategies, however, the implementation of those recommendations have been either slow moving or ignored. Table 2 provide a list of research reports reviewed for this thesis.

Table 2. List of U.S. Army Sponsored Research		
Title	Author	Date
<i>TRAINFIRE I: A New Course in Basic Rifle Marksmanship</i>	Human Research Unit #3, Continental Army Command	1955
<i>Training Support Package Advanced Marksmanship</i>	ARI	1987
<i>The Development and Implementation of Basic, Advanced, and Unit M16A1 Rifle Marksmanship Training Programs</i>	ARI	1988
<i>Shooting Straight – Twenty Years of Rifle Marksmanship Research</i>	ARI	2000
<i>Soldier Performance on a New Marksmanship Course of Fire</i>	ARI	2010
<i>Changing the Army’s Weapon Strategies to Meet Operational Requirements More Effectively and Efficiently</i>	RAND	2014
<i>Evaluation of Courses of Fire for Law Enforcement Firearms Training</i>	ARI	2014
<i>Development of Two Courses-of-Fire: Night Fire with Aiming Lights and Combat Field Fire</i>	ARI	2016
<i>Marksmanship Requirements from the Perspective of Combat Veterans Volume I</i>	ARI	2016
<i>Marksmanship Requirements from the Perspective of Combat Veterans Volume II</i>	ARI	2016

Source: Created by author.

The Civilian Perspective on Combat Marksmanship and Practical Shooting

There are several publications available in the civilian market that bring a wealth of knowledge and most importantly, experience, to the forefront of the combat marksmanship discussion. Some of the most recent, popular, and respected books were published between 2005-2011 by former Special Forces Soldiers. Several of these authors applied combat marksmanship principles, in actual combat engagements, in support of the Global War on Terrorism. Many of these authors are also retired from service and either work for or have founded their own tactical security companies in order to share their lessons learned, help train the next generation of law enforcement and military professionals, and prepare the average citizen for home defense or concealed carry.

Table 3. List of Civilian Publications		
Title	Author	Publisher, Date
<i>Practical Shooting: Beyond Fundamentals</i>	Brian Enos	Zediker Publishing, 1990
<i>T.A.P.S. Tactical Application of Practical Shooting</i>	Pat McNamara	iUniverse Inc., 2008
<i>Green Eyes and Black Rifles: The Warriors Guide to the Combat Carbine</i>	SGM(RET) Kyle Lamb	Trample and Hurdle Publishers, 2008
<i>Tactical Pistol Shooting</i>	Erik Lawrence and Mike Pannone	Gun Digest Books, 2009
<i>Stay in the Fight!!! The Warriors Guide to the Combat Pistol</i>	SGM(RET) Kyle Lamb	Trample and Hurdle Publishers, 2011
<i>Compete to Survive</i>	Chris Cireno	Recoil Magazine, 2012

Source: Created by author.

One of the first publications to hit the market during the early stages of conflict in the Iraq and Afghanistan theaters was in 2005 with *Tactical Pistol Shooting* by Erik Lawrence, a former Green Beret and founder of several training companies. The 2nd edition of his book was written in 2008 with co-author Mike Pannone, which provides noteworthy detail on the use of the pistol. Pannone is a former Marine and Special Forces Soldier, firearms instructor, and competitive shooter.⁴⁴ Through the book’s illustrations, Pannone demonstrates all of the pistol handling techniques.

In their book, Lawrence and Pannone present the “Combat Triad”⁴⁵ model, a concept originally developed by the late Colonel(Retired) Jeff Cooper who wrote *Principles of Personal Defense* in 1989. Cooper served in World War II and the Korean War and is accredited with being the father of practical pistol competition and founded the International Practical Shooting Confederation (IPSC) in 1976.⁴⁶ Cooper was a contributor to Lawrence and Pannone’s first chapter. The Combat Triad is “composed of three elements: gun handling, marksmanship, and mindset (mental conditioning).”⁴⁷

The essential elements of the triad are “taught to help students identify, assess, and respond to potential life-threatening decisions.”⁴⁸ Gun handling is focused on the ability to manipulate the firearm; loading, unloading, presentation and control of the weapon, and the ability to clear malfunctions. The Marksmanship element of the triad is the ability to apply the fundamentals of marksmanship quickly and accurately. Finally, the Mindset element is the ability to maintain “self-control”⁴⁹ and operate under extreme stress with “awareness, anticipation, and concentration.”⁵⁰ The new Pistol manual, TC 3-23.35, covers Mindset extensively within its Appendix D. The balance of these three elements, incorporated into a realistic training environment, will help enable Soldiers to not only engage threats more effectively, but become more lethal. Lawrence and Pannone emphasize that “no expensive handgun or accessory will replace true skill and solid fundamentals in a less-than-desirable situation”⁵¹ and “pre-conditioning permits us to defend ourselves more easily and survive that deadly encounter.”⁵²

One of the most well-known and respected names in the shooting industry is former Special Forces Soldier and owner of Viking Tactics Inc. Sergeant Major (Retired) Kyle E. Lamb. In 2008, Lamb published *Green Eyes & Black Rifles, Warriors Guide to the Combat Carbine*. A majority of the material written in his book were lessons captured by Lamb over the span of five years while he actively served in combat.⁵³ Of note, Pannone served as the Senior Instructor for Viking Tactics and is mentioned in Lamb’s acknowledgements as a contributor. In similar style to that of Lawrence and Pannone, Lamb provides detailed illustrations and content to explain and teach the combat focused employment of the rifle.

Lamb also wrote *Stay in the Fight!! Warriors Guide to the Combat Pistol* in 2011 and uses a similar writing and illustration style to that of *Green Eyes and Black Rifles*. Both books are extremely detailed and provide a comprehensive and progressive approach to training with the pistol or carbine/rifle. Although more detailed, Lamb's books apply the same concepts to that of the Combat Triad introduced by Lawrence and Pannone in which gun handling, marksmanship, and mindset are balanced concepts that a shooter must embrace in order to be lethal in a direct fire engagement.

Both of Lamb's books share a lot of the same techniques presented by Lawrence and Pannone, but also deep dive into dynamic shooting by illustrating multiple alternate firing positions, use of barricades, shooting on the move, and transitioning from a carbine/rifle to pistol if equipped with both. Lamb emphasizes the importance of training beyond the fundamentals of marksmanship and preparing for combat. "Invariably, you will practice the prone position 90 percent of the time. But how often in a real scenario are you even able to get into this perfect prone position?"⁵⁴

Selection of Case Studies

There are a myriad of AARs, historical summaries, and published observations by U.S. Army entities such as CMH, CSI, ARI, and the Center for Army Lesson's Learned (CALL) that help to paint a picture of what occurred on the ground during armed conflict. A majority of these publications attempt to provide a holistic view when analyzing these conflicts. Their overall purpose is to provide analysis, feedback, and critiques so that the force can better prepare for the next conflict. APPENDEX C provides a comprehensive list of the publications analyzed during this research project in order to collect and interpret direct fire engagements with the pistol and carbine/rifle in combat. These

publications not only provide insight and perspective as to what happens in armed conflict, but they also demonstrate that the OE has changed over time and is a significant variable when attempting to understand the outcomes of direct fire engagements.

Criteria for the Case Study

Based on the literature reviewed, criteria were developed to assist in the research process and to help answer the primary and secondary research questions. Overall the characteristics of small arms engagements should be based on the current pistol and carbine/rifle qualification tables and training strategies. Criteria for this study are outlined below:

1. Case Study analysis should explore and determine if skills tested as part of the current qualification tables are applied in direct fire engagements. The criteria is defined by those skills that are performed during the qualifications themselves.
2. Case Study analysis should explore skills that are considered characteristics of advanced marksmanship, CQB, and characteristics of practical and competitive shooting to determine if they are applied in direct fire engagements. The skills determined to be applicable or present in direct fire engagements are based on review of the literature in this chapter.
3. Direct Fire engagements will be collected from bodies of work considered “scholarly” since publications by certain institutions bring credibility to narratives that may describe these engagements. Invariably, the oral histories and other sources used to describe conditions on the ground have been vetted by the publisher. Their credibility is held in high regard and their validity only

increases the accuracy of analysis and interpretation of what occurred in combat.

4. The characteristics of the OE should be considered during case study analysis to determine if there are certain factors and conditions that are only applicable to certain direct fire engagements or if those characteristics and conditions transcend all of the case studies being researched.

Summary

The literature review has attempted to put the research problem into context by summarizing the origin of the current carbine/rifle and pistol training strategies and qualification courses, as well as describe some of the research that has been completed and works published on the subject. There are significant takeaways from this literature review that have not only helped to frame the problem but have also assisted in developing criteria to conduct further analysis to answer the primary and secondary research questions.

1. This literature review has demonstrated that significant changes to U.S. Army pistol and carbine/rifle training strategies have not been implemented since the adaptation of the 1955 *TRAINFIRE I* Research.
2. Not only has the OE changed since the adaptation of *TRAINFIRE I*, but tactics, techniques, and training strategies for the employment of the pistol and carbine/rifle have also changed. More so, these changes have mostly been adopted by entities outside of the U.S. Army and or not fully implemented across the entire force.

3. There has been very little research and analysis of characteristics, factors, and conditions of direct fire engagements to determine what changes are required to U.S. Army pistol and carbine/rifle training strategies and their qualification courses.

The next chapter will outline the research method and its appropriateness for completing the study.

¹ Howard McFann, John Hammes, and John Taylor, “TRAINFIRE I: A New Course in Basic Rifle Marksmanship” (U.S. Army, Continental Army Command, Human Resources Research Unit No. 3, Fort Benning, GA, 1955), 22.

² Ibid., 9.

³ S.L.A. Marshall, *Men Against Fire* (Norman: University of Oklahoma Press, 1947), 34.

⁴ Ibid., viii.

⁵ Ibid., 53.

⁶ Ibid., 50.

⁷ Ibid., 54.

⁸ Ibid., 36, 37, 49, 78.

⁹ Ibid., 60.

¹⁰ Killology Research Group, “Bio, Lt. Col. Dave Grossman”, accessed January 15, 2018, <https://www.killology.com/bio>.

¹¹ Dave Grossman and Loren Christensen, *On Combat: The Psychology and Physiology of Deadly Conflict in War and in Peace* (Millstadt, IL: Warrior Science Pub 2008), 79.

¹² Ibid., 80.

¹³ McFann, Hammes, and Taylor, “TRAINFIRE I,” iv, iv.

¹⁴ Ibid., iv.

¹⁵ Ibid., iv.

¹⁶ Ibid., 4.

¹⁷ Ibid., 4.

¹⁸ The United States Army Marksmanship Unit, “History of AMU,” accessed January 16, 2018, <https://www.goarmy.com/events/army-marksmanship-unit/the-unit/history.html>.

¹⁹ McFann, Hammes, and Taylor, “TRAINFIRE I,” 5.

²⁰ S.L.A. Marshall, *Infantry Operations & Weapons Usage in Korea* (Russell Gardens, London: Greenhill Books, 1988), xix.

²¹ Ibid., 4.

²² Ibid., 4-5.

²³ McFann, Hammes, and Taylor, “TRAINFIRE I,” 5.

²⁴ Ibid., 5-6.

²⁵ Ibid., 6-7.

²⁶ Ibid., 7.

²⁷ Jean L. Dyer, Peter S. Schaefer, Martin L. Bink, David R. James, Richard L. Wampler, and Michael D. Dlubac, “Research Report 1924, Soldier Performance on a New Marksmanship Course of Fire” (U.S. Army Research Institute for the Behavior and Social Sciences, Arlington, VA, 2010), 10.

²⁸ HQDA, TC 3-22.90, 1-1.

²⁹ Ibid., 1-1.

³⁰ HQDA, TC 3-20.0 FINAL DRAFT, 3-2, 3-9.

³¹ Christopher Donohue, “From the Chief of Infantry,” *Infantry Bugler* (Spring 2018): 8.

³² Ibid., 6.

³³ John Lauterbach, “How to Improve Rifle Marksmanship in the United States Army” (Monograph, U.S. Army Infantry School, Advanced Infantry Officer Course, Fort Benning GA, 1954), 6.

³⁴ Bruce Wilson, “Moving Personnel Targets and the Combat Infantryman” (Master’s thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 1971), 12.

³⁵ *Ibid.*, 13.

³⁶ William Ellison, “Current Inadequacy of Small Arms Training for All Military Occupational Specialties in the Conventional Army” (Master’s thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2005), ii.

³⁷ *Ibid.*, 2.

³⁸ *Ibid.*, 51.

³⁹ Ronald F. Martere, Jon P. Hunt, Georgann Lucariello, and James R. Parish, “Training Support Package for Advanced Rifle Marksmanship” (U.S. Army Research Institute for the Behavior and Social Sciences (ARI), Fort Benning, GA, 1987), v.

⁴⁰ K. L. Evans and A. D. Osborne, “The Development and Implementation of Basic, Advanced, and Unit M16A1 Rifle Marksmanship Training Programs” (U.S. Army Research Institute for the Behavior and Social Sciences, Fort Benning, GA, August 1988), 1-12.

⁴¹ James C. Crowley, Bryan W. Hallmark, Michael G. Shanley, and Jerry M Sollinger, “Changing the Army’s Weapon Strategies to Meet Operational Requirements More Effectively and Efficiently” (RAND Corporation, Washington, DC, 2014), 67.

⁴² Jean L. Dyer, “Marksmanship Requirements from the Perspective of Combat Veterans – Volume II: Summary Report,” (U.S. Army Research Institute for the Behavior and Social Sciences, Fort Belvoir, VA, 2016), 76.

⁴³ *Ibid.*, iv.

⁴⁴ CTT Solutions, “About Mike Pannone,” accessed December 7, 2019, <http://www.ctt-solutions.com/about/mike-pannone/>.

⁴⁵ Erik Lawrence and Mike Pannone, *Tactical Pistol Shooting*, 2nd ed. (Iola, WA: Krause Publications: 2009), 16.

⁴⁶ Jeff Cooper Books, “The Official website of Jeff Cooper and Wisdom Publishing,” accessed December 7, 2017, <https://jeffcooperbooks.com>.

⁴⁷ Lawrence and Pannone, *Tactical Pistol Shooting*, 16.

⁴⁸ *Ibid.*, 16.

⁴⁹ *Ibid.*, 17.

⁵⁰ Ibid., 17.

⁵¹ Ibid., 7.

⁵² Ibid., 17.

⁵³ Kyle Lamb, *Green Eyes and Black Rifles, Warriors Guide to the Combat Carbine*, (n.p.: Trample & Hurdle, 2008), 8.

⁵⁴ Ibid., 120.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

There is an old adage in the U.S. Army, “train as you fight.” To do this Soldiers must understand the OE and understand how training directly translates to the conditions Soldiers face in combat. Chapter 2: Literature Review helped to define the problem and determined there are characteristics of marksmanship that may or may not be applicable to direct fire engagements in combat. A metric to determine whether or not U.S. Army training strategies are preparing Soldiers for combat requires analysis of actual narratives or descriptions of direct fire engagements. To analyze direct fire engagement narratives, this research will identify the common characteristics or conditions of pistol and carbine/rifle engagements and then compare those characteristics against current marksmanship training strategies. Ultimately this analysis will determine the appropriateness, effectiveness, and perhaps ineffectiveness of current training strategies through a study of recent armed conflicts, determining trends and characteristics that are unique or consistent to all OEs.

Research Method Appropriateness

It is appropriate to analyze direct fire engagements in combat because it is the true measure of performance for the U.S. Army’s marksmanship training strategies. This research identified and evaluated common characteristics of pistol and carbine/rifle engagements in combat, across multiple OEs, and compared those characteristics to current training conditions. This research specifically assessed the effectiveness of

current marksmanship training and qualification standards to determine appropriate changes needed to accommodate the characteristics found in modern combat. As described in Chapter I, this research project was limited by several factors and did not analyze the degree of lethality applied in the engagements studied.

The research process began by first determining what the common characteristics of marksmanship are. Second, a diverse group of historical combat case studies were analyzed, from the Korean War to OEF, in order to adequately locate and describe those characteristics of pistol and carbine/rifle engagements likely to be found in modern combat. Below is the Research Design Model (figure 8) that was used to complete the study:

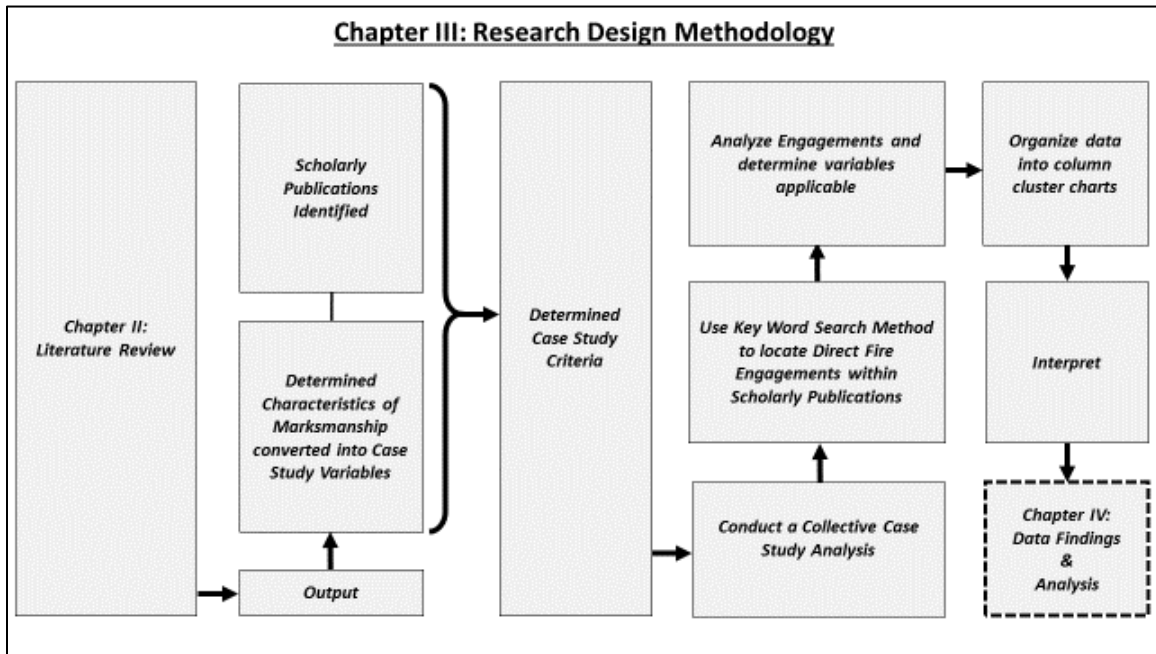


Figure 8. Research Design Methodology

Source: Created by author.

Research Method Defined

Prior to analyzing pistol and carbine/rifle direct fire engagements, variables for the study were identified. Chapter 2: Literature Review provided insight into former and current U.S. Army marksmanship training strategies as well as a review of marksmanship publications and research that describe requisite skills to be trained or likely conditions Soldiers will find themselves in during a direct fire engagement in combat. Based on the review of scholarly work, a list of likely engagement characteristics (22 total) were developed. For example, characteristics one thru three are described as requirements for Soldiers to engage targets/threats from either close range, mid-range, or long range respectively. The standards for close range are based on the U.S. Army doctrinal definition of close quarter engagements in which Soldiers must be able to engage threats within 50 meters. This characteristic would be applicable for both the pistol and carbine/rifle, whereas mid-range and long range engagements would be more applicable to the carbine/rifle only because any engagement beyond 50 meters is beyond the effective range of a combat pistol. The criteria to define mid-range versus long-range was based on the current target array for the Carbine and Rifle Qualification Course (targets ranging from 50-300 meters). The other characteristics identified from the literature review exist as part of current U.S Army marksmanship training strategies, advanced marksmanship skills, combat and competitive shooting skills. Appendix D provides the list and definitions of the 22 characteristics that were selected and evaluated during the study to determine if they are applicable in a direct fire engagement.

To determine if the 22 characteristics of marksmanship exist in combat conditions, a Case Study Method was used. There were four conflicts analyzed during

this process; Korean War, i.e. Case Study 1, Vietnam War, i.e. Case Study 2, OIF, i.e. Case Study 3, and OIF, i.e. Case Study 4. These conflicts were selected as likely candidates, based on available publications, to provide insights into the application of the training strategies and qualification courses that influenced *TRAINFIRE I* research in 1955 to present day research. Although a Case Study Method is mostly qualitative in nature, quantitative measurements were used to organize and interpret the data. This approach assisted in developing a pattern analysis to determine trends and unique qualities of each case study.

In Dr. Robert K. Yin's book titled *Case Study Research, Design and Methods*, he cites that multiple-case studies have advantages over single-case designs in that "the evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as more robust."¹ This holds true for this research process. A single-case study could be completed to determine the characteristics of marksmanship applicable to that case study alone, however it would prevent a comparable analysis to other conflicts. Multiple-case studies helped to determine which characteristics are common or unique by case study.

Analyzing case studies that provide examples of what characteristics were present was important to help answer the research questions. The intent of this research was to understand which characteristics have been used in direct fire engagements. In Dr. Robert Stake's book titled *The Art of Case Study Research*, he emphasizes that "the use of [this type of] case study is to understand something else"² or better referred to as an instrumental case study. He further explains that studying multiple-case studies, in an instrumental way, results in a Collective Case Study Approach.³ The variables in this

study will be organized and interpreted collectively to better determine common characteristics across all of the case studies.

Collective Case Study Approach

Within each case study, a series of direct fire engagements involving the use of the pistol or carbine/rifle by U.S. Army Soldiers were analyzed, interpreted, and then catalogued within a data collection tool. Modern day technology has improved the accessibility of these scholarly publications. CSI and CMH all have digital publication libraries on their official websites to download these publications. Both digital libraries were easy to navigate and organize publications by theme or conflict.

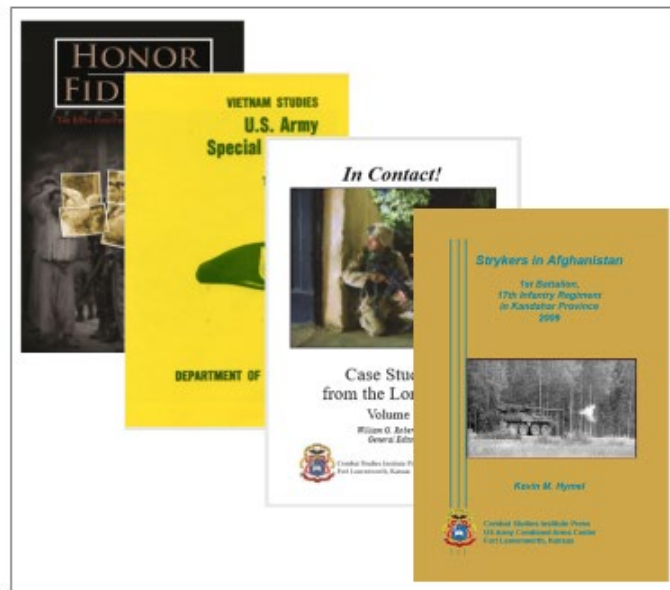


Figure 9. Examples of Scholarly Publications

Source: Created by author using book covers from four of the 46 scholarly publications listed in Appendix C.

Process for Identifying Direct Fire Engagements

The process to identify a direct fire engagement involving a U.S. Army Soldier employing a pistol or carbine/rifle began with a Key Word Search Method. This method enabled the researcher to cover and locate engagement narratives from a large volume of sources. The idea was if a larger body of sources can be analyzed, a larger body of data can be identified, catalogued, and interpreted. The below list (table 4) provides the key words selected that helped identify direct fire engagements within the larger body of published work. The key word search method began with the terms “pistol,” “carbine,” and “rifle,” but later expanded to other words that were likely to appear in a direct fire engagement narrative.

M1 or M-1	Killed or Killing
M14 or M-14	Fight or Fighting
M16 or M-16	Direct Fire
M4 or M-4	Fired or Firing
.45 or 1911	Weapon
M9 or M-9	Magazine
Pistol	Reload or Reloading
Revolver	Jam or Jammed
Carbine	Malfunction
Rifle	Hit
Small Arms	Wounded or Wounding
Shoot or Shooting or Shot	Bullet
Engaged, Engaging, or Engagement	Round

Source: Created by author.

Using the Key Word Search Method

The digital publications selected were formatted in a way that allowed for the word search method to be applied. Figure 10 below provides an example of a narrative that was identified within a body of work after the word “pistol” was searched.

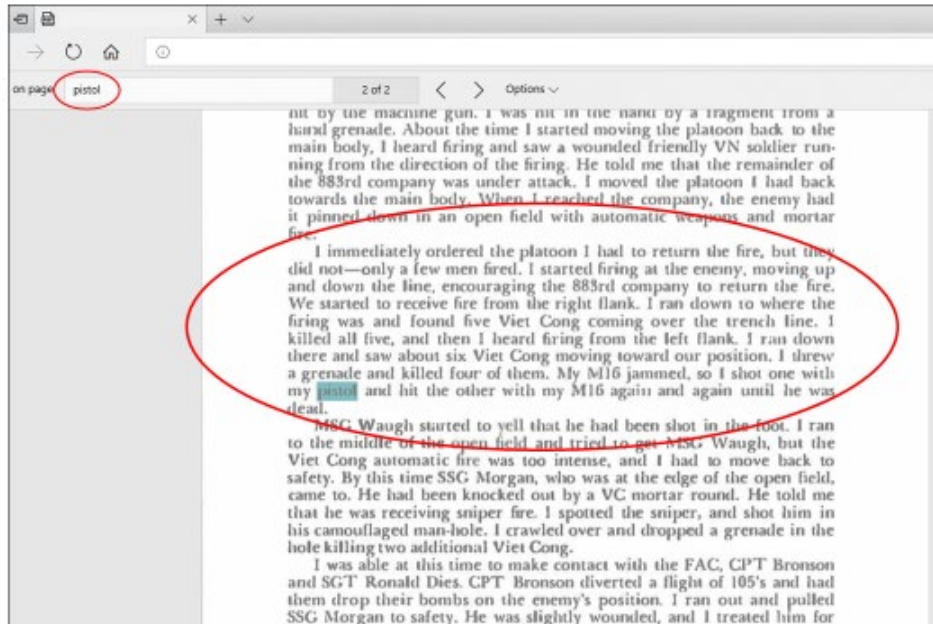


Figure 10. “Control F” Method to Locate Engagement Narratives

Source: Created by author using an excerpt from Francis J. Kelly, *Vietnam Studies, U.S. Army Special Forces 1961-1971* (Washington, DC: U.S. Government Printing Office, 2004), 94.

Analyzing an Engagement Narrative

Once an engagement narrative was determined to have met the case study criteria, it was analyzed to determine if the case study variables were present. Figure 11 below provides an example of an engagement narrative selected from the Vietnam War Case

Study in which a Special Forces officer, serving as an advisor, is reacting to an enemy ambush.

Example of an Acceptable Engagement Narrative

“When I reached the company, the enemy had it pinned down in an open field with automatic weapons and mortar fire. I immediately ordered the platoon I had to return the fire, but they did not-only a few men fired. I started firing at the enemy, moving up and down the line,
[Shooting on the Move]
encouraging the 883rd company to return the fire. We started to receive fire from the right flank. I ran down to where the firing was and found five Viet Cong coming over the trench line. I killed
[Engaged Moving Targets] [Engaged Multiple Targets]
all five, and then I heard firing from the left flank. I ran down there and saw about six Viet Cong
moving toward our position. I threw a grenade and killed four of them. My M16 jammed, so I
[Close Engagement] [Weapon Malfunction]
shot one with my pistol and hit the other with my M16 again and again until he was dead.”
[Transition to Secondary] [Engaged Single Target with Multiple Rounds]

VWR22, VWP1

Figure 11. Example of a Direct Fire Engagement Narrative

Source: Created by author using an excerpt from Francis J. Kelly, *Vietnam Studies, U.S. Army Special Forces 1961-1971* (Washington, DC: U.S. Government Printing Office, 2004), 94

Organizing Engagement Narratives

Once an Engagement Narrative was analyzed, the narrative itself, along with a description of the OE, and the corresponding variables were catalogued into a narrative collection database. The narrative was then given a unique identifying code (figure 12). Each code begins with an acronym for the case study of origin (i.e. Vietnam War is coded as “VW”). The next part of the code consists of either the letter “R”, “C”, or “P”,

depending if the narrative involved the use of the rifle, carbine, or pistol respectively. Finally the number in the engagement code accounts for the number of narratives, by type and case study.

Row	Column A	Column B	Column C	Column D	Column E
30	US Army Engineers in Vietnam (CMH)				
31	Exploration was usually conducted by two-man teams. While one man Slayed at the entrance the other descended into the tunnel equipped with a phone, communications wire, compass, bayonet, nashlight, and pistol. As he explored the network, the man in the tunnel maintained communication with his partner at the entrance, to whom he reported his progress, findings, and changes of direction. The man on the surface recorded all such information as it was received. (PAGE 94)				
32	Vietnam Studies, US Army Special Forces (CMH)				
33	When I reached the company, the enemy had it pinned down in an open field with automatic weapons and mortar fire. I immediately ordered the platoon I had to return the fire, but they did not-only a few men fired. I started firing at the enemy, moving up and down the line, encouraging the 883rd company to return the fire. We started to receive fire from the right flank. I ran down to where the firing was and found five Viet Cong coming over the trench line. I killed all five, and then I heard firing from the left flank. I ran down there and saw about six Viet Cong moving toward our position. I threw a grenade and killed four of them. My M16 jammed, so I shot one with my pistol and hit the other with my M16 again and again until he was dead. (PAGE 94)	VWR22, VWP1	SF Advisors to South Vietnamese Forces	Enemy Counterattack after early morning Raid	close engagement, shoot on the move; engaged multiple targets; engaged moving targets; fired more than one round at single target; malfunction; close engagement, transition to secondary.
34	Vietnam Studies, The War in the Northern Provinces (CMH)				
35	N/A				
36	Dustoff, Army Aeromedical Evacuation in Vietnam (CMH)				
37	The engine compartment was on fire. The crew got out as fast as possible, the pilots squeezing between the door frame and their seats' sliding armor side plates, which were locked in the forward position. They started to run from the aircraft when they realized that their rifles and ammunition were still inside. The medical corpsman dashed back inside, grabbed the rifles and bandoliers, jumped back out, and distributed the arms. They looked around and decided that they had overflown the enemy,	Downed Aircraft			target discrimination.

Figure 12. Engagement Narrative Collection Tool

Source: Created by author using narratives collected from the 46 scholarly publications listed in Appendix C.

Process for Organizing and Analyzing Data

After the publications for all four case studies were searched and all of the identified narratives were catalogued, a data collection tool (APPENDICES E thru H) was used to calculate the number and types of variables that were present within the case studies. The collection tool was created to organize narratives that met the criteria by publication title. Columns were created to provide a brief description of what type of unit

was involved in the engagement and the circumstances surrounding the engagement. Publications that did not produce narratives that met the research criteria were still listed within the collection tool, but the table that would have housed a narrative was marked “no narratives applicable.” After all narratives were collected and given an identifier, the data was inputted into a sorting tool (Appendix I), calculated, and converted into clustered column charts for interpretation (Appendixes J thru N).

Summary

Using a Collective Case Study Design helped to answer the primary and secondary research questions. The same evaluation criteria and variables were used for each case study in order to maintain a consistent analysis, regardless of the OE, and helped to draw conclusions on what marksmanship characteristics are applied in combat. The next section of this thesis, Chapter 4: Data Findings and Analysis, will outline the results of the research by case study, and will also provide a summary of all data combined to determine overall trends of marksmanship characteristics in modern conflict.

¹ Robert K. Yin, *Case Study Research, Design and Methods* (Thousand Oaks, CA: Sage Publications Inc. 2014), 57.

² Robert Stake, *The Art of Case Study Research* (Thousand Oaks, CA: Sage Publications, Inc., 1995), 3.

³ *Ibid.*, 3.

CHAPTER 4

ANALYSIS

Something in war stories often seems frozen out by print on paper, not so much any particular element but perhaps the immediacy of memory and its relationship with every physiological sensation and reaction that recall produces. The literature of battle, however, reaches beyond the physical and temporal presence of participants and their memories, at least 2,500 years beyond in surviving texts still counted as useful by warriors. They may not be the best accounting, but written reports of combat have accessibility and durability that permit close study and facilitate wide understanding of the conduct of this ancient political activity.

— Jack Stuster and Zail Coffman, “Capturing Insights from Firefights to Improve Training, Phase I Final Report”

Overview

During the course of the research process, approximately 46 publications from four conflicts (Case Studies) spanning the years 1950 to 2011 were analyzed. From those publications, approximately 133 direct fire engagement narratives involving the pistol, carbine, and rifle were collected. Chapter 3: Research Methodology described how the characteristics of direct fire engagements were selected and were developed into variables for analysis. At a minimum, at least one of the 22 characteristics of direct fire engagements were identified in each of the narratives that were collected. Those characteristics were then documented and converted into data tables for interpretation.

Restated Purpose

The purpose of this research is to determine which characteristics of direct fire engagements involving the pistol, carbine, and rifle are unique and or common in modern combat. The purpose of Chapter 4: Data Findings and Analysis is to:

1. Present the data points (variables present within direct fire engagements).
2. Interpret the findings.

Chapter Layout and Design

This chapter is organized in a way to present the research data by case study.

Figure 13 below illustrates how each case study is organized:

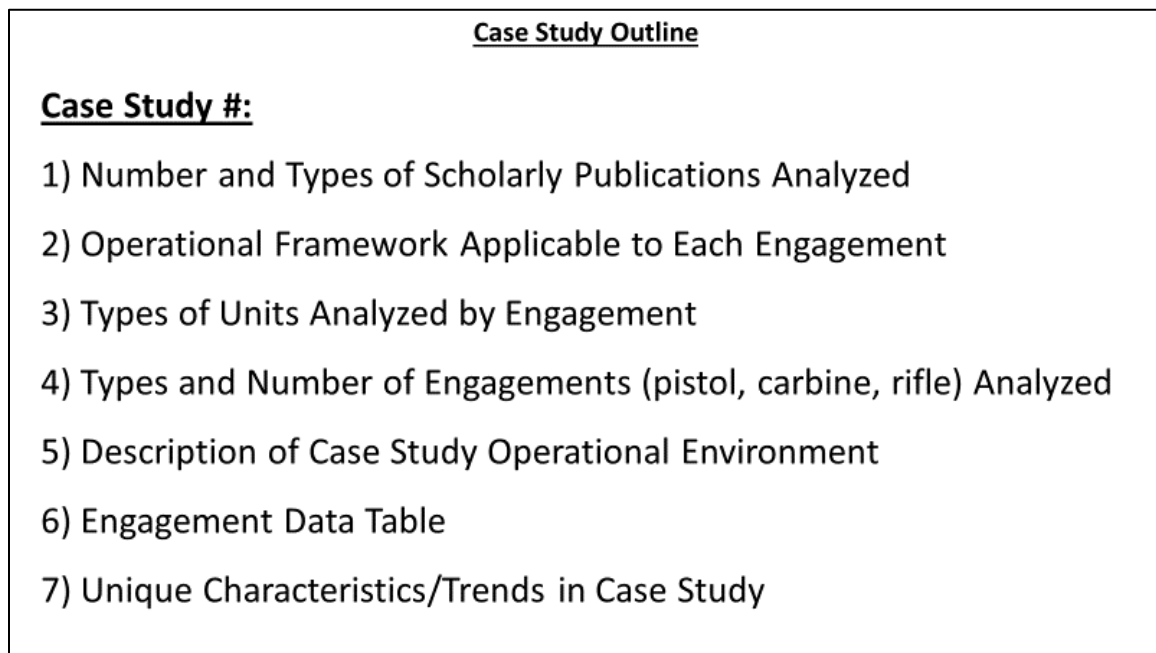


Figure 13. Case Study Outline

Source: Created by author.

After the results of each Case Study, a Combined Summary Analysis of all the Case Study data is presented and interpreted. Below is the outline for the Combined Summary Analysis (figure 14):

Combined Data Outline

Combined Summary Analysis:

- 1) Pistol Data
- 2) Carbine/Rifle Data
- 3) Combined Data
- 4) Operational Framework Data
- 5) Infantry/Special Operations Compared to All Other Branches Data

Figure 14. Combined Data Outline

Source: Created by author.

Case Study 1 (Korean War)

Table 5. Korean War - Publications Analyzed	
Type	Total
U.S Army Center of Military History (CMH)	6
Combat Studies Institute (CSI)	2

Source: Created by author.

Table 6. Korean War - Operational Framework	
Type	Total
Deep Area	0
Close Area	33
Consolidation Area	2
Support Area	1

Source: Created by author.

Table 7. Korean War - Units Analyzed	
Type	Total
Armor	2
Engineer	2
Field Artillery	1
Infantry	27
Logistics	1
Military Police	1
Ordnance	1
Reconnaissance	1

Source: Created by author.

Table 8. Korean War - Engagement Types	
Type	Total
Pistol	9
Carbine	9
Rifle	18

Source: Created by author.

Data from the Korean War Case Study was collected from four of eight publications by CMH. Although other works were analyzed (primarily from CSI), they did not meet the criteria for this study. One of the applicable works from CMH was

published as early as 1954 and is comprised of personal accounts from interviews with Soldiers shortly after they participated in close combat. The publications covered the involvement of U.S. Soldiers in the Korean War during periods ranging from June of 1950 to April of 1952. Most accounts involved Soldiers in combat serving at the battalion to squad level.¹

The OE during the course of the Korean War was unforgiving. Most engagements occurred on elevated terrain surrounded by rice paddies and streams,² but also included urban areas. The climate ranged from extreme cold and snow during the winter, to rainy seasons that produced unfavorable operating conditions. Not only did the climate impact morale, but there were many accounts in which the extreme cold induced malfunctions on weapon systems.³ Enemy forces were also relentless. North Korean and Chinese Forces consistently massed Infantry against U.S. Forces in an effort to overwhelm positions and force withdrawal from terrain.

Below is an example of one of the 36 direct fire engagements analyzed as part of the Korean War Case Study. This narrative in particular provides seven of the 22 characteristics of direct fire engagements and were determined applicable to both the carbine and rifle. The combat conditions Infantryman in the Korean War faced are italicized in the below narrative while the corresponding direct fire engagement characteristics (variables) are in parentheses:

When Lieutenant Mitchell explained that he couldn't move for a while, Stratton offered to stay with him. Just about this time, *three Chinese riflemen* [Engaged Multiple Targets] appeared on top of the ridge and *stopped about fifteen feet* [Close Engagement] from where *the two men were sitting* [Engaged from Seated Position]. Mitchell was hidden partially by brush. *Stratton saw them first and fired seven rounds from his rifle* [Fired Multiple Rounds at Target], missing each time. Mitchell fired one round and missed. *His carbine jammed then and he had*

to take out his bayonet and pry the cartridge from the chamber [Weapon Malfunction]. Meanwhile, a bullet from one of the Chinese guns hit the stock of Stratton's rifle and then his hand, tearing it badly. Then the enemy gun jammed. The other two Chinese had turned their backs and appeared to be listening to someone who was shouting to them from the opposite side of the hill. Lieutenant Mitchell finally got his carbine in operation and killed all three of the enemy [Engaged Multiple Targets]. The two men slid down the hill a short distance to a small gully that offered more cover from enemy fire [Engaged from Elevated Position]. [Emphasis by author.]⁴

Figure 15 below illustrates the percentage of variables identified within the 36

Korean War engagement narratives:

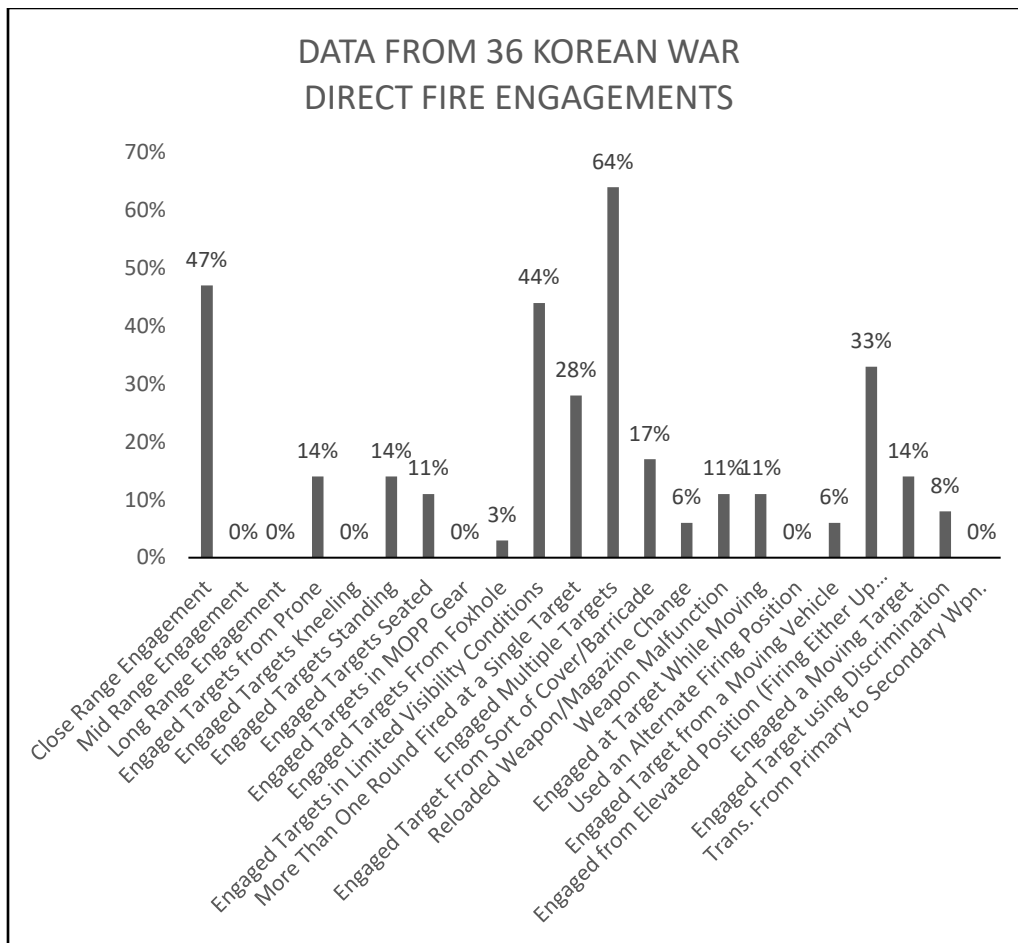


Figure 15. Korean War Engagement Data Table

Source: Created by author.

Unique Characteristics/Trends in Case Study 1

The data points organized in the Korean War Engagement Data Table (figure 15) suggests there is a correlation between close range engagements (47%) and limited visibility conditions (44%) during the Korean War. During the course of analysis, publications described how enemy troop movement would typically occur against U.S. positions under the cover of darkness to penetrate defensive lines or in the early morning when conducting large scale attacks. Additionally, Soldiers were routinely outnumbered and engaged multiple targets at close range (64%). Also, Soldiers were consistently put in positions in which they engaged enemy forces from elevated positions, either because they were in a defensive position firing down from a hilltop on attacking forces or they were the attacking force firing up terrain at defended enemy positions. Finally, engagements described the need for a Soldier to eliminate a threat by firing more than one round at the target (28%), suggesting this to be a necessary characteristic of engaging in close combat against a large enemy force whom favors fighting under limited visibility conditions.

Case Study 2 (Vietnam War)

Table 9. Vietnam War - Publications Analyzed	
Type	Total
U.S Army Center of Military History (CMH)	18
U.S. Army Transportation School	1

Source: Created by author.

Table 10. Vietnam War - Operational Framework	
Type	Total
Deep Area	0
Close Area	18
Consolidation Area	3
Support Area	10

Source: Created by author.

Table 11. Vietnam War - Units Analyzed	
Type	Total
Aviation	1
Infantry	16
Special Forces (Advisory Role)	12
Transportation	2

Source: Created by author.

Table 12. Vietnam War - Engagement Types	
Type	Total
Pistol	4
Carbine	0
Rifle	27

Source: Created by author.

Data from the Vietnam War Case Study was collected from ten of 18 publications by CMH and one from the U.S. Army Transportation Corps Historian. Many of the CMH publications were focused on providing operational to strategic level perspectives of the Vietnam conflict and did not describe direct fire engagements at the tactical level. The publications that met the criteria for the case study provided narratives from periods as early as the battle for the Ia Drang Valley in 1965 up to engagements occurring in 1971.

The OE during the course of the Vietnam War presented multiple challenges to U.S. forces. According to the direct fire engagements analyzed, a majority of operations occurred in thick, jungle vegetation and in mountainous regions. A majority of the engagements involved Infantry Soldiers executing offensive operations against North Vietnamese forces. There were several engagements, however, that described offensive operations by North Vietnamese and Viet Cong forces against static positions such as patrol and fire bases.

Below is an example of one of the 31 direct fire engagements analyzed as part of the Vietnam War Case Study. The narrative below presents four of the 22 characteristics (variables) of direct fire engagements applicable to the use of the M16 rifle. The combat conditions the Infantryman faced while his unit attacked a fortified enemy position are italicized and the corresponding direct fire engagement characteristics are in parentheses:

On 13 July, one element of the 101st Airborne Division— Company B, 1st Battalion, 506th Infantry—was moving along a ridgeline in Thua Thien Province to attack a fortified position that had pinned down an adjoining company. Suddenly, from a nearby hill, the North Vietnamese unleashed heavy fire that stopped the unit in its tracks. Sp4c. Gordon R. Roberts, a rifleman who had received a Silver Star at Hamburger Hill, crawled through the grass toward the nearest emplacement. *He then jumped to his feet and, with rifle blazing, headed straight into the enemy's fire* [Engaged Target on the Move]. He killed two gunners [Engaged Multiple Target] and, *after pausing to load a fresh magazine in his M16 rifle* [Reload], advanced on a second bunker. When enemy fire knocked the weapon from his hands, he picked up an M16 dropped by a comrade and continued his assault, *killing the crew at the bunker with rifle fire before eliminating a third position with an accurate grenade toss* [Close Engagement]. By then, he was cut off from his platoon, but he continued forward, knocking out a fourth enemy position. He then helped move wounded men while under fire to an evacuation area. [Emphasis by author.]⁵

Figure 16 below illustrates the percentage of variables identified within the 31 Vietnam War engagement narratives:

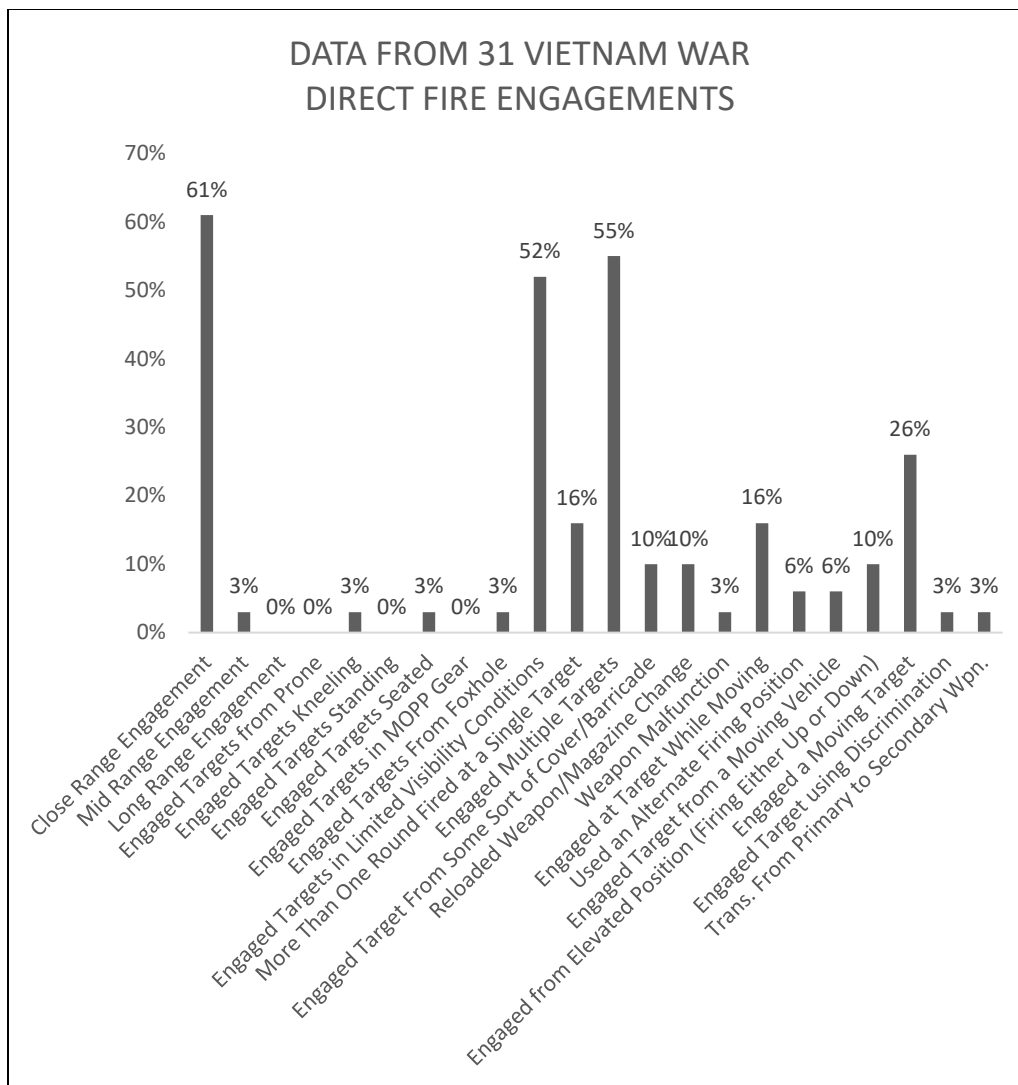


Figure 16. Vietnam War Engagement Data Table

Source: Created by author.

Unique Characteristics/Trends in Case Study 2

The data points organized in the Vietnam War Engagement Data Table (figure 16) indicate that the majority of direct fire engagements (61%) within the Vietnam War OE required Soldiers to engage threats at close range. Additionally, similar to the Korean

War Case Study, more than half of the engagements (52%) occurred in limited visibility conditions. Due to the jungle environment, the execution of night ambushes by U.S. forces, the execution of large scale attacks by North Vietnamese Forces against U.S. defensive positions, and the movement of enemy troops during limited visibility conditions, are all contributing factors to the higher number of close range and limited visibility engagements. Additionally, more than half of the engagements (55%) analyzed had U.S. Soldiers in circumstances where they described engaging more than one target in a single engagement. Finally, 26% of the engagements described the need to engage a moving target.

Case Study 3 (OIF)

Table 13. OIF - Publications Analyzed	
Type	Total
U.S Army Center of Military History (CMH)	4
Combat Studies Institute (CSI)	4
U.S. Army Transportation School	2

Source: Created by author.

Table 14. OIF - Operational Framework	
Type	Total
Deep Area	0
Close Area	0
Consolidation Area	27
Support Area	3

Source: Created by author.

Table 15. OIF - Units Analyzed	
Type	Total
Armor	2
Cavalry (Reconnaissance and Security Squadron)	2
Field Artillery	1
Infantry	11
Maintenance	1
Military Police	4
Special Forces (Advisory Role)	2
Transportation	7

Source: Created by author.

Table 16. OIF - Engagement Types	
Type	Total
Pistol	4
Carbine	5
Rifle	21

Source: Created by author.

Data from the OIF Case Study was collected from CMH, CSI, and U.S. Army Transportation Corps Historian publications. Of the ten publications analyzed, two (one from CMH, one from CSI) did not meet the criteria for this study. All of the publications analyzed covered OIF from the years 2003 to 2008. Of note, all of the engagement narratives only covered the period of armed conflict known as “Phase IV, Stabilize” and did not include the initial invasion. As a result, the type of enemy forces U.S. Soldiers encountered within the dense urban jungles of Iraq were primarily well organized and armed insurgent forces, not the Iraqi Army Forces encountered during the initial invasion.

Below is an example of one of the 30 direct fire engagements analyzed as part of the OIF Case Study. This narrative in particular provides six of the 22 characteristics of direct fire engagements with the rifle. The combat conditions Transporters in OIF faced are italicized in the below narrative while the corresponding direct fire engagement characteristics are in parentheses:

Walsh claimed, “*I continued to stand on the side of the truck [Engaged Target While Standing] as we went only about twenty-five to thirty miles per hour [Engaged Target from Moving Vehicle]; there were no tires left on the truck, it was driving completely on the rims. As we entered Baghdad, I fired into the city buildings and just about everywhere trying to keep the suppressive fire down [Engaged Multiple Targets]. Unfortunately, it wasn’t working. The more I fired, the more rounds were fired at us. And I couldn’t stabilize my weapon; I was attempting to hold onto the truck with one hand while firing with the other [Alternate Firing Position]. I decided I would be more stable on the hood of the truck.*” Hamill remembered, “He was standing up on the running board and had absolutely no protection. He was shot in the arm but kept firing away and trying to hold on. *A couple of times he grabbed another clip, bumped it, and slammed it in his M-16 [Reloaded Weapon]. He was sweeping his gun back and forth and firing, not really picking his targets. He realized he needed a better prone position [Engaged Target from Prone Position]. Using as a rest, he continued firing at anything that moved. We steadily crept along, barely moving at all. [Emphasis by author.]*”⁶

Figure 17 below illustrates the percentage of variables identified within the 30 OIF engagement narratives:

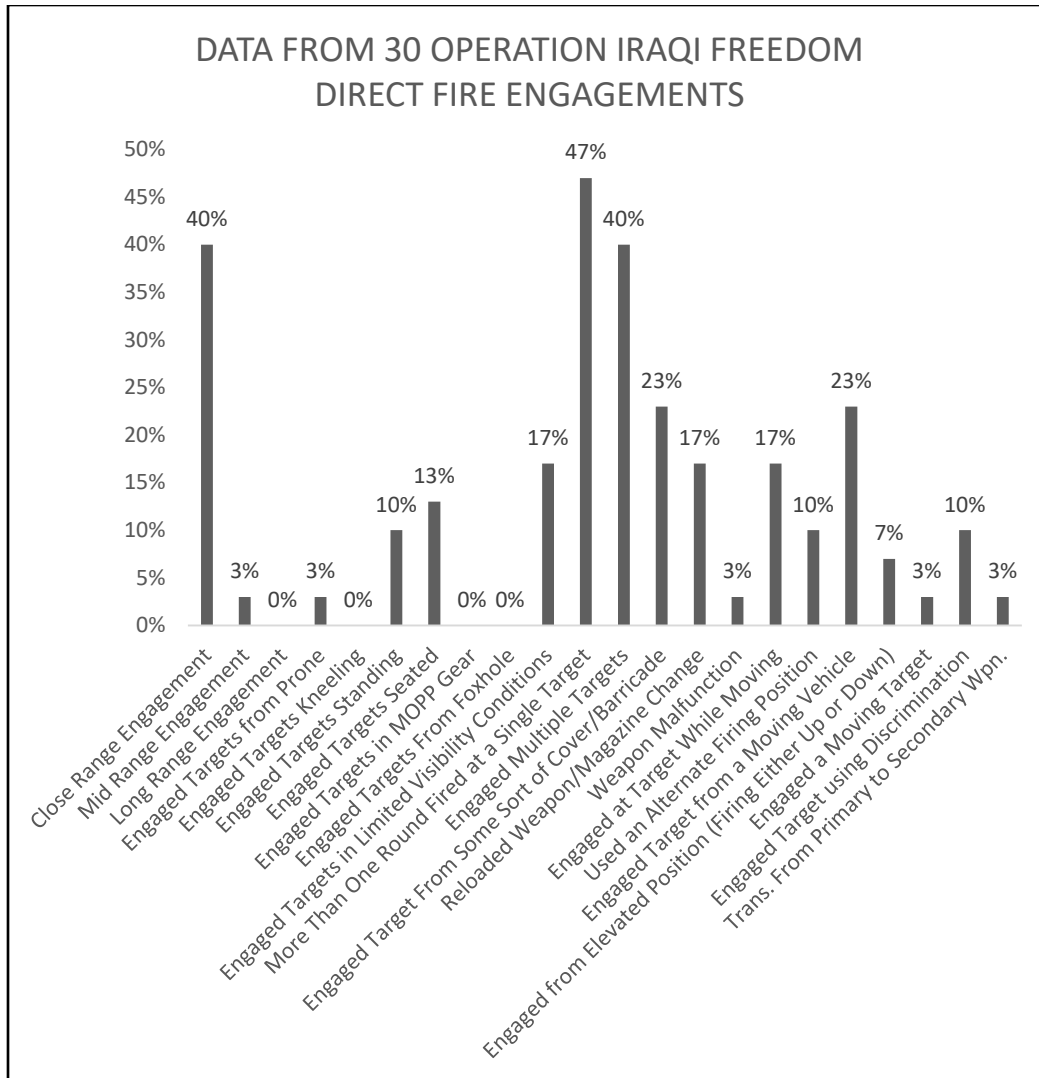


Figure 17. OIF Engagement Data Table

Source: Created by author.

Unique Characteristics/Trends in Case Study 3

The data points organized in the OIF Engagement Data Table (figure 17) suggests that in almost half of the engagements analyzed, Soldiers were required to engage multiple targets at once (40%). These conditions were mostly in response to enemy ambushes along lines of communication or against U.S. and Coalition dismounted patrols

within urban areas. Approximately 40% of the direct fire engagements analyzed occurred at close range. This is likely due to a majority of the engagements analyzed occurring within dense cities such as Baghdad, Fallujah, Mosul, and Nasiriyah. Unique characteristics of the OIF Case Study (compared to Case Studies #1 and #2), was the increased necessity to engage targets from moving vehicles (23%) and the increased use of cover/barricade (23%) when engaging threats. These variables correspond with the characteristics of the OIF OE in which units primarily maneuvered the battlefield with wheeled and track vehicles, and likely used those vehicles, or adjacent buildings and structures, as cover while engaging a threat in an urban environment.

Case Study 4 (OEF)

Table 17. OEF - Publications Analyzed	
Type	Total
U.S Army Center of Military History (CMH)	4
Combat Studies Institute	6
U.S. Transportation School	1

Source: Created by author.

Table 18. OEF - Operational Framework	
Type	Total
Deep Area	10
Close Area	19
Consolidation Area	2
Support Area	5

Source: Created by author.

Table 19. OEF - Units Analyzed	
Type	Total
Aviation	1
Cavalry (Reconnaissance and Security Squadron)	4
Engineer (Route Clearance Patrol)	2
Infantry	16
Infantry (Rangers)	5
Logistics (Convoy Escort)	2
Special Forces (Direct Action)	6

Source: Created by author.

Table 20. OEF - Engagement Types	
Type	Total
Pistol	2
Carbine	34
Rifle	0

Source: Created by author.

Data from the OEF Case Study was collected from CMH, CSI, and U.S. Army Transportation Corps Historian publications. Of the 11 publications analyzed, three (from CMH) did not meet the criteria for this study. The publications covered operations as early as the initial invasion of Afghanistan in 2001 to clearance and disruption operations of insurgent strongholds in 2010. The OE in Afghanistan is harsh and diverse. Engagement narratives described conditions in which Soldiers operated in terrain ranging from mountainous regions, small villages, vast open areas, irrigated farmland, orchards, and river valleys. Because the case study collection analyzed publications that described operations spanning ten years of combat operations, the enemy ranged from large sized,

foreign trained, organized, and equipped insurgent forces, to small teams operating in local areas. Because U.S. forces have been focused primarily on conducting counterinsurgency operations in Afghanistan, the OE was more non-linear than linear. In many instances during the case study, U.S. forces were focused on removing enemy forces within certain areas, as opposed to focusing on traditional stability operations. Several of the engagement narratives were also categorized as Deep Area operations by Special Operations Forces tasked to eliminate enemy forces.

Below is an example of one of the 36 direct fire engagements analyzed as part of the OEF Case Study. This narrative provides seven of the 22 characteristics of direct fire engagements and is divided among three separate engagements involving two Special Forces Soldiers; one who employed the carbine, the other who employed both the carbine and pistol. The conditions these Soldiers faced are italicized, while the corresponding direct fire engagement characteristics are in parenthesis:

At Objective Brigid, a guard opened fire when he spotted Ashford's assault teams as they ran through the main gate of the compound to their breach points. His alarm shots started firefights as the assaulters fought their way across the courtyard and into the main building. Once inside, *it was close-quarters combat from room to room* [Close Range Engagement], and the resistance was sharp. Having initially stunned the enemy fighters in the room with flash-bang grenades, the assaulters killed five enemy fighters as two escaped out windows. When MSG Albert Payle and SFC Jon Hsu (pseudonyms) burst into another room, *an enemy fighter ran out right between them. Hsu spun about and pursued him, shooting him down before he could escape* [Shot on the Move; Engaged a Moving Target]. *Alone and wearing NVG, Payle faced three enemy fighters surrounding him in the darkened room* [Limited Visibility Conditions]. *He quickly killed two of them with his M-4 carbine* [Engaged Multiple Targets] before the third jumped him from behind, clawing at his eyes. Payle, using combat jiu-jitsu, threw the enemy soldier over his shoulder, sharply snapping the man's head to one side. In the darkness, Payle felt the enemy fighter, even with a broken neck, still grasping at him. *Payle drew his 9mm pistol and fired twice* [Transitioned to Secondary Weapon; Fired Multiple Rounds at Target], finally finishing his opponent. As he started to move, Payle realized that his opponent was still hanging on him, his hand having been

caught in his body armor during their struggle. Not all fought so violently or so stubbornly. In the next room, a single enemy fighter dropped his rifle when assaulters charged in and was readily subdued and flex-cuffed [Emphasis by author.]⁷

Figure 18 below illustrates the percentage of variables identified within the 36

OEF engagement narratives:

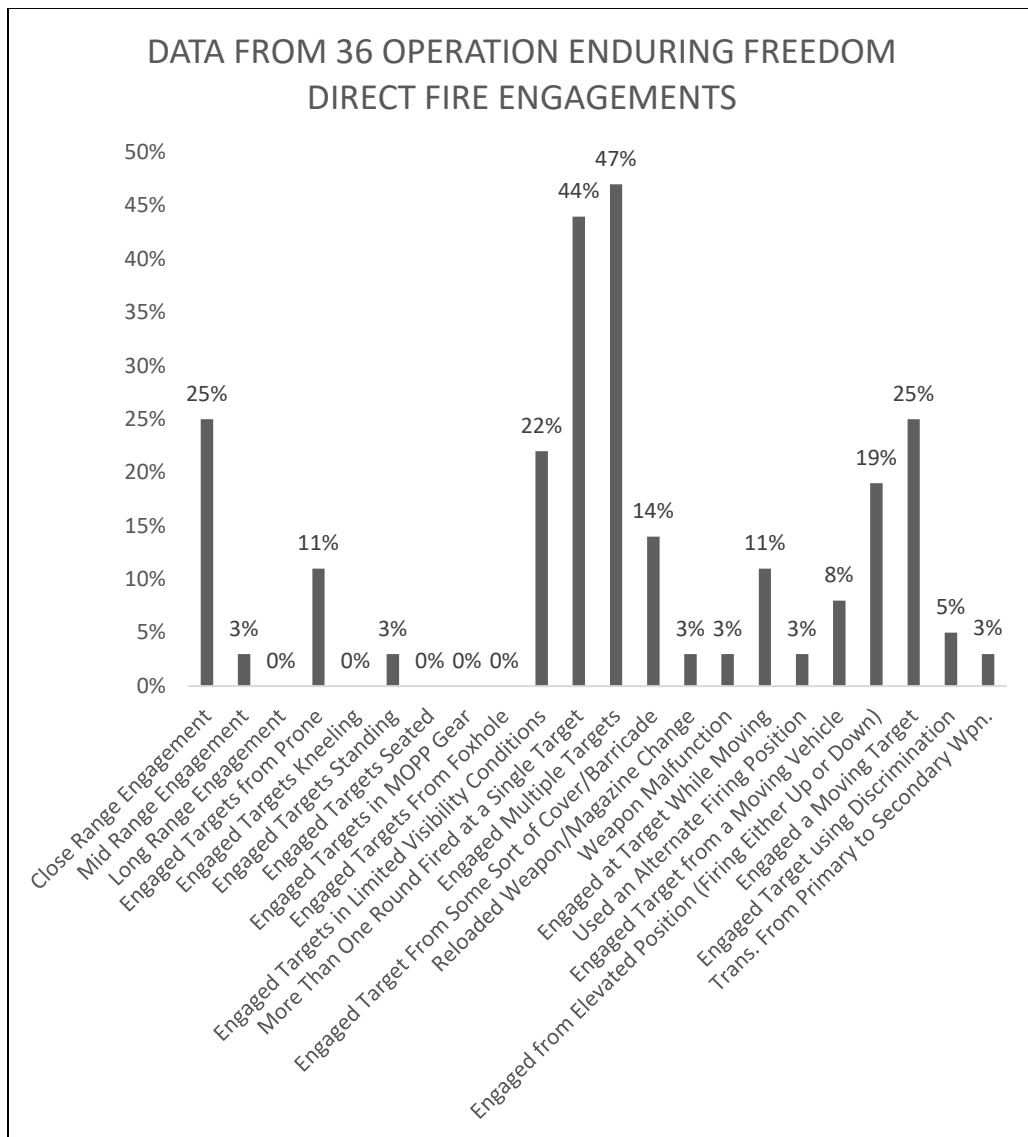


Figure 18. OEF Engagement Data Table

Source: Created by author.

Unique Characteristics/Trends in Case Study 4:

The data points organized in the OEF Engagement Data Table (figure 17) suggest that there is a decrease in close range engagements (25%) compared to the other Case Studies. This is likely due in part to the terrain and efforts by the enemy to maintain standoff distance. There is also a decrease in the number of described limited visibility condition engagements (22%). This may also be attributed to the increase in U.S. Soldier capability (use of night vision devices, infrared, etc.) versus the enemy. The most significant data points, which are consistent with the other Case Studies, is the need to engage a single target with more than one round (44%) and the number of instances in which Soldiers were required to engage more than one target during a single engagement (47%). Finally, similar to the Vietnam War Case Study, there was a number of engagements that described the requirement to engage moving targets (25%).

Pistol Data

A total of 19 pistol engagement narratives were collected across all four case studies. The Pistol Data Chart (Appendix J) provides combined and separate data points for the variables identified in the study. The small number of pistol engagement narratives collected limits the ability to interpret data accurately, however it was concluded, based on available narratives, that pistol engagements were consistently described as close range engagements (68%), in which Soldiers were required to engage in limited visibility conditions (47%) against multiple targets (49%). A variable unique to pistol engagements is the requirement to transition from a primary weapon to the pistol. Three out of the four Case Studies had narratives that described the action of transitioning

to the pistol due to a weapon malfunction or lack of ammunition from a primary weapon such as a rifle.

Carbine/Rifle Data

A total of 114 carbine/rifle engagement narratives were collected across all four case studies. The Carbine/Rifle Data Chart (Appendix K) shows commonality/consistency across all case studies with two variables; the need to engage multiple targets at once (54% combined average) and the need to engage moving targets (20% combined average). There were, however, inconsistencies across all case studies for three variables; close range engagements, the requirement to engage targets in limited visibility conditions, and the need to fire more than one round at a target to eliminate a threat. For example, only 24% of OEF narratives described a close range engagement, whereas 55% of Vietnam War engagements were described as close range.

Combined Data

The Combined Data Chart (figure 18 below and Appendix L) presents the data for both the pistol and carbine/rifle totaling 133 direct fire engagements. There are trends applicable to both weapons systems for three of 22 variables; engaging targets in limited visibility conditions (34% average), the need to fire more than one round at a target to eliminate a threat (34% average), and most notably the need to engage multiple targets at once (53% average).

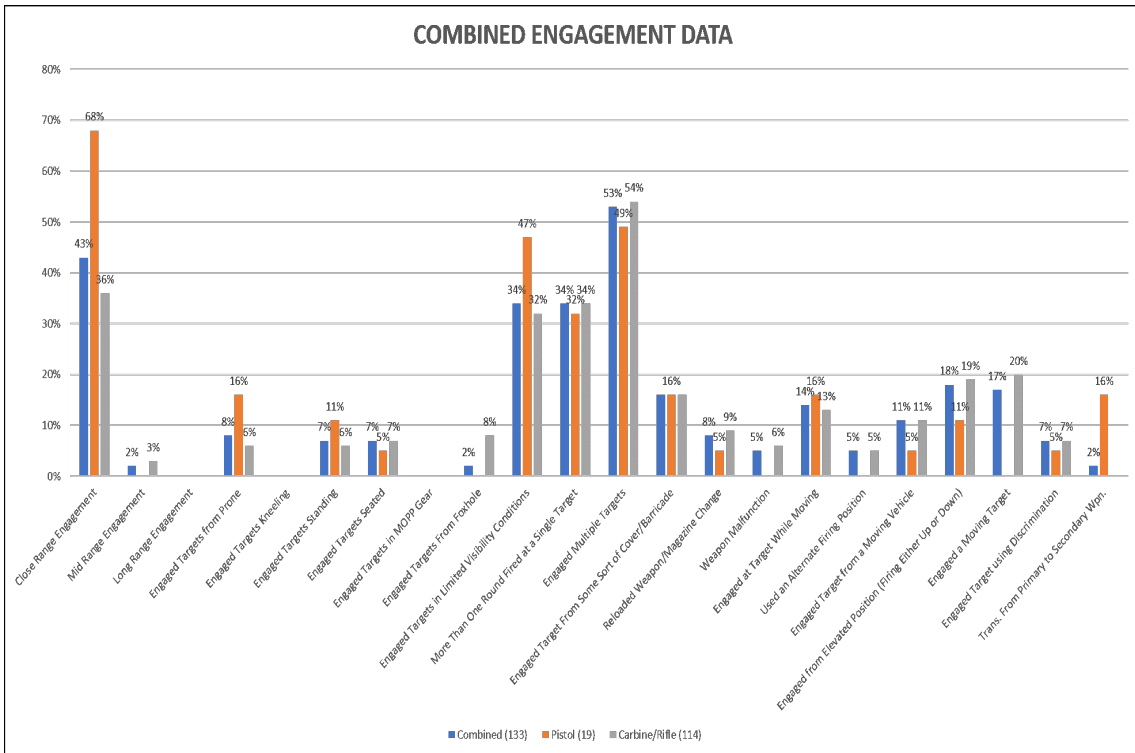


Figure 19. Combined Data Table

Source: Created by author.

Operational Framework Data

The Operational Framework Data Chart (Appendix M) divides the data into four categories, Deep Area, Close Area, Support Area, and Consolidation Area to determine which variables are unique to those operational areas and which variables are consistent across all operational areas. The data shows a correlation between the Deep, Close, and Consolidation Areas for close engagements. The most consistent variable across all operational areas is the requirement to engage multiple targets at once and most applicable to the Close Area (63% of the time). The data also indicated the need to engage in limited visibility conditions across all operational areas. Engaging a moving

target variable was identified to be more common in the Support and Consolidation Areas (23% and 26% respectively), likely attributed to a static friendly force (forward operating base, defensive perimeter, etc.) with enemy forces converging on those areas.

Infantry/Special Forces Compared to All Other Branch/Unit Data

A chart was developed to delineate which variables were more common for Infantry and Special Forces Soldiers vice all other branches/units (see Appendix N). The data suggests that Infantry and Special Forces Soldiers were two times more likely to be in a close range engagement than other branches/units (52% versus 21%). Also Infantry and Special Forces Soldiers were 21% more likely to be required to engage multiple targets at once. All other branches/units, however, were more likely to engage targets seated and or from a moving vehicle (13% and 26% respectively) than Infantry and Special Forces Soldiers. This is likely attributed to the majority of other branches/units using mounted platforms to perform their duties.

Conclusions Based on Analysis

After careful review of all data collected in support of the Collective Case Study, it was determined that certain variables were present more than others, and some not present at all. Trend lines indicate that all type units, whether employing the pistol or carbine/rifle, were likely to engage threats with the following conditions and characteristics (variables) present:

1. Soldiers were likely to engage threats within close range.
2. Soldiers were likely to engage threats during/within limited visibility conditions.

3. Soldiers were likely to engage multiple threats during a single engagement.
4. When engaging threats, Soldiers would need to engage a single target multiple times to eliminate the threat.
5. The OE is not static and is extremely dynamic, requiring Soldiers to engage from various positions, from cover, while moving individually or as a unit against an equally maneuverable threat.

The following variables were rarely described or not applicable/present in any of the Case Studies:

1. Engaged targets in Mission Oriented Protective Posture (MOPP) Gear.
2. Engaged targets kneeling.
3. Long range engagement (300m>).

Analysis of the OE by case study never indicated/described the need for Soldiers to engage threats in MOPP Gear (i.e. in a protective mask, chemical suit, gloves, boots, etc.). Although this type of threat could be likely, given the OE, it was not a common variable identified during the study. Also, due to limitations imposed on the study, there was never a narrative that was descriptive enough to account for Soldiers firing from a kneeling position. Based on several of the narratives analyzed, it would be reasonable to suggest that Soldiers likely engaged targets from the kneeling position, just as some narratives described engaging from the prone, standing, seated, and foxhole positions. But, given the limitations, unless the firing position was directly mentioned or obvious based on the action of the Soldier, the variable was not documented. This is true for the distance in which Soldiers engaged threats. A majority of the narratives described close range engagements and only several described mid-range engagements. Even without the

imposed limitations to the study, there was rarely an instance or narrative where it could have been reasonably interpreted that Soldiers engaged threats at 300 meters or farther.

Primary Research Question

What changes are required to the U.S. Army pistol and carbine/rifle training strategies to adequately prepare Soldiers to engage threats in modern combat?

Research concluded that the U.S. Army pistol and carbine/rifle weapons training strategies and qualification standards need to change to account for the following:

1. Engagements at a much closer range (within 50 meters).
2. Engagements in which Soldiers are required to engage a single target with multiple rounds.
3. Engagements in which Soldiers must engage multiple targets at once.
4. Engagements that replicate a dynamic OE in which friendly forces and threats are not static, and requires training focused on engaging moving targets, engaging threats while moving, engaging from various positions that include from covered positions, and accounts for elevation.
5. Increased focus on night fire training to account for the number of engagements that occur in limited visibility conditions.
6. Decreased focus on CBRN engagement training and qualification tables with an increased focus on weapon reloading, malfunctions, transition drills, as well as alternate firing position drills.

Secondary Research Questions

1. What are the common fundamental characteristics of U.S. Army pistol and carbine/rifle engagements in modern combat? The top five common fundamental characteristics included:
 - a. Engaging threats at close range.
 - b. Engaging threats in limited visibility conditions.
 - c. Engaging multiple targets at once.
 - d. Engaging singular targets with multiple rounds to eliminate the threat.
 - e. Engaging moving targets.
2. Based upon the OE, what are the expected characteristics of pistol and carbine/rifle engagements in modern combat? Consistent with all four Case Studies, Soldiers should be expected to engage moving threats in close combat, in limited visibility conditions, are prepared to face multiple threats at once, and if necessary, engage singular targets, multiple times, until eliminated.
3. What are the current gaps or shortfalls in the U.S. Army pistol and carbine/rifle training strategies in preparing Soldiers to engage threats in modern combat? Results indicate a major shortfall in the lack of qualification requirements for Soldiers to engage threats with their carbine/rifle within 50 meters. Additionally, there are characteristics or skills that should be necessary for all Soldiers to demonstrate as part of qualification standards as they are consistent characteristics present in combat, i.e. magazine reloads, engaging and then transitioning to different firing positions (which includes from cover), engaging multiple targets,

or demonstrating the ability to engage a single target with multiple rounds to eliminate a threat.

The next and final chapter of this research project will provide further conclusions from the study as well as recommendations for immediate changes to U.S. Army pistol and carbine/rifle training strategies as well as outline areas/topics that require further study.

¹ Russell A. Gugeler, *Combat Action in Korea* (Washington, DC: U.S. Army Center of Military History, U.S. Government Printing Office, 1987), v.

² *Ibid.*, vi.

³ Marshall, *Infantry Operations & Weapons Usage in Korea*, 17, 67.

⁴ Gugeler, *Combat Actions In Korea*, 87.

⁵ Adrian G. Trass, *Transition, November 1968-December 1969* (Washington, DC: U.S. Army Center of Military History, 2018), 61-62.

⁶ Richard E. Killbane, *Convoy Ambush Case Studies* (Fort Lee, VA: U.S. Army Transportation School, Transportation Corps Historian, date unknown), 80.

⁷ Charles H. Birscoe, Richard L. Kiper, James A. Schroder, and Kalev I. Sepp, *Weapon of Choice, U.S. Army Special Operations Forces in Afghanistan* (Fort Leavenworth, KS: Combat Studies Institute, 2003), 239.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The most complex form of shooting is under combat conditions when the Soldier is moving, the enemy is moving, under limited visibility conditions. Soldiers and leaders must continue to refine skills and move training from the simplest shot to the most complex.

— Headquarters, Department of the Army,
Training Circular 3-22.9, *Carbine and Rifle*

Overview

After analyzing and interpreting data collected from 133 direct fire engagements among four case studies, it was determined that several characteristics of U.S. Army pistol and carbine/rifle engagements are present in combat. Furthermore, there are common fundamental characteristics within direct fire engagements involving the pistol and or carbine/rifle that have helped to determine what changes are required to the existing training strategies to enable Soldiers to effectively employ their individual weapons systems in modern combat. This chapter will briefly review the findings from the study and provide recommendations to the existing training strategies.

Layout and Design

Figure 20 below outlines how Chapter 5 is organized:

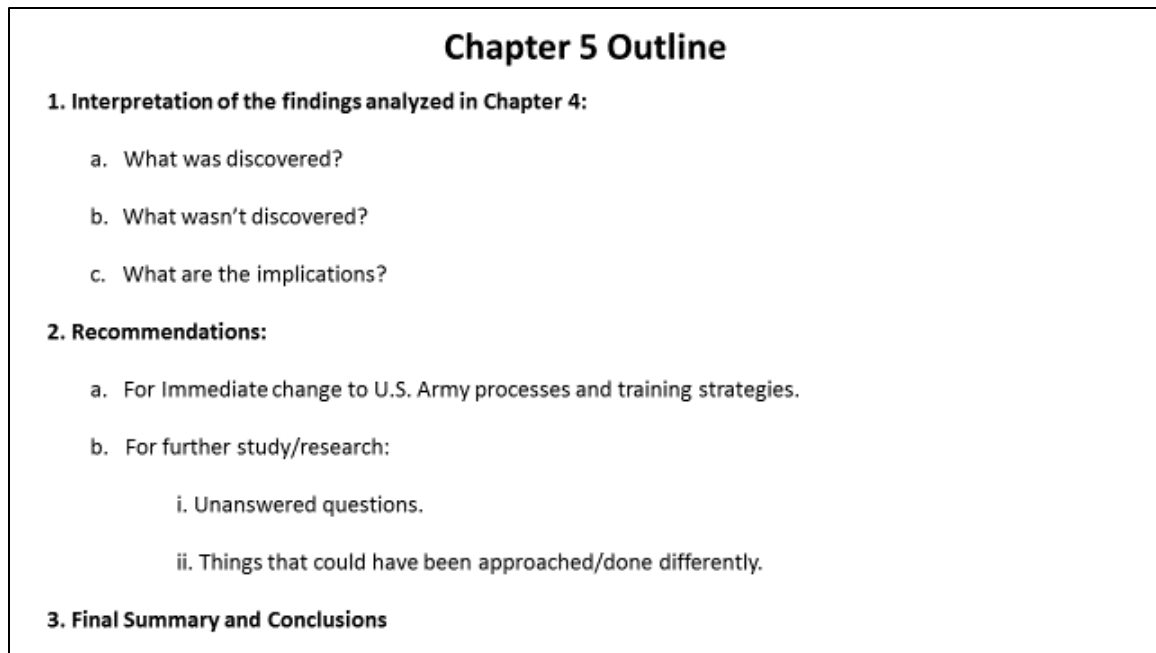


Figure 20. Chapter 5 Outline

Source: Created by author.

Interpretation of Findings from Chapter 4

What Was Discovered?

1. There were little to no narratives that described direct fire engagements beyond the close engagement range. The narratives collected either clearly described the close engagement or when describing engagements beyond the close range, they simply were not descriptive enough to categorize as mid or far range engagements.
2. With such a concerted effort by the U.S. Army to develop overmatch and standoff distance, it was surprising to see the number of engagement

narratives in which enemy forces were able to mass on individual Soldiers/units.

3. There were common characteristics of direct fire engagements across all case studies:
 - a. More than half of the narratives in the study described how Soldiers engaged threats within the close range.
 - b. More than one-third of the narratives described how Soldiers required more than one round to eliminate a threat.
 - c. More than one-third of the narratives described how Soldiers were required to engage multiple threats at once.
 - d. More than one-third of the engagements described how Soldiers were required to engage threats within limited visibility conditions.

What was not Discovered?

Based on limitations imposed on the study, the narratives analyzed were not able to adequately describe the various shooting positions used by Soldiers within combat, i.e. engaging from the prone, kneeling, standing positions and should be an area of focus in future research.

What are the Implications?

1. Characteristics of marksmanship need to be considered/analyzed during and after conflicts to identify trends and determine changes required to training strategies.

2. With the evolution of warfare and the improvement of the employment of certain types of weapons systems (i.e. M16 Series Rifle/Carbine), certain characteristics have been deemed common and transcend time and should be considered permanent aspects of training to better prepare Soldiers for combat.

Recommendations

This section of Chapter 5 is focused on providing immediate recommendations to the process for collecting information on direct fire engagements involving Soldiers in ground combat. This series of recommendations is based on what was learned during the course of the research process and while applying the method used to collect and interpret data. The second set of recommendations is focused on changes to existing training strategies based on what was discovered during analysis. Lastly, the recommendations for further research are based on the lack of information available while conducting research or was outside the scope of the project.

For Immediate Change to U.S. Army Processes and Training Strategies

Processes

Recommend the development of a “U.S. Army Direct Fire Engagement Database” for individuals to share their experiences for historical preservation, and for research purposes. This enables Army Institutions such as CALL, CMH, and CSI to better collect and interpret engagements across a range of military conflicts. There are several examples of this type of database to include the Department of Justice Statistics which collects information from law enforcement related shootings across the U.S.¹

In 2015 a student at the Naval Post Graduate School develop a capstone project title *Combat Stories: Creating a Web-Based Geospatial Interface to Record Combat Stories for Validation and Other Research Purposes*. This project developed a computer program that used the battle of Fallujah Case Study to “help give insight into topics such as measuring the level of skill among individuals and units by using first-person narratives.”² The author concluded that the interface had three essential purposes “(1) future researchers can conduct original investigations, (2) current military leaders can obtain better lessons learned, and (3) the geodatabase can act as a repository of knowledge.”³

A database would ultimately assist researchers in analyzing trends and make it easier to submit recommendations to change doctrine and training strategies. In the near term, recommend that U.S. Army Institutions such as CALL, CMH, and CSI change the way in which their history teams conduct interviews of Soldiers. A pamphlet, guide, or standard operating procedure (SOP) should be developed to assist interviewers in asking precise questions to help paint a better picture of how direct fire engagements occur in combat.

Training

As discussed in Chapter 1, at the start of this research project it was assumed there was no effort in changing current training strategies, specifically qualification courses. Chapter 2 looked at the new IWTS and the pending changes to the carbine/rifle qualification course. Based on this research, it was determined the new changes to the carbine/rifle qualification course do reflect some of the required characteristics in modern combat. Specifically, the use of cover/barricade, magazine reloads, engaging more than

two targets exposures, and the addition of the standing position are improvements that support some of the characteristics discovered and analyzed in this study.

The U.S. Army should continue this momentum of change and consider an overhaul of the U.S. Army Combat Pistol Qualification Course to better replicate combat conditions and incorporate the applicable characteristics of direct fire engagements. A new qualification course should consider the characteristics identified in this research and incorporate some of the aforementioned changes developed in the new carbine/rifle qualification course which includes engaging targets from various firing positions (prone, kneeling, standing) and from cover/barricade. Reloading the pistol already exists in the current qualification standard but should be done either while moving or from a covered position. Additionally, Soldiers should be required to engage a single target with multiple rounds, and effectively engage and transition between multiple target arrays. This includes increasing the number of targets exposed during the qualification course itself (current exposure consists of up to two targets at once).

Training Strategies and Qualification Courses for both the pistol and carbine/rifle need to also incorporate:

1. Night qualification engagement tables for the carbine/rifle and pistol should be for record.
2. Moving targets.
3. Iterations in which Soldiers must shoot and move.
4. Engagements that account for angular fire.
5. For the carbine/rifle specifically, add targets that are positioned within 3-49 meters. This would require a reduction in some of the mid-range

engagements in order to work within the existing qualification framework (currently 40 rounds).

6. Scenarios should require Soldiers to engage at least one, single target with multiple rounds. Again, this may require a reduction in the number of targets in the current qualification to keep within the existing round count. Further research should be conducted to determine the appropriate number of rounds required to engage a single target, however emphasis on shot placement/accuracy, and the distance from the Soldier to this type of target should also be studied.

Finally, training strategies and qualification courses need to decrease focus on Chemical Biological, Radiological, and Nuclear (CBRN) Skills Tables. The use of MOPP gear was not a characteristic or variable identified in this study, however many other variables were identified that are currently not part of the qualification courses. Divert time and resources to developing and improving marksmanship skills in those areas, i.e. close-range engagements, engaging multiple targets, employing multiple rounds on a single target, engaging moving targets, and firing from alternate positions to enable Soldiers to effectively engage threats in modern combat.

Although the recommendation to add these skills to the existing qualification courses help to improve realism, it also adds complexity. Recommend developing a “tiered” approach to qualification in which individuals, based on their experience level, can train and test to different levels of proficiency. Basic trainees, for example, may not be able to perform to the level of proficiency that fully replicates the conditions of combat. The purpose of basic training is to prepare the trainee to develop entry level

skills. After integration into their units, along with experience and repetition, a new Soldier's proficiency level will improve. As for the rest of the force, it is reasonable to expect unit trainers or Soldiers deploying to certify to an appropriate level that the OE demands.

For Further Study/Research

Unanswered Questions

Due to the scope of the project, weapon training strategies of U.S Army Special Operations, inter-organizational, non-governmental, and foreign military entities could not be researched. Completing further research of these organizations may assist in determining which skills from their training strategies are applicable to addressing the shortfalls of U.S Army pistol, carbine/rifle training strategies.

Adversaries

A request for research support was submitted to the TRADOC Assistant Chief of Staff G-2, Threats Integration Division for any available material on adversarial training strategies (Russia, China, Iran, North Korea, and from violent extremist groups). A request by that office was submitted across the Department of Defense and it was determined there are currently no adversarial individual weapons training doctrine on file for research/analysis. Recommend an effort to fill this critical research gap to determine how U.S. Army adversaries view characteristics of direct fire engagements in combat.

Foreign Militaries

Recommend a comparable analysis be conducted of Coalition Partners and their training strategies/qualification courses to determine similarities/differences to that of U.S. Army pistol and carbine/rifle weapons training strategies.

Law Enforcement

Recommend a comparable analysis of U.S. Law Enforcement and their training strategies/qualification courses to determine similarities/differences to that of U.S. Army pistol and carbine/rifle weapons training strategies.

Things that could have been Approached/Done Differently

A survey method could have been developed for a targeted audience in order to ask combat veterans which characteristics of direct fire engagements are applicable in combat. Survey questions could be developed based on the 22 characteristics of marksmanship (variables) that were developed for this study, and then have questions answered by a pre-determined group of participants to help eliminate the unknowns within the research. Finally, in keeping with the existing research methodology, a request for transcripts of oral histories could have been submitted to CMH to widen the pool of acceptable engagement narratives for analysis.

Final Summary and Conclusions

In recent years, the U.S Army has made an effort to improve training strategies with updates to pistol and carbine/rifle manuals, the development of the IWTS, and the first major changes to the Carbine/Rifle Qualification Course. U.S. Army training and

doctrine writers and decision makers have reinvested in improving an important aspect of Soldier lethality. This momentum must not slow. The U.S. Army cannot afford to ignore marksmanship training strategies, just as it did for years following the publication of the *Trainfire I* research in 1955. This research project has demonstrated there is value to analyzing direct fire engagements to determine which characteristics of marksmanship are applicable in modern combat. Based on the findings in this research, it is apparent that the U.S. Army must continue to evaluate Soldier performance in combat, but most importantly, invest in tough, realistic training that will better prepare Soldiers for the rigors of combat. The U.S. Army will continue to train and prepare for the next fight, but in doing so, the onus is on the force to better prepare Soldiers to adequately engage, destroy, survive, and ultimately win.

¹ Department of Justice Statistics, “Law Enforcement Officer Killings and Assaults,” accessed April 16, 2018. <https://ucr.fbi.gov/leoka>.

² Christopher J. Mellon, “Combat Stories: Creating a Web-Based Geospatial Interface to Record Combat Stories for Validation and Other Research Purposes” (Thesis, U.S. Naval Postgraduate School, Monterey, CA, 2015), 43.

³ *Ibid.*, 42.

APPENDIX A

RIFLE QUALIFICATIONS STANDARDS FROM 1955 TO PRESENT

Title	Date	Qualification Description	Target Description	Distances	Firing Positions	Additional Characteristics
TRAINFIRE I Proficiency Test	1955	56 Targets (44 stationary, 12 movers divided among 7 Tables.	1) M31A1 Automatic Target Device (aka. Pop-up Targets). 2) Manually activated.	Ranging from 50-350m (distances varied and were unknown to Shooter).	1) Tables 1-5: Foxhole Supported, Position. 2) Tables 6-7: Any Unsupported Shooting Position - Shooters Preference.	1) First Proficiency Test designed by the Army using reactive targets. 2) Test also included moving targets.
FM 23-72 Rifle Marksmanship Course TRAINFIRE I	1957	Research inconclusive, number of targets and rounds used not specifically provided, however evidence indicates that the course of fire mirrored or incorporated much of the course of fire from the TRAINFIRE I Proficiency Test.	1) M31A1 Automatic Target Device (aka. Pop-up Targets). 2) Manually activated.	Ranging from 50-350m (distances varied and were unknown to Shooter).	Research inconclusive, number of targets and rounds used not specifically provided, however evidence indicates that the course of fire mirrored the TRAINFIRE I Proficiency Test.	1) First FM to implement TRAINFIRE I concepts into doctrine. 2) These documents were placeholders until new FM's was published. 3) This version did not include moving targets 4) The 1958 version included a Night Fire Table.
FM 23-72. Carbine Marksmanship Courses TRAINFIRE I	1958		1) M31A1 Automatic Target Device (aka. Pop-up Targets). 2) Manually activated.	Ranging from 50-200m (for Carbine) (distances varied and were unknown to Shooter)		
FM 23-71. Rifle Marksmanship	1966	1) Record Fire I: 32 targets for Foxhole, Supported Position, 24 targets for Unsupported Position. 2) Record Fire II: 28 targets, 40 rounds provided.	1) M31A1 Automatic Target Device (aka. Pop-up Targets). 2) Manually activated.	Ranging from 50-350m (distances varied and were unknown to Shooter).	1) Tables 1-4: Foxhole, Supported Position. 2) Tables 5-8: Unsupported (any Unsupported Shooting Position - Shooters Preference).	Course of Fire included a "move out" aspect in which Firers would move forward to the next firing point and assume a firing position once targets were presented.
FM 23-71. Rifle Marksmanship, Changes 2, 3, 4	1968					
FM 23-8. M14 and M14A1 Rifle and Rifle Marksmanship	1974	1) Record Fire I: 40 targets, two tables foxhole, two tables prone unsupported. 2) Record Fire II: 40 targets, first table Foxhole Supported, remaining three tables.	1) M31A1 Automatic Target Device (aka. Pop-up Targets). 2) Manually activated.	Ranging from 50-300m (distances varied and were unknown to Shooter).	1) Tables 1-2: Foxhole Supported, Tables 3-4: Prone Supported.	1) Course of Fire included the same "move out" aspect as the 1966 FM. 2) This version included tables where one to three targets could be presented to the shooter at any given time 2) This version reinstated a Night Fire Table.
FM 23-9. M16A1 Rifle and Rifle Marksmanship	1974	Little to no significant changes to qualification standards.				
FM 23-9. M16A1 Rifle and Rifle Marksmanship, Change 1	1975					

FM 23-9. M16A1 Rifle and Rifle Marksmanship, Change 2	1980					
FM 23-9. M16A1 Rifle and Rifle Marksmanship, Change 3	1983	1) Record Fire: 4 Tables, 10 rounds, 10 Targets per table.	1) M31A1 Automatic Target Device (aka. Pop-up Targets).	Target placement ranged from 50-300m (number of targets by distance changed from previous standards).	Two tables foxhole supported, two tables prone supported.	1) No "move out" phase. 2) Night Fire was removed. 3) Triple target arrays removed.
FM 23-9. M16A1 Rifle and Rifle Marksmanship, Change 4	1985					
FM 23-9. M16A1 and M16A2 Rifle Marksmanship	1989	Only significant change: went from four tables to two tables (each table 20 rounds/20 targets each).				
FM 3-22.9. Rifle Marksmanship, M16A1, M16A2/3, M16A4 and M4 Carbine	2003					
FM 3-22.9. Rifle Marksmanship, M16A1, M16A2/3, M16A4 and M4 Carbine, Change 2	2004					
FM 3-22.9. Rifle Marksmanship, M16A1, M16A2/3, M16A4 and M4 Carbine, Change 4	2006	Only significant change: went from two tables to three by adding kneeling position (Table I: 20 rounds/20 targets, prone supported; Table II: 10 rounds/10 targets, prone unsupported; Table III 10 rounds/10 targets, kneeling).				
FM 3-22.9. Rifle Marksmanship M16-M4-Series Weapons	2008					
TC 3-22.9 Rifle and Carbine	2016					

Source: Created by author using data from Jean L. Dyer, Peter S. Schaefer, Martin L. Bink, David R. James, Richard L. Wampler, and Michael D. Dlubac, "Soldier Performance on a New Marksmanship Course of Fire" (Research Report 1924, U.S. Army Research Institute for the Behavior and Social Sciences, Arlington, VA, 2010), 1-10.

APPENDIX B

PISTOL QUALIFICATIONS STANDARDS FROM 1940 TO PRESENT

Title	Date	Qualification Description	Target Description	Distances	Firing Positions	Additional Characteristics
FM 23-35 Automatic pistol caliber .45 M1911 and M1911A1	1940	1) Horse Mounted and Dismounted courses of fire. 2) For dismounted, Two tables, 7 rounds per table.	1) 8 "E Bobbing" targets, manually exposed by range officer for 6 seconds for first exposure, 3 seconds for every exposure thereafter, totaling 7 exposures.	Target range between 50 and 15 yards.	1) Firers "move out" towards the targets. 2) Firers stop to engage standing when targets are presented.	1) At initial "move out" pistols are holstered with magazine seated. After first exposure, the firer draws, loads and engages with as many rounds as desired. 2) Targets are exposed after firers move 5 yards.
FM 23-35 Pistols and Revolvers	1960	1) 2 Firing Tables with a total of 10 Firing Points. 2) 50 rounds, 10 Targets.	1) S Targets - a silhouette target with numbered vital areas.	Target range between 50 and 7 meters.	Course includes standing, crouching, kneeling, prone, and seated firing positions, as well as pistol draws, and multiple rounds fired at a target.	1) First table must be completed in 6.5 minutes 2) Range constructed as a "shoot house" with walls, doors, and windows.
FM 23-35 Pistols and Revolvers	1971	A copy of this manual could not be located				
FM 23-35 Combat Training with Pistols and Revolvers	1988	1) 5 Table engagements consisting of various reactive targets, both single and multiple engagements are presented.	1) 30 Targets, firer is provided 40 rounds to make up for any missed targets. 2) Target exposures range from 3 to 5 seconds. 3) A total of 7 electric targets and E Type Silhouettes.	1) Targets range from 7 to 25 meters	1) From standing position only.	1) Includes time magazine reloads. 2) The same course is used for Night and CBRN, with additional time to fire during course.
FM 3-23.35 Combat Training with Pistols M9 and M1911	2003	No changes to qualification standards, Night and CBRN converted from repeated qualifications to Table VI and VII.				
TC 3-23.35 Pistol	2017					

Source: Created by author using qualification data collected from War Department, Field Manual 23-35, *Automatic Pistol Caliber .45 M1911 and M1911A1* (Washington, DC: Government Printing Office, April 30, 1940); Headquarters, Department of the Army,

Field Manual 23-35, *Pistols and Revolvers* (Washington, DC: Government Printing Office, July 1960); Headquarters, Department of the Army, Field Manual 23-35, *Pistols and Revolvers* (Washington, DC: Government Printing Office, July 1971); Headquarters, Department of the Army, *Combat Training with Pistols and Revolvers* (Washington, DC: Government Printing Office, October 1988); Headquarters, Department of the Army, Field Manual 3-23.35, *Combat Training with Pistols, M9 and M11* (Washington, DC: Government Printing Office, June 2003); Headquarters, Department of the Army, Training Circular 3-23.35, *Pistol* (Washington, DC: Government Printing Office, May 30, 2017).

APPENDIX C

CASE STUDY PUBLICATIONS

Table 21. List of Case Study Publications			
Num.	Title	Author	Publisher, Date
Korean War			
1	<i>A Historical Perspective of Light Infantry</i>	McMichael, Scott R.	CSI, 1987
2	<i>Honor and Fidelity, the 65th Infantry in Korea, 1950-1953</i>	Villahermosa, Gilberto N.	CMH, 2009
3	<i>Combat Support in Korea</i>	Westover, John G.	CMH, 1990
4	<i>South of the Naktong, North of the Yalu</i>	Appleman, Roy E.	CMH, 1992
5	<i>Combat Actions in Korea</i>	Gugeler, Russel A.	CMH, 1987
6	<i>Korea, 1950</i>	Collins, Lawton J, Mountcastle, John W.	CMH, 1997
7	<i>Korea, 1951-1953</i>	Miller Jr., John, Carroll, Owen J. and Tackley, Margaret E.	CMH, 1997
8	<i>Counterattack on the Naktong, 1950</i>	Robertson, William G.	CSI, 1985
Vietnam War			
9	<i>Seven Firefights in Vietnam</i>	Cash John A., Albright, John, and Sandstrum Allan W.	CMH, 1985
10	<i>Thiet Giap! The Battle of An Loc, April 1972</i>	Willbanks, James H.	CSI, 1993
11	<i>Vietnam Studies, Airmobility 1961-1971</i>	Tolson, John J.	CMH, 1999
12	<i>Vietnam Studies, Allied Participation in Vietnam</i>	Larsen, Stanley R., Collins Jr., James L.	CMH, 2005
13	<i>Vietnam Studies, Medical Support of the U.S. Army in Vietnam</i>	Neel, Spurgeon	CMH, 1991
14	<i>Vietnam Studies, Mounted Combat in Vietnam</i>	Starry, Donn A.	CMH, 2002
15	<i>Vietnam Studies, Riverine Operations 1966-1969</i>	Fulton, William B.	CMH, 1985
16	<i>Vietnam Studies, U.S. Army Engineers 1965-1970</i>	Ploger, Robert R.	CMH, 2000
17	<i>Vietnam Studies, U.S. Army Special Forces 1961-1971</i>	Kelly, Francis J.	CMH, 2004
18	<i>Vietnam Studies, The War in the Northern Province 1966-1968</i>	Pearson, Willard	CMH, 1991
18	<i>Dust Off: Army Aeromedical Evacuation in Vietnam</i>	Dorland, Peter, Nanney, James	CMH, 2008
20	<i>Vietnam, From Cease Fire to Capitulation</i>	Le Gro, William E.	CMH, 1985
21	<i>Combat Operations, Taking the</i>	MacGarrigle, George L.	CMH, 1998

	<i>Offensive, October 1966 to October 1967</i>		
22	<i>Combat Operations, Stemming the Tide, May 1965 to October 1966</i>	Carland, John M.	CMH, 2000
23	<i>Engineers at War</i>	Trass, Adrian G.	CMH, 2010
24	<i>Taking the Offensive October 1966 to September 1967</i>	Williams, Glenn E.	CMH, 2016
25	<i>Turning Point, 1967-1968</i>	Traas, Adrian G.	CMH, 2017
26	<i>Transition November 1968 -December 1969</i>	Traas, Adrian G.	CMH, 2018
OIF			
27	<i>Between the Rivers, Combat Actions in Iraq 2003-2005</i>	McGrath John J.	CSI, 2012
28	<i>Red Devils, Tactical Perspectives from Iraq</i>	Tunnell IV, Harry D.	CSI, 2006
29	<i>Surging South of Baghdad, The 3D Infantry Division and Task Force Marne in Iraq, 2007-2008</i>	Andrade, Dale	CMH, 2010
30	<i>The Surge 2007-2008</i>	Schlosser, Nicholas J.	CMH, 2017
31	<i>Battleground Iraq, Journal of a Company Commander</i>	Brown Todd S.	CMH, 2007
32	<i>Eyewitness to War, Volume I: The US Army in Operation AL FAJR: An Oral History</i>	Gott, Kendall D.	CSI, 2006
33	<i>Eyewitness to War, Volume II: The US Army in Operation AL FAJR: An Oral History</i>	Gott, Kendall D.	CSI, 2006
34	<i>Transformation to Combat, The First Stryker Brigade at War</i>	Reardon Mark J., Charlston, Jeffery A.	CMH, 2007
35	<i>Convoy Ambush Case Studies Volume II (Trans School)</i>	Killbane, Richard E.	U.S. Army Trans. School, 2015
OEF			
36	<i>Enduring Voices, Oral Histories of the U.S Army Experience in Afghanistan 2003-2005</i>	Koontz, Christopher N.	CMH, 2008
37	<i>The United States Army in Afghanistan, Operation Enduring Freedom March 2002 - April 2005</i>	Neumann, Brian F., Mundey Lisa, Mikolashek, Jon	CMH, date unknown
38	<i>The United States Army in Afghanistan, Operation Enduring Freedom October 2001 - March 2002</i>	Stewart, Richard W.	CMH, 2004
39	<i>A Different Kind of War, The United States Army in Operation Enduring Freedom October 2001 - September 2005</i>	Wright, Donald P., et al.	CSI, 2010
40	<i>Strykers In Afghanistan 1st Battalion, 17th Infantry Regiment in Kandahar Province 2009</i>	Hymel, Kevin M.	CSI, 2014

41	<i>Vanguard of Valor Part I</i>	Wright, Donald P., et al.	CSI, 2012
42	<i>Vanguard of Valor Part II</i>	Wright, Donald P., et al.	CSI, 2012
43	<i>Weapon of Choice, ARSOF in Afghanistan</i>	Briscoe, Charles H., et al	CMH, 2003
44	<i>Wanat, Combat Actions in Afghanistan 2008</i>	Staff, CSI	CSI, 2010
OEF, OIF			
45	<i>In Contact! Case Studies from the Long War Volume I</i>	Robertson, William G.	CSI, 2006
Vietnam War, OIF, OEF			
46	<i>Convoy Ambush Case Studies</i>	Killbane, Richard E.	Trans. Corps Historian, date unknown

Source: Created by author.

APPENDIX D

CHARACTERISTICS OF DIRECT FIRE ENGAGEMENTS

Table 22. Selected Characteristics of Marksmanship	
Characteristic	Definition
1 Close Range aka CQB (0-50 meter) Engagement	“Short-range engagements are probable in close terrain (such as urban or jungle) with engagement ranges typically less than 50 meters. Soldiers must be confident in their equipment, zero, and capabilities to defeat the threats encountered.” ¹ The maximum effective range of the M9 Berretta (and most combat pistols) is 50 meters. ²
2 Mid-Range (51-300m) Engagement	Accounts for targets beyond the CQB range (50 meters) but within the furthest target engaged as part of the Carbine and Rifle Qualification Course (300 meters).
3 Long Range (<300m) Engagement	“A properly trained rifleman should be able to engage targets out to 600 meters in the right circumstances.” ³ Currently this range is not evaluated as part of the Rifle and Carbine Qualification Course. The maximum effective range of the M4 series Carbine for individual/point targets is 500 meters and the maximum effective range of the M16 series Rifle is 550 meters. ⁴
4 Engaged Target/Threat from Prone Position	“The prone position is the most stable firing position due to the amount of the Soldier’s body is in contact with the ground. The majority of the firer’s frame is behind the rifle to assist with recoil management.” ⁵
5 Engaged Target/Threat from Kneeling Position	“The kneeling position is very common and useful in most combat situations. The kneeling position can be supported or unsupported.” ⁶
6 Engaged Target/Threat from Standing Position	“This position should be used for closer targets or when time is not available to assume a steadier position such as short range employment.” ⁷
7 Engaged Target/Threat from Seated Position	“There are three types of sitting positions: crossed-ankle, crossed leg, and open-leg. All positions are easy to assume, present a medium silhouette, provide some body contact with the ground, and form a stable firing position. These positions allow easy access to the sights for zeroing.” ⁸
8 Engaged Target/Threat in MOPP Gear	“All Soldiers must effectively fire their weapons to accomplish combat missions in a CBRN environment. With proper training and practice, Soldiers gain confidence in their ability to effectively hit targets in mission-oriented protective posture equipment (MOPP). MOPP firing proficiency must be part of every unit’s training program... CBRN training must develop the Soldier’s confidence and ability to engage targets while wearing any level of MOPP equipment. In a situation where MOPP gear is required, the Soldier must be able to perform his mission without doubt in his gear protecting him.” ⁹
9 Engage from a Foxhole Position	Per FM 3-22.9, dated August 2008, “this position provides the most stable platform for engaging targets” ¹⁰ and was previously executed as part of the Carbine and Rifle Qualification Course. The purpose of the position is to replicate firing from a dug fighting position but was later removed due to changing conditions/requirements of the OE and is no longer mentioned in the new Carbine and Rifle TC.

10	Engaged Targets in Limited Visibility Conditions	May include low to no natural or artificial light. These conditions may occur early morning, early evening, at night, indoors and includes obscuration from smoke. Although Soldiers may be augmented with night vision optics, aiming devices (i.e. lasers), or flashlights, they are still operating in limited visibility conditions. ¹¹
11	More than one round fired at a single target/threat	“Rapid semiautomatic fire is approximately 45 rounds per minute and is typically used for multiple targets or combat scenarios where the Soldier does not have overmatch of the threat. Soldiers should be well-trained in all aspects of slow semiautomatic firing before attempting any rapid semiautomatic fire training.” ¹²
12	Engaged Multiple Targets/Threats	“When faced with multiple targets, the Soldier must prioritize each target and carefully plan his shots to ensure successful target engagement. Mental preparedness and the ability to make split-second decisions are the keys to a successful engagement of multiple targets. The proper mindset will allow the Soldier to react instinctively and control the pace of the battle, rather than reacting to the adversary threat.” ¹³
13	Engaged Target/Threat from sort of Cover/Barricade	Depending on the OE Soldiers attempt to “use available cover for support—for example, a wall—or a barricade to stand behind” ¹⁴ when engaging a threat. This cover not only provides a stable platform to fire from, but may also provide protection. Other examples in the study may include a vehicle, large boulders, and trees.
14	Magazine Changes/Reloads	“The Tactical Reload drill is executed when the Soldier is wearing complete load bearing equipment. It provides exercises to assure fast reliable reloading through repetition at all firing positions or postures.” ¹⁵
15	Weapon Malfunction	“When any weapon fails to complete any phase of the cycle of function correctly, a malfunction has occurred. When a malfunction occurs, the Soldier’s priority remains to defeat the target as quickly as possible. The malfunction, Soldier capability, and secondary weapon capability determine if, when, and how to transition to a secondary weapon system.” ¹⁶
16	Engaged Targets While Moving	“The process of the Soldier moving during the engagement process. It includes the Soldier’s ability to move laterally, forward, diagonally, and in a retrograde manner while maintaining stabilization, appropriate aim, and control of the weapon.” ¹⁷
17	Alternate Firing Position	Soldiers may find themselves in a position in which they must engage a target/threat with their opposite hand. This may be a result of injury on the dominant firing side or because the Soldier is positioned behind some sort of cover in which the only way to engage is with the opposing side of the body. ¹⁸
18	Engaged Target/Threat from a Vehicle	With an increased requirement to employ vehicles in modern combat, Soldiers may have to engage targets/threats with their personally assigned weapons from a seated position in a vehicle, from the gunners hatch, or crew position. With the likelihood of the vehicle moving, targets moving, while Soldiers engage from an elevated position atop the vehicle, this type of engagement creates a certain set of unique challenges and conditions.
19	Elevation, aka Angled Fire (either firing up at or down on a target/threat)	“Firing uphill or downhill at angles greater than 30 degrees, the firer must account for the change in the strike of the round from a horizontal trajectory.” ¹⁹

20	Engaged a Moving Threat	“Moving targets are those threats that appear to have a consistent pace and direction. Targets on any battlefield will not remain stationary for long periods of time, particularly once a firefight begins. Soldiers must have the ability to deliver lethal fires at a variety of moving target types and be comfortable and confident in the engagement techniques.” ²⁰
21	Discriminate Between Threats and Non-Threats	“Effective target detection requires a series of skills that Soldiers must master. Detection is an active process during combat operations with or without a clear or known threat presence.” ²¹ Soldier must identify (or discriminate) targets into three classifications “friend, foe, or noncombatant (neutral).” ²² “The identification process is complicated by the increasing likelihood of having to discriminate between friend/foe and combatant/noncombatant in urban settings or restricted terrain [and limited visibility conditions]. To mitigate fratricide and unnecessary collateral damage, Soldiers use all of the situational understanding tools available and develop tactics, techniques, and procedures for performing target discrimination.” ²³
22	Transition from Primary to Secondary Weapon System	“A secondary weapon, such as a pistol, is the most efficient way to engage a target at close quarters when the primary weapon has malfunctioned. The Soldier controls which actions must be taken to ensure the target is defeated as quickly as possible based on the threat presented...The firer transitions by taking the secondary weapon from the HANG or HOLSTERED position to the READY UP position, reacquiring the target, and resuming the shot process as appropriate.” ²⁴

Source: Created by author.

¹ HQDA, TC 3-22.9, 7-10.

² Departments of the Army, Air Force, and Navy, *TM 9-1005-317-10 Pistol Semiautomatic, 9mm, M9* (Washington, DC: Government Printing Office, 1990), 1-6.

³ HQDA, TC 3-22.9, 7-10.

⁴ Departments of the Army, Air Force, and Navy, *TM 9-1005-319-10 Operators Manual for Rifle, 5.56mm, M16A2 W/E, Rifle, 5.56mm, M16A3, Rifle, 5.56 mm, M16A4, Carbine, 5.56 mm, M4 W/E, Carbine, 5.56 mm, M4A1* (Washington, DC: Government Printing Office, 2010), 0002 00-2.

⁵ HQDA, TC 3-22.9, 6-15.

⁶ Ibid.

⁷ Ibid, 6-16.

⁸ Ibid., 6-15.

⁹ Ibid., F-11.

¹⁰ Headquarters Department of the Army (HQDA), Field Manual (FM) 3-22.9, *Rifle Marksmanship M16-/M4-Series Weapons* (Washington, DC: Government Printing Office, 2008), 4-25.

¹¹ HQDA, TC 3-22.9, 1-8, 7-20.

¹² *Ibid.*, 8-6.

¹³ *Ibid.*, 5-7.

¹⁴ Headquarters, Department of the Army (HQDA), Training Circular (TC) 3-23.35, *Pistol* (Washington, DC: Government Printing Office, 2017), 6-12.

¹⁵ HQDA, TC 3-22.9, D-6.

¹⁶ *Ibid.*, 8-8.

¹⁷ *Ibid.*, 5-3.

¹⁸ Kyle Lamb, *Green Eyes Black Rifles: Warriors Guide to the Combat Carbine*, (N.p.: Trample & Hurdle, 2008), 151-160.

¹⁹ HQDA, TC 3-22.9, E-3.

²⁰ *Ibid.*, C-6.

²¹ *Ibid.*, 5-4.

²² *Ibid.*, 5-6.

²³ *Ibid.*, 5-6.

²⁴ *Ibid.*, 8-14.

APPENDIX E

KOREAN WAR DATA COLLECTION TOOL

Code	Engagement Narrative	Unit Type	Condition	Engagement Summary
A Historical Perspective of Light Infantry (CSI)				
N/A	*NOTE: By the end of the campaign, many soldiers had acquired pistols as personal close-defense weapons of last resort. (pg. 15)	N/A	N/A	N/A
Honor and Fidelity, the 65th Infantry in Korea, 1950-1953 (CMH)				
KWC1	<p>During the early morning of 29 January, the Chinese made their first concentrated effort to block the 3d Division. At 0200, a battalion from the Chinese 447th Regiment, blowing whistles and bugles and supported by concentrated machine-gun and mortar fire, hurled itself at the 1st Battalion, 65th Infantry, encamped several miles northeast of Suwon. Surrounding the Company A command post, the enemy soldiers pinned down the company commander and his headquarters platoon. The unit's executive officer, 1st Lt. Paul Lavergne, then charged the Communists while blazing away with his automatic rifle. His bold and unexpected maneuver sent the enemy running and bought enough time for Colonel St. Clair to organize a counterattack with Company C. The Chinese also struck 1st Lt. Rafael A. Serra's Company B, which was located in a defensive perimeter on nearby Hill 270. Confronted by an estimated three hundred enemy troops armed with grenades, automatic weapons, and mortars, Company B found itself in danger of being overrun. Seeing a gap develop in his perimeter, Lieutenant Serra repositioned his men to plug the hole and then called for mortar and artillery fire as close to his troops as safety would allow. Their attack disrupted by the incoming shells, the Chinese soon retreated. Meanwhile, Company C from the 1st Battalion launched a counterattack against the enemy soldiers besieging Company A. The commander of Company C, Captain Magner, "had ordered his men to fix bayonets," remembered Harris, "and when they landed in the middle of two hundred Chinese, the fur began to fly. In short order it became a rifle-butt swinging, bayonet jabbing, close-range shootout, where it was difficult to distinguish friend from foe."¹⁵ Meanwhile, elements of the 65th's tank and headquarters companies, located with the regimental command post on an adjoining hill five hundred yards to the south, targeted several Chinese heavy-weapon teams with tank cannons and machine guns. As a result of the regiment's quick reaction, the Borinqueneers were able to regain the initiative and prevent the enemy from making further inroads against the 1st Battalion's defensive perimeter. M.Sgt. Juan Cordero of Company B, 1st Battalion, for example, led a platoon-size counterattack against the Chinese. Using grenades and small arms, he forced the enemy back and restored the line in his sector. After he reorganized his men, his company repulsed all subsequent Communist attacks and infiltration attempts. For leadership and courage under fire, Sergeant Cordero received the Bronze Star for valor.¹⁶ (pg. 83-84)</p>	Infantry Command Post	Unit conducting an offensive attack. Unit halted and "encamped" in preparation for advance.	Close Range Engagement; limited visibility conditions; multiple targets; multiple rounds fired; engaged while moving; engaged standing.
KWC2	<p>Barno later recalled: About this time, a Chinese patrol of four men came to the bunker [where he was hiding]. One of them squatted down and tried to look in. . . I raised my carbine and pulled the trigger. It didn't go off. The four scrambled to the top of the bunker, talking excitedly. They dropped a grenade at my feet. It went off and I wasn't hit. A second, and I think a third, were dropped at my feet and I still wasn't hit. I threw the only grenade I had about ten feet from me. The blast hit my left eye and shrapnel hit my left hand. I could hear groaning on top of the bunker. A few moments later, a VT [variable time] round came in directly over the bunker. No more groans. Silence.³⁰ (pg 224)</p>	Infantry	Occupying a bunker in defense.	Carbine malfunction/multiple targets(four); close engagement.

KWC3	<p>The North Koreans landed the first blow, targeting 1st Lt. Albert E. Carsely's Company E, which had taken up positions near the village of Sim'gi-dong only a short distance from Hamch'ang. Taking advantage of the predawn darkness, a large North Korean force infiltrated to within yards of the Americans without being detected. At 0615, the enemy launched a surprise attack that quickly penetrated the Company E perimeter. Lieutenant Carsely emerged from his command post and saw a North Korean soldier only seven yards away and running in his direction. The lieutenant shot the man with his carbine and then rallied his soldiers, leading them in a successful counterattack. The North Koreans retreated after losing seventy-eight killed and another sixty-four captured.87 (Page 39)</p>	Infantry Command Post	Unit Command Post in Urban Area	Close Range Engagement (seven yards); limited visibility conditions; moving target.
Convoy Support in Korea (CMH)				
KWP1	<p>The convoy then proceeded by the right fork but stopped about a mile farther on. Again I doubled the column to see what was wrong. The sergeant told me things didn't look right to him. Although the civilians were under curfew, a civilian had stood by the road as he drove through the village and waved the convoy on. Farther on, seven or eight civilians were standing in the road, but scattered when they came within the headlight beams. I told the men to remount and continue on, but at that moment we were struck by small-arms fire from both sides of the road and in front. We were forced to the rear, and I instructed the men to stay on the road and fire at anyone who approached from the fields on each side of us. This was to prevent our men from firing at one another in the dark. ..Making a defense with these 25 to 30 men was virtually impossible. I didn't know them since they were not from the 377th. Some of them had no weapons. One truck mounted a caliber 50 machine gun, and I ordered the driver to return fire with it. He got into position and pulled at the operating handle, then declared that the weapon was jammed. Later, the enemy turned this gun on us, and I believe that driver just didn't know how to use his weapon. In the circumstances I could do nothing but order the men to move to the rear of the convoy...At the tail of the column I ordered the last four trailers unhitched, the trucks turned, and the men to load up and drive out. Three vehicles were turned around, loaded, and moved out. Then I discovered I was alone with the fourth truck! All the men had left in the first three. I got into the fourth truck, started the engine, and turned it around. As I did so a North Korean ran alongside. His white clothing stood out clearly in the night. I pointed my pistol at him and fired twice. I either hit him or scared him, because he dropped back, and I drove away. (pg. 52)</p>	Supply Convoy	Ambush along Supply Route	Limited visibility conditions; fired more than one round at target; Alternated Firing Position (shooting seated in vehicle).

KWP2	<p>The 135 officers and men of the 38th were armed with 7 truck mounted, caliber .50 machine guns, 3 caliber .30 machine guns, 3 submachine guns, 3 bazookas, 45 carbines, and 76 pistols. The company's alert plan called for sounding the truck sirens in case of emergency. The men were to take their posts by sections. On the south and east sides would be headquarters, supply, service, and recovery sections. These 53 men were armed mostly with pistols. The carbines were primarily in the automotive section (48 men), and this section was responsible for the north and west sides of camp. Shortly before 0200, a party of 35 or 40 guerrillas reached the rice paddies and began crawling toward the ordnance company. Unnoticed by the two guards stationed to the south of the company, they quietly reached the four-foot bank which bounded the company area. First realization of the attack came with the thud of grenades falling in the company area. (pg 195) Few of the ordnance company's men fired back at the enemy. Some were so poorly situated they could not fire without endangering their comrades. Some were scared. Others just didn't think of the importance of defending themselves. The entire company might have been overrun had not Sgt. Eugene McCracken taken a hand. McCracken, dressed only in underwear, was under his wrecker. He helped Lt. Henry J. Moore, who was wounded, and then began to look around. The attack had now been under way for about five minutes, and McCracken suddenly realized that all the fire was incoming. He jumped on his wrecker and attempted to fire the caliber .50 machine gun mounted on it. The gun wouldn't fire. McCracken could see ten or twelve guerrillas running up and down the bank throwing grenades while three others sat on the bank behind his wrecker and fired small arms. Another man who fired at the enemy was PFC Daniel LeGaspi, who used his caliber .25 pistol. LeGaspi was wounded during the action by an enemy grenade. (pg. 196)</p>	Ordnance Company	Support Area infiltrated and attacked	Limited visibility conditions; multiple targets; engage from barricade (stationary vehicles); engage from prone.
KWR1	<p>The engineers placed 200 pounds of the explosive on each of the first two piers, and 50 pounds on the deck of the bridge, to break it in the middle as the piers collapsed. After fifteen minutes the friendly machine-gun crew departed and the demolition party was without security. To get observation, Lieutenant Champion moved northward in the river bed a few yards. Twenty minutes after he took up this new position the lieutenant noticed five or six North Koreans coming up the river bed single-file from the south. Evidently they were trying to get back to their own lines. The lieutenant shouted to his men. The lead enemy soldier, who had approached within forty feet of the bridge, reached into his blouse for a hand grenade instead of raising his rifle. Lieutenant Champion could not fire because his own men were between him and the target. One of the engineers shot this North Korean and the rest scattered behind a dike. Several more enemy soldiers joined the first group and a fire fight began. The engineers took cover behind the bridge piers and rocks in the river bed, but soon they flanked the dike and in fifteen minutes killed 9 North Koreans and took 3 prisoners. After the fight ended, the men returned to the bridge and completed the placement of demolition charges. The engineers then moved to the railroad bridge. (pg. 19-20)</p>	Engineer	Emplacing Explosives on Bridge	Close engagement (within 40 feet); target discrimination; engaged from cover.

KWR2	<p>We had one incident during the night. I had been informed that a civil-affairs detachment and some engineers were working north of us, and that they had not returned to the division area. Early in the evening a number of these people were challenged, and then came through our roadblock. We assumed all had returned. Later in the night a jeep came along the road but did not halt when challenged. The roadblock officer was a former infantryman, and he fired toward the jeep with his M1 as it came on. As the jeep sped by he grabbed two of the passengers and hauled them out. The jeep soon halted, and we learned he had wounded the local chief of police. I ordered him taken to the hospital, but he died from loss of blood on the way. (pg. 204)</p>	MP Team Road Block	Friendly Road Block, Fratricide	Limited visibility conditions; target discrimination.
South of the Naktong, North of the Yalu (CMH)				
KWP3	<p>This attack on the 3d Battalion, 21st Infantry, was one of the most perfectly coordinated assaults ever launched by North Koreans against American troops. The North Koreans who had been driven from the 3d Battalion's position shortly after midnight, together no doubt with other infiltrators, apparently had provided detailed and accurate information of the 3d Battalion's defenses and the location of its command post. The attack disorganized the battalion and destroyed its communications before it had a chance to fight back. Enemy roadblocks behind the battalion prevented evacuation of the wounded or resupplying the battalion with ammunition. For several hours units of the battalion fought as best they could. Many desperate encounters took place. In one of these, when an enemy machine gun placed a band of fire on K Company's command post, Pvt. Paul R. Spear, armed with only a pistol, charged the machine gun emplacement alone, entered it with his pistol empty and, using it as a club, routed the enemy gunners. Enemy fire seriously wounded him. (pg. 98)</p>	Infantry Battalion	Assault on unit position	Limited visibility conditions; shooting on the move; multiple rounds fired; engaged multiple targets
KWP4	<p>At this time, close to 0300, a company-sized column of men (one source said platoon-sized) from the south approached the bridge over the Nammyon River below the battalion command post. The two squads of M Company charged with security of the bridge let the column pass over the bridge thinking they were ROK's. When this column was even with the command post one of its leaders sounded a bugle. This was the signal for a deadly surprise assault on the battalion command post from all sides. At the same time, other enemy forces engaged L Company along the stream bank to the southwest, and still others crossed the stream directly south of the command post and attacked the tanks there. Sergeant Miller crawled back to his tank in time to help fight enemy troops off the decks with a pistol. The tanks on both sides of the road backed up to the road except one which was first damaged by a satchel charge and then, in a few minutes, blew up. At the road the tanks held off other enemy troops trying to cross the stream from the south. (pg. 701)</p>	Armor	Surprised Attack on Unit in Assembly Area	Limited visibility conditions; close engagement; prone position.

KWP5	<p>Meanwhile, a few minutes after Ormond and McAbee had left the dugout, Capt. Clarence R. Anderson, the battalion surgeon, and Father Emil J. Kapaun, the chaplain, brought in a wounded man. The small arms fire continued unabated and Major Moriarty stepped outside to investigate. Visibility was good, and in the bright moonlight he saw Captain McAbee stagger toward him. Just beyond McAbee, Moriarty saw three or four uniformed figures wearing fur headgear. He grabbed McAbee and thrust him into the dugout. Close at hand someone called for help. Responding to the call, Moriarty clambered over the dugout ramp leading from the road and found the battalion S-4 rolling on the ground grappling with an enemy soldier. Moriarty shot this soldier with his pistol and another who was crouching nearby. For the next fifteen or twenty minutes he was one of the many in the command post area waging a "cowboy and Indian" fight with the Chinese, firing at close range, and throwing grenades. (pg. 702)</p>	Battalion Command Post	Surprise Attack on Unit in Assembly Area	Target discrimination; limited visibility conditions; multiple targets; close engagement.
KWR3	<p>Bazooka teams from the 24th Reconnaissance Company set out after the two tanks. These tanks, meanwhile, encountered two jeeploads of men at the Medical Company headquarters, killed all but two, and wounded them. One tank ran over one of the wounded as he lay helpless in the road. A bazooka man finally got in a shot against one of these tanks, hitting it in the side and bouncing it off the ground, but the tank kept on going. At the railroad station, this tank fired into supplies and equipment, starting large fires. There, with a track off, it came to the end of its journeys. Rifle fire killed the tank commander. A rocket hit the second tank and knocked a piece of armor three feet square from its front plate. A third tank for a period survived a rocket that penetrated the top turret. Pfc. Jack E. Lowe and Cpl. Robert B. Watkins of the 24th Reconnaissance Company were the bazooka men who scored the destructive hits on these tanks. (pg. 162)</p>	Recon Company	Small team engaging an enemy tank	Engaging a moving target (Enemy Tank Commander).
KWR4	<p>When the attack hit Chindong-ni, some of the security guards apparently were asleep. A few outpost troops mistook some of the enemy for South Koreans from other nearby outpost positions.³² Several Americans came running shoeless down the hill to the courtyard. Colonel Michaelis and his staff officers pulled men from under jeeps and trucks and forced them into position. One soldier went berserk and started raking his own companions with machine gun fire.³³ An officer, by a well-placed shot, wounded him and stopped his murderous fire. Michaelis and Check with other officers and noncommissioned officers gradually brought order out of the chaos. Capt. Logan E. Weston, A Company commander, led an attack against the enemy positions on the hill overlooking the command post. He assaulted two enemy machine guns on the crest and eliminated their crews by accurate M1 rifle fire. Enemy fire wounded Weston in the thigh during this action, but after receiving first aid treatment he returned to the fight and subsequently was wounded twice more. Despite three wounds he refused to be evacuated. Ten days earlier he had likewise distinguished himself in leadership and in combat near Poun. (pg. 245)</p>	Infantry Unit	Counterattack on Enemy Machine Gun Positions	Shooting on the Move; Engaging multiple targets; shooting from elevated position (up).

KWR5	<p>The 90th Field Artillery Battalion suffered almost as great a calamity. Early in the predawn attack the North Koreans scored direct hits on two 155-mm. howitzers and several ammunition trucks of A Battery. Only by fighting resolutely as infantrymen, manning the machine guns on the perimeter and occupying foxholes as riflemen, were the battalion troops able to repel the North Korean attack. Pfc. William L. Baumgartner of Headquarters Battery contributed greatly in repelling one persistent enemy force. He fired a truck-mounted machine gun while companions dropped all around him. Finally, a direct hit on his gun knocked him unconscious; and off the truck. After he revived, Baumgartner resumed the fight with a rifle. (pg. 284)</p>	Artillery Unit	Repelling an enemy attack	Limited visibility condition; engaging from a foxhole; engaging from the prone
KWR6	<p>The enemy attack on the night of the 14th was not confined to Cloverleaf. South of Obong-ni enemy troops virtually surrounded the 1st Battalion, 21st Infantry, and inflicted numerous casualties on it. At 0300 Colonel Hill ordered Smith to withdraw. The battalion fought its way out of encirclement before dawn and took up a new defensive position. It held this new position at the south end of the main battle line with the help of a counterattack by the 3d Battalion, 34th Infantry, which had been strengthened that morning by the return of K and L Companies from their river hill positions.⁵⁴ Very few of its members had any hope of dislodging the enemy when Task Force Hill continued the attack on the morning of 15 August. Clouds and rain still hampered air support. On the south end of Obong-ni, A and B Companies, 34th Infantry, fought a savage encounter with North Koreans on the ridge line. The 2d Platoon of A Company, led by SFC Roy E. Collins, assaulted across a shallow saddle to an enemy-held knob. Enemy troops were just over the crest of it on the reverse slope. A grenade fight immediately developed. Men exchanged rifle fire at ten paces. One enemy soldier dived over the ridge line and tackled Collins around the waist. To his amazement, Collins learned that the enemy soldier wanted to surrender. This was the only way he could do it. Within fifty minutes after launching the attack, the platoon lost 25 men killed or wounded of the 35 who had dashed across the saddle. Ten men withdrew while PFC Edward O. Cleaborn, a Negro, stubbornly stayed behind to get in one more shot. He lost his life trying to get that shot. With them the 10 able-bodied survivors took 9 wounded men, 3 of whom died before they reached an aid station. (pg. 307)</p>	Infantry Battalion	Unit Surrounded and attempting to withdrawal, but established a defensive position, then moved to counterattack	Limited visibility conditions; shooting on the move; close range engagement (within 10 feet) shooting from elevated position (up, then down).

KWR7	<p>Enemy troops were not long in discovering the Task Force Manchu group. They first attacked it at 1400 that afternoon, and were repulsed. That night an estimated company attacked three times, pressing the fight to close quarters, but failed each time to penetrate the tight perimeter. Daylight of the second day disclosed many enemy dead on the steep slopes outside the perimeter. By that morning (2 September) the need for hand grenades was desperate. About 0900 MSgt. Travis E. Watkins of H Company shot and killed two enemy soldiers 50 yards outside the northeast edge of the perimeter. He jumped from his hole to get the weapons and grenades of the dead men; 20 yards from them three hidden enemy soldiers jumped to their feet and opened fire on him. Watkins killed them and gathered weapons, ammunition, and insignia from all five before returning to the perimeter. An hour later a group of six enemy soldiers gained a protected spot 25 yards from a machine gun position of the perimeter and began throwing hand grenades into it. Although already wounded in the head, Watkins rose from his hole to engage them with rifle fire. An enemy machine gun immediately took him under fire and hit him in the left side, breaking his back. Watkins in some manner managed to kill all six of the nearby enemy soldiers before he sank into his hole paralyzed from the waist down. Even in this condition, Watkins never lost his nerve, but shouted encouragement to his companions. He refused any of the scarce rations, saying that he did not deserve them because he could no longer fight. (pg. 456-457)</p>	Infantry Unit	Perimeter Defense	Engaged multiple targets; close engagements (20-50 yards).
KWR8	<p>A mile north of the crossroads, an enemy machine gun, hidden in a native hut on a turn of the road, suddenly poured devastating fire into the lead jeep. The bodies of all four men fell from the wrecked vehicle into a rice field. The second jeep stopped with a jerk and the men jumped into the ditch by the road. After three or four minutes of silence, seven or eight North Korean soldiers started down the road. They passed the first jeep and, when nearing the second, they shouted and started to run toward it. Pvt. Sidney D. Talley stood up and fired his M1 at the North Koreans. He killed two of them. His three companions now joined in firing. The surviving North Koreans turned and ran back. (pg. 223)</p>	Infantry Unit	Ambush along a route	Moving target; multiple targets; shooting while standing.
KWR9	<p>Another member of the engineers, Sgt. George D. Libby, was awarded the Medal of Honor posthumously for his heroic behavior that evening. Enemy fire at the roadblock area disabled the truck in which he was riding and killed or wounded everyone in it except him. Libby got into the roadside ditch and engaged the enemy. Twice he crossed the road to give medical aid to the wounded. He stopped an M-5 artillery tractor going through the roadblock, put the wounded on it, and then placed himself on the enemy side of the driver. He wished to protect the driver as he realized that no one else present could drive the tractor out. In this position Libby "rode shotgun" for the tractor and its load of wounded, returning enemy fire. The tractor stopped several times so that he could help other wounded on to it. In passing through the main enemy roadblock, Libby received several wounds in the body and arms. Later, the tractor came to a second roadblock and there he received additional wounds in shielding the driver. Libby lost consciousness and subsequently died from loss of blood, but the tractor driver lived to take his load of wounded through to safety. (pg. 173)</p>	Engineer Unit	Ambush on road	Engage from the prone; engage from cover/barricade; engage standing; engage seated; engage from a vehicle on the move.
Combat Actions in Korea (CMH)				

KWP6	<p>At 2100 that night enemy infantrymen launched an attack that appeared to be aimed at the destruction of the tanks. Lieutenant Nordstrom's 1st Platoon tanks, which were positioned near the road about a hundred yards east of the pass, were under attack for an hour with so many North Koreans scattered through the area that the tankers turned on the headlights in order to locate the enemy. The Americans used grenades and pistols as well as the tanks' machine guns. Gradually the action stopped, and it was quiet for the rest of the night. When morning came there were 25 to 30 bodies around the 1st Platoon's tanks, some within a few feet of the vehicles. At 1000 the column got under way again and reached Chongju that afternoon. This was the objective, and here the task force broke up. (pg. 43-44)</p>	Armored Unit	Enemy attack on stationary Tank Platoon	Limited visibility; engage from a vehicle; close engagement (within several to 100ft from position); multiple targets; shooting from elevated position (down).
KWP7	<p>There was respite for an hour before the enemy struck again, this time as Lieutenant Jones's platoon began moving north. For this assault the Chinese shifted to the small mound just west of Mitchell's hill, and attacked from that direction. Ten or fifteen enemy soldiers crawled up under the mortar and machine-gun fire and attempted to overrun the American position. Since Lieutenant Mueller's machine gun was still guarding the south end of the line, five men with rifles and automatic carbines waited until the Chinese were at the rim of their perimeter, then fired at full rate for a minute or less. There was another brief lull before the Chinese made one more assault. This time three enemy soldiers succeeded in getting into the perimeter where they caused considerable confusion in the darkness. One Chinese soldier stood erect among Lieutenant Mitchell's men. "Get the son of a bitch!" one of them yelled. Several men fired at once, killing him. They killed another one who appeared immediately afterwards. A third Chinese walked up to within a few feet of SFC Odvin A. Martinson (Mueller's platoon sergeant) and fired at him with a burp gun. Sergeant Martinson, who already had been wounded five times that day, fired back with a pistol. Neither of them hit the other. PFC Thomas J. Mortimer, who was lying on the ground immediately behind the Chinese soldier, raised up and struck a bayonet into his back as someone else shot him from the front. Sergeant Martinson picked up the body and threw it out of the perimeter. (pg. 96)</p>	Infantry Unit	Enemy attack on Platoon perimeter/moving element	Limited visibility conditions; close engagement (within feet); multiple targets.
KWR10, KWP8	<p>As the 1st Platoon crawled toward Lamb's position, two men were wounded not far beyond the line of departure. One of them, seriously wounded in the face and neck by a machine-gun bullet, became hysterical, and it was necessary for High to hold him down. Farther forward, Lieutenant Gano, with the lead elements of his platoon, had almost reached the intermediate knoll when he was killed on this, his first, attack. The platoon halted, pinned down by hostile fire. Just at this time Corporal Lamb's machine gun ceased firing. "I'm out of ammo!" the gunner shouted. Seven or eight enemy soldiers came out of their bunkers and suddenly appeared on the slope of Hill 520 descending toward Lamb's platoon. He reported that he was being counterattacked. Supporting machine-gun fire was too high to be effective. Lamb's riflemen opened fire, the ammunition bearers fired their carbines, and even the machine-gunner began firing his pistol. Part way down the slope the enemy soldiers stopped, then turned back. (pg. 218)</p>	Infantry Unit	Enemy attack on Hill 520	Shooting from elevated position (up); multiple targets.

KWP9	<p>At this point, ten or fifteen minutes after 0100, Kumz and Garvin remained fighting in the easternmost of the three bunkers under the heaviest enemy fire. Corporal Godwin was the only able-bodied man in the center bunker. Jones, Gibbs and Goldston, in the next bunker to the right, heard the firing suddenly stop at the center bunker when Godwin ran out of ammunition, and decided that surely they were the only ones at that end of the perimeter still living. Then they spotted enemy soldiers on top of Godwin's bunker. The three men—Jones and Gibbs helping the wounded Goldston—climbed out of the trench and rolled down the eastern slope of the hill about halfway to the wire. Taking advantage of what cover was available, they lay quiet, and remained there without further trouble during the rest of the action. Corporal Godwin, in the center bunker with Fiscus and Menzies, also had the feeling that he must be the only able-bodied man left. Stepping out of the bunker for a look, he spotted a Chinese soldier coming along the trench toward him. He stepped back against the bunker, waited until the Chinese was within point-blank range, and shot him in the head with a caliber .45 pistol. (pg. 230)</p>	Infantry Unit	Enemy attack on defensive position in bunkers	Limited visibility conditions; shooting from cover/barricade (in bunker); close range engagement (within a foot).
KWR11	<p>But the rest of the platoon followed, each man about ten or fifteen steps behind the man in front. No one was wounded until the next to the last man—Cpl. Joseph H. Simoneau—rose to go. A burst from the North Korean gun struck him in the leg and shoulder. He yelled, "I'm hit!" and fell back toward Sergeant Collins. Collins pulled him back, called the medics, and then, after notifying the leader of the 3d Platoon that he was the last man from the 2d, jumped over the protective hump of dirt and ran. This had taken no longer than five minutes. Sergeant Collins had gone only a few steps when Corporal Brennen, the lead man, reached the end of the ridge. After running the entire distance, Brennen looked over the low, pinched ridge separating him from the enemy-occupied ground and saw three North Koreans sitting around their machine gun as if they were relaxing. The gun was about twenty yards in front of him. Brennen had one grenade ready to throw and he tossed it. As he did this, he noticed movement to his left and turned to see another enemy light machine gun and its crew nearer than the first. He fired one clip from his rifle at them at the same time the machine gun fired at him. Corporal Brennen hit both enemy soldiers manning the gun, and believed he killed them, but not until they had shot him through the leg. He slid down the hill a short distance to a protected area. A brief period of noisy, confused, and furious fighting followed. (pg. 23-24)</p>	Infantry Unit	Friendly Platoon attack on enemy defense	Close engagement (20meters); shooting from an elevated position (down); multiple targets; more than one round to eliminate target.

KWR12	<p>As the members of the 2d Platoon reached the saddle, they formed a firing line along their side of the little ridge. Lying close to the ground, they peered over the ridge frequently to observe and fire at the enemy, who was often only a few yards away. Three or four men who became casualties within a few minutes slid down the slope to join Corporal Brennen. There, Sergeant Gibson and a medic were now caring for the wounded. Sergeant Collins, whom Lieutenant Shea had appointed second in command, reached the combat area a few minutes after the first burst of activity and took over the direction of the 2d Platoon. Like Corporal Brennen, Sergeant Collins carried a grenade with the cotter pin straightened and the ring over his index finger so that he could flip out the pin quickly. A few seconds after he reached the saddle there was a burst of fire from an enemy burp gun on the left flank. Collins ran back toward the bank on the left end of the firing line and looked over the ridge just as a North Korean raised to fire into the American line. Collins dropped his grenade on the enemy side of the hill and jumped to one side as a burst from the burp gun dug into the ground near him. His grenade-burst threw the burp gun into the air, and as Collins raised up to look over the ridgeline again another North Korean picked up the gun and tried to reload it. Sergeant Collins shot him with his rifle. At this moment SFC Regis J. Foley of the 3d Platoon came up to Collins. (pg. 24)</p>	Infantry Unit	Platoon Movement to Contact	Engaged from cover (hill/ridgeline).
KWR13	<p>Near the center of the saddle a Negro rifleman, PFC Edward O. Cleaborn, concentrated on keeping an enemy machine gun out of action. Standing up on the ridgeline and shooting down into the enemy side of the hill, he kept killing North Koreans who tried to man the gun. He was excited and kept firing rapidly, calling for ammunition and yelling, "Come on up, you sons of bitches, and fight!" Sergeant Collins told him to get down on the ground, but Cleaborn said, "Sergeant, I just can't see them when I get down." (pg. 26)</p>	Infantry Unit	Platoon In defense	Engaged from standing; engaged from elevated position (down); engaged multiple targets.
KWR14	<p>Soon after the initial thrust from the south, the enemy gun to the north opened fire, wounding seven men at that end of the perimeter. The men lay as still as possible to avoid this fire, except for an eighteen-year-old squad leader (Cpl. LeRoy Gibbons) who already had been wounded six times during the Korean war. Gibbons wanted to talk with Lieutenant Mitchell, who, by this time, had reached the small, flat part of the perimeter. He stood up and walked erect through a string of tracers that went past him. Several of the men yelled at him to get down. "Aw, hell," he said, "they couldn't hit the broad side of a barn," and continued walking. After this demonstration, Sgt. Everett Lee decided to take the enemy gun under fire. He crawled about fifteen feet farther north, saying to the other men nearby, "I'm going to get that son of a bitch." He fired two rounds to zero in his rifle, then killed two of the men operating the machine gun. Other men near him joined in the firing and the enemy gun went quiet and did not again fire. Sergeant Lee stood up and walked back to his position on the line. This relieved much of the pressure on the north end of the line and, from then on, the main enemy efforts came from the south and from the west. (pg. 89)</p>	Infantry Unit	Platoon In defense	Engaged targets from the prone; engaged multiple targets.
KWR15	<p>By this time the sound-powered telephone line to the squad leader was out, so McGee shouted across to him: "There are four of them at the rear of your hole. Toss a grenade up and over." A burst from a machine gun in the 1st Platoon's area—one now manned by the enemy—prevented the squad leader from standing up to lob the grenade. Lieutenant McGee and the other occupant of his foxhole (Pvt. Cletis Innon, a runner), firing a BAR and rifle, respectively, killed the four enemy soldiers. The time was now about 2200. (pg. 110)</p>	Infantry Unit	Platoon In defense	Engaged multiple targets (at least four); limited visibility conditions.

KWC4	By this time other enemy soldiers had started crawling up the slope toward Lieutenant McGee's position. One of them threw three grenades at McGee before the lieutenant killed the Chinese with a BAR he had taken from one of his men who had just been hit. The BAR was jamming on every tenth round. Lieutenant McGee used his pocket knife to extract the case. Finally he dropped the knife and was unable to find it in the dark. Quickly, he abandoned the automatic rifle and tried to fire his carbine at a Chinese who had crawled up to within ten feet of his hole. As the enemy soldier raised up on his knees, McGee pulled back the bolt to load the carbine, but at this critical moment the cold oil on the mechanism stopped the bolt from going home, and the weapon would not fire. McGee grabbed the operating handle and slammed the bolt in, fired four rounds at the Chinese, killing him. Men in nearby holes killed three other enemy soldiers who got close to Company G's front line. (pg. 111)	Infantry Unit	Platoon In defense	Limited visibility conditions; close engagement (within 10 feet); clear a malfunction; fired more than one round to eliminate threat (four rounds).
KWC5	Blood spurted from his eye as the platoon leader tried to calm him down. Lieutenant McGee told him to lie down. "I can't take you out now," he said. He shouted across to his platoon sergeant for the medic. "Inmon's been hit." Within a few minutes the aid man came over and bandaged Inmon's head. Lieutenant McGee wanted Inmon to keep on firing his rifle but the wounded man said he could not see well enough, so McGee asked him to load clips for his carbine while he fired. (pg. 114)	Infantry Unit	Platoon In defense	Reload weapon; engagement multiple targets; fired multiple rounds.
KWR16	Several minutes had elapsed since the enemy broke through the barbed wire and started crawling up toward the outpost defenses. Godwin now discovered that there were no grenades left in the center bunker. He grabbed his rifle and began firing into the advancing Chinese from a position in the communication trench. The enemy troops were very near the top. Godwin fired until his ammunition was gone, threw his rifle at the nearest Chinese and saw the butt hit him in the face, knocking him back down the hill. He then ducked into the bunker to look after the two wounded men and as he did so, noticed Corporal Brittan throwing BAR magazines at the approaching Chinese. Brittan was killed very soon afterward. (pg. 230)	Infantry Unit	Platoon In defense	Engaged from elevated position (down); engaged multiple targets; reload; engage moving targets.
KWR17, KWC6	Ehlers then went to the bunker south of the one where Kunz and Garvin were still operating the machine gun. There Ehlers, Lieutenant Manley (who had also come over to that position), Cpl. Robert Hill and Cpl. Joel Ybarra, fought the Chinese with their automatic rifles, M1 rifles, and grenades. As the Chinese worked up close, both Ehlers and Hill were killed. At a critical moment Lieutenant Manley ran out of ammunition for his carbine, or it jammed. (pg. 231)	Infantry Unit	Platoon In defense	Engaged moving target; engaged multiple targets; malfunction; fired multiple rounds
KWC7	As the column proceeded through the village, moving slowly, enemy fire killed the drivers of the first three trucks. The column halted and an enemy machine gun immediately raked it at point-blank range. Jumping off the tailgate of the third truck, Lieutenant Campbell scrambled for the right side of the road where an embankment separated it from a small plot of cultivated ground eight or ten feet beneath. In the darkness he could see only outlines of the trucks on the road and the flashes of a machine gun firing from a hill on the opposite side of the road. Leaning against the embankment, he fired his carbine at the machine gun's flashes. A body, an arm torn off, lay nearby on the road. (pg. 76)	Infantry Unit	Ambush on convoy during CASEVAC operations	Limited visibility conditions; shoot from cover (road embankment); multiple rounds fired; multiple targets

KWC8, KWR18	<p>When Lieutenant Mitchell explained that he couldn't move for a while, Stratton offered to stay with him. Just about this time, three Chinese riflemen appeared on top of the ridge and stopped about fifteen feet from where the two men were sitting. Mitchell was hidden partially by brush. Stratton saw them first and fired seven rounds from his rifle, missing each time. Mitchell fired one round and missed. His carbine jammed then and he had to take out his bayonet and pry the cartridge from the chamber. Meanwhile, a bullet from one of the Chinese guns hit the stock of Stratton's rifle and then his hand, tearing it badly. Then the enemy gun jammed. The other two Chinese had turned their backs and appeared to be listening to someone who was shouting to them from the opposite side of the hill. Lieutenant Mitchell finally got his carbine in operation and killed all three of the enemy. The two men slid down the hill a short distance to a small gully that offered more cover from enemy fire. (pg. 87)</p>	Infantry Unit	Unit in the Defense	Multiple targets (three); close range engagement (within fifteen feet); multiple rounds fired (seven rounds); malfunction; engaged from elevated position (down).
KWC9	<p>Positions still manned by the 1st Platoon were a few yards down the forward slope of the hill, below Captain Elledge. Toward the west end of the hill he heard some odd noises, and stopped beside a three-foot-high grave mound near the top of the hill. Nearby were several men whom he suspected were Chinese. He could not see them, but he could hear them making low whistling sounds, like an owl, probably as a signal to other enemy soldiers. He waited there on his hands and knees, listening. In a few moments he could hear someone crawling over the crusted snow. Raising to look over the mound, he came face to face with an enemy soldier who was also peering over the mound. Captain Elledge was holding his carbine in his right hand. It was set to operate on automatic and was pointed in the general direction of the Chinese. He pulled the trigger and hit the man in the chest. Right behind this Chinese was another whom Captain Elledge shot through the head. A third enemy soldier threw a small "ink bottle" grenade which exploded and hit Elledge in the shoulder. With his arm numb, and figuring he was badly hit, Elledge slid on down the hill and went back to the battery's mess tent. 14 (pg. 112).</p>	Infantry Unit	Patrol	Limited visibility conditions; multiple targets; close range engagement (within feet); engaged from cover/barricade (three foot high grave mound); engaged from elevated position (down).
Korea 1950 (CMH)				
NO NARRATIVES AVAILABLE				
Korea 1951-1953 (CMH)				
NO NARRATIVES AVAILABLE				
Counterattack on the Nakdong, 1950 (CSI)				
NO NARRATIVES AVAILABLE				

Source: Created by author using narratives collected from publications listed in Appendix C.

APPENDIX F

VIETNAM WAR DATA COLLECTION TOOL

Code	Engagement Narratives	Unit Type	Condition	Engagement Summary
Convoy Ambush Case Studies (U.S. Trans. Historian)				
VWR1	Another rocket hit the tail gate above Christopher sending a shower of fragments all over SP4 Czerwinsky, a machine gunner. The other machine gunner, Jim Boyd, was hit in the arm. Both M-60 machine guns were smashed. While Christopher tried to save Czerwinsky's life, Boyd searched for a rifle and started firing away with his good arm. Christopher then saw an NVA sapper in the grass across the road. He fired with his M-79 not sure if there was enough distance for the round to arm. The round exploded on target. ¹⁷ (pg. 11)	54th Transportation Battalion	Convoy Ambush	Engaged from vehicle, engaged from alternate firing position.
VWR2	Soon after leaving Bastogne, the firing commenced again. The intensity was the same as coming in the week before. I remember several explosions on the edge of the road to our left. I was doing my best to fire out the window and steer at the same time. I remember shell casings from my M-14 burning my left arm. "We left the fire base and started driving down the mountain when all hell broke loose. The tanks and APC's opened fire and we started shooting to the left of the road. I had my rifle cradled in my left arm and I was shooting out the driver's side window. It was a real challenge shifting gears and shooting out the window and not running into the back of the APC in front of me. When one magazine emptied, I would put in another and keep firing. " ¹²⁷ "After checking my forward movement, I looked to the left, and continued to fire my weapon. This is when I thought the devil himself had just hit me between the eyes with his fist. My head jolted and snapped back. My black plastic rim glasses were shoved back and down into my nose. The pain of being hit between the eyes was excruciating. I thought my nose was broke. I wasn't sure what happened. So many things run through your mind. First, I thought I must have hit a pothole and bumped my head on the steering wheel. When I looked up, everything was black. I looked around and saw nothing but darkness. A few seconds passed and my vision returned. Everything happened so fast that I was in a state of confusion for a moment. After realizing I didn't hit a pothole, I gathered my thoughts, pushed my glasses back up on my nose and kept shooting and driving. The only thing on my mind again was to get out of that area as quick as we could." ¹²⁸ (pg. 46)	585th Transportation Company	Convoy Ambush	Engaged from vehicle, engaged seated; alternated firing position; reload.
Seven Firefights in Vietnam (CMH)				
VWR3	Having reported the action to Colonel Moore, Captain Herren turned from his radio just in time to see a North Vietnamese soldier not more than fifteen meters away with a weapon trained on him. Rapidly, Herren fired a burst from his M16, ducked for cover, and tossed a grenade. (pg.14)	1/7 CAV (Infantry)	LZ XRAY	Close engagement; fired multiple rounds at target.
VWR4	Through it all the men returned the fire, taking a heavy toll of the enemy. Sergeant Savage, firing his M16, hit twelve of the enemy himself during the course of the afternoon. In midafternoon Lieutenant Herrick was hit by a bullet which entered his hip, coursed through his body, and went out through his right shoulder. As he lay dying, the lieutenant continued to direct his perimeter defense, and in his last few moments he gave his signal operation instructions book to S. Sgt. Carl L. Palmer, his platoon sergeant, with orders to burn it if capture seemed imminent. He told Palmer to redistribute the ammunition, call in artillery fire, and at the first opportunity try to make a break for it. Sergeant Palmer, himself already slightly wounded, had no sooner taken command than he too was killed. (pg. 22)	1/7 CAV (Infantry)	LZ XRAY	Engaged multiple targets.

VWR5	From his command post, Edwards himself could see fifteen to twenty enemy soldiers 200 meters to his front, moving toward him. He called Colonel Moore, briefed him on the situation, and requested artillery fire. Then he and the four others in his command group began firing their M16's at the advancing enemy. Edwards called battalion again and requested that the battalion reserve be committed in support. (pg. 30-31)	1/7 CAV (Infantry)	LZ XRAY	Mid-range engagement; engaged multiple targets; engaged moving targets.
VWR6	The heavy fighting continued. At 0745 enemy grazing fire was crisscrossing X-RAY, and at least twelve rounds of rocket or mortar fire exploded in the landing zone. One soldier was killed near the anthill, others were wounded. Anyone who moved toward the Company C sector drew fire immediately. Still the men fought on ferociously. One rifleman from Company D, who during the fighting had wound up somehow in the Company C sector, covered fifty meters of ground and from a kneeling position shot ten to fifteen North Vietnamese with his M16. (pg. 32)	1/7 CAV (Infantry)	LZ XRAY	Engaged kneeling; engage multiple targets.
VWR7, VWR8, VWR9	By 2010 the ambush party was ready, occupying a position that measured about forty meters from flank to flank with roughly six to eight meters between each group of men. (Map 7)...The wounded Viet Cong continued to reach for his weapon, finally retrieved it, and was trying to aim it when Montgomery fired an M16 burst into his right side, killing him. The claymore explosion had also set off enemy fire from the rise of ground not more than twenty-five meters from the trail junction, and a sub machine gun was sweeping the trail with sporadic bursts. From the right flank security position, Private Robinson took this weapon under fire with semiautomatic bursts from his M16. In the adjacent two-man team, Private Grooms also fired one round at the Viet Cong machine gun, then followed the lead of Sergeant Nobles and began to throw hand grenades toward the muzzle flash. (pg. 63-65)	Infantry Company 173rd Airborne	Nighttime OP	Limited visibility conditions; multiple rounds fired at target; close engagement. Limited visibility conditions; close engagement.
VWR10, VWR11, VWR12	Frustrated, Schungel grabbed another LAW, and with Fragos raced after the tank to get a closer shot. Spec. 4 James L. Moreland, a medic with the mobile strike force who had observed the action from the team house, joined them. When he thought he was close enough, Schungel fired his remaining weapon. Misfire! Desperately, amidst a hail of enemy small arms and machine gun fire, the three Americans fired their M16's at the tank's apertures and tossed grenades at its treads, but to no avail. Seemingly contemptuous of this minor harassment, the enemy tank continued to blast away at bunkers and fighting positions. (pg. 123)	Special Forces (Advisor)	Nighttime Attack on Camp	Limited visibility conditions; engaged moving target; close range.
VWR13	On the heels of the blast, the North Vietnamese troops rushed at the small band, firing their AK47 assault rifles. But Lieutenant Quy, who was not injured, fired his M16 rifle as fast as he could reload and undoubtedly saved his companions, for once again the enemy infantrymen faltered, their ranks depleted by the deadly fire. (pg. 126)	Special Forces (Advisor)	Nighttime Attack on Camp	Limited visibility conditions; engage multiple targets; reload; engaged moving targets.
VWR14	While both injured men climbed down from the tower and into the bunker, Schungel rushed forward and tossed two hand grenades under the tank. Almost simultaneously a rocket from a LAW struck the tank in the rear. The tank commander's cupola hatch flipped open with a metallic clang, but only flames emerged. Possibly affected by the sight, the crew of the other tank attempted to leave their stalled vehicle, although it was still operable. As each crewman crawled out, Colonel Schungel killed him with an M16. (pg. 126)	Special Forces (Advisor)	Nighttime Attack on Camp	Limited visibility conditions; close range; engaged multiple targets.

VWR15	<p>When Colonel Schungel and Lieutenant Wilkins had reached the team house, Schungel directed Wilkins, who was weaponless, to hide behind the bar. The colonel then armed himself with an M16, two magazines, and two fragmentation grenades and took a position in the center of the building where he could observe both entrances. He had cut the inner-tube hinges from both doors so that they would remain open. He did not have long to wait. At 0330, five North Vietnamese infantrymen, three with AK47's and two with satchel charges, approached the northern entrance. Unsuspecting, they came toward the building in a group, chattering excitedly. Schungel signaled Wilkins to remain quiet. When the North Vietnamese were less than five meters away the colonel mowed them all down with the bullets from one magazine. Almost immediately, a burst of small arms fire raked the room, followed by the explosion of a satchel charge which rattled the building, wounding Colonel Schungel in the right calf. Realizing the vulnerability of the team house, Schungel decided that he and Wilkins should take cover under the dispensary. (pg. 129)</p>	Special Forces (Advisor)	Nighttime Attack on Camp	Limited visibility conditions; engaged multiple targets; engaged moving targets;
VWR16, VWR17, VWR18	<p>After the explosions all was quiet except for the digging sounds, which were coming steadily closer to the wall, and the talk between the CIDG troops and their captors above. Fragos moved back to the door, this time with Longgear and Moreland. Up above they saw a North Vietnamese summarily shoot a CIDG soldier who had been stripped to his shorts. The three men eased back into the bunker as a voice called out in English from upstairs. "We want to speak to your captain. Is he still there?" Fragos replied defiantly, "Yes!" "Have you got a weapon?" "Yep!" "Do you have ammo?" "I've got plenty for you!" All three fired their M16's up the stairwell. In response the enemy tossed down another barrage of grenades. The talking between the captors and the South Vietnamese above the bunker stopped. And then, amidst screams and yells, the enemy soldiers began firing their weapons. Although no bodies were found later at the spot, the Americans assumed that the prisoners were executed. (pg. 131)</p>	Special Forces (Advisor)	Nighttime Attack on Camp	Engaged from cover; engaged from elevated position (shooting up); engaged multiple targets; limited visibility conditions.
VWR19	<p>As Fragos, the sixth man out, neared the supply bunker, automatic weapons fire from the former positions of Company 104 began to beat a deadly path in the dirt just fifty meters ahead of him. Lieutenant Longgear wheeled and fired an entire magazine from his M16 rifle into the bunker aperture, silencing the weapon. With Sergeant Phillips and Captain Willoughby carrying Sergeant Earley, the men made their way out of the camp unmolested. (pg. 136-137)</p>	Special Forces (Advisor)	Nighttime Attack on Camp	Engaged in limited visibility; engaged target with multiple rounds.
Thiet Giap! The Battle of An Loc, April 1972 (CMH)				
NO NARRATIVES AVAILABLE				
Vietnam Studies, Air mobility 1961-1971 (CMH)				
VWR20	<p>On 17 May, at 0615 hours, Bravo pulled in its listening posts, which had been stationed some 20-25 meters outside the perimeter, and the two companies initiated a "mad minute" of fire—a systematic spraying of trees and bushes in front of the positions. This firing touched off an immediate enemy reaction, and he launched a violent attack at all sectors of the perimeter, covering his assaults with an intense barrage of grenade and rocket launcher projectiles. The intensity and violence of the incoming fire indicated an assault by at least a battalion-sized unit. Both companies fought bravely side-by-side for nearly two hours. Enemy riflemen came within a few feet of foxhole positions before being killed, and the ammunition in the perimeter began running alarmingly low. The approach of another relief company, Company C, 1st Battalion, 12th Cavalry—moving up from HEREFORD, apparently caused the enemy to break contact. As the enemy riflemen faded back into the</p>	C Co/1/12 CAV (Infantry)	Company Defense	Limited visibility conditions; engaged multiple targets; reload, close engagement; engaged from foxholes.

	jungle, the men in the perimeter already had fixed bayonets and had loaded their last magazines in their rifles. (pg. 99-100)			
Vietnam Studies, Allied Participation In Vietnam (CMH)				
NO NARRATIVES AVAILABLE				
Vietnam Studies, Medical Support (CMH)				
NO NARRATIVES AVAILABLE				
Vietnam Studies, Mounted Combat in Vietnam (CMH)				
VWR21	Knowing that the enemy was in the area in strength, the 1st Squadron, 9th Cavalry (Air), with Company A, 1st Battalion, 8th Cavalry (Airmobile), moved to the Duc Co Special Forces Camp and by evening on 3 November 1965 had begun reconnaissance in force along the Cambodian border. The Squadron ambush force, consisting of three American aerorifle platoons, an attached Vietnamese platoon, and a mortar section of Company A, 1st Battalion, 8th Cavalry, reconnoitered and established three ambush sites. In the early evening the southernmost ambush, manned by Troop C's aerorifle platoon, sighted a large, heavily laden North Vietnamese Army company. The enemy soldiers easily seen by the light of the full moon, were laughing and talking and obviously felt secure in that part of the jungle. The waiting cavalrymen detonated eight claymore mines set along a 100-meter kill zone, and the troopers joined in with their M16 rifles as additional claymores and rifle fire from the flank security elements sealed off the area. The firing lasted minutes and when there was no answering fire from the enemy the aerorifle platoon returned to the patrol base. Olle (PAGE 59)	Infantry	Nigh time Ambush on Enemy Forces	Limited visibility conditions; engaged multiple targets; engaged moving targets.
Vietnam Studies, Riverine Operations 1966-1969 (CMH)				
NO NARRATIVES AVAILABLE				
Vietnam Studies, US Army Engineers 1965-1970 (CMH)				
N/A	Exploration was usually conducted by two man teams. While one man Slayed at the entrance the other descended into the tunnel equipped with a phone, communications wire, compass, bayonet, flashlight, and pistol. As he explored the network, the man in the tunnel maintained communication with his partner at the entrance, to whom he reported his progress, findings, and changes of direction. The man on the surface recorded all such information as it was received. (pg. 94)	N/A	N/A	N/A
Vietnam Studies, US Army Special Forces 1961-1971 (CMH)				

VWR22 VWP1	When I reached the company, the enemy had it pinned down in an open field with automatic weapons and mortar fire. I immediately ordered the platoon I had to return the fire, but they did not-only a few men fired. I started firing at the enemy, moving up and down the line, encouraging the 883rd company to return the fire. We started to receive fire from the right flank. I ran down to where the firing was and found five Viet Cong coming over the trench line. I killed all five, and then I heard firing from the left flank. I ran down there and saw about six Viet Cong moving toward our position. I threw a grenade and killed four of them. My M16 jammed, so I shot one with my pistol and hit the other with my M16 again and again until he was dead. (pg. 94)	SF Advisors to South Vietnamese Forces	Enemy Counterattack after early morning Raid	Close engagement; shoot on the move; engaged multiple targets; engaged moving targets; fired more than one round at single target; malfunction; Transition to secondary.
Vietnam Studies, The War in the Northern Provinces 1966-1968 (CMH)				
NO NARRATIVES AVAILABLE				
Dust Off: Army Aeromedical Evacuation In Vietnam (CMH)				
VWR23	The engine compartment was on fire. The crew got out as fast as possible, the pilots squeezing between the door frame and their seats' sliding armor side plates, which were locked in the forward position. They started to run from the aircraft when they realized that their rifles and ammunition were still inside. The medical corpsman dashed back inside, grabbed the rifles and bandoliers, jumped back out, and distributed the arms. They looked around and decided that they had overflown the enemy, who now separated them from the friendly unit with the casualties. Rather than head into a possible ambush, they started toward a knoll in the direction of Long Binh. Unknown to them, another platoon of the friendly company was out on a sweep headed in their direction. On the ground the crew was completely out of their environment. Their loaded M16's cocked on automatic, they were ready to shoot the first blade of grass that moved. Suddenly they heard the thump, thump, thump of troops running toward them. They stopped, waited, then saw U.S. troops coming at them through the bush. (pg. 74)	Helicopter Crew	Downed Aircraft, moving through jungle	Target discrimination.
Vietnam, From Cease Fire to Capitulation (CMH)				
NO NARRATIVES AVAILABLE				
Combat Operations, Taking the Offensive, October 1966 to October 1967 (CMH)				

N/A	Carrying a pistol, with a silencer when available, a telephone, and a flashlight, he would enter the tunnel, take an azimuth (direction) with his compass, and move forward slowly, using a probe to detect booby traps and trailing his phone line behind him. As he reached each bend and twist of the tunnel, he would stop, estimate the distance traveled, and shoot a new azimuth, reporting that information by telephone to his comrades above ground, who would record it. If he lost contact with the monitor or needed assistance, another soldier would use the telephone wire to find him. The enemy's defensive arrangements within the tunnels were often quite elaborate. In one case, a tunnel rat mapping a second-level complex found that the narrow passageway he was exploring came to an apparent end. Probing about, however, he discovered a trap door which led down into another tunnel at a third level, only to rise vertically two or three meters to the second level. In the earth, constituting the apparent dead end, were two small holes through which a man might observe and fire. He found a similar arrangement several meters farther. But this time, as he was lifting the trap door to drop down to the third level, he was shot at through one of the peep holes. The shot missed, and the intrepid soldier snapped off his flashlight and, using the telephone wire as a guide, inched his way in total darkness back to safety. (pg. 109)	N/A	N/A	N/A
VWR24, VWP2	As the firefight degenerated into a general melee, withdrawing to safety became a matter of individual initiative. Pfc. James c. Jones, the artillery forward observer's radio operator, found himself with two jobs-calling in artillery and fighting off the enemy closing in around him. After emptying his .45-caliber pistol at his attackers, he snatched up a wounded soldier's M16 and kept firing. As the bullets flew, Jones stayed on the radio, walking in the artillery fire so close that shell fragments spattered all around him. When the enemy fire lessened, Jones, believing himself to be the sole survivor in the area, crawled to the rear, eventually rejoining Company A's command group (pg. 356-357)	2-28DN (Forward Observer engaged)	Battle of Ong Thanh	Close engagement; engaged multiple targets. Close engagement; engaged multiple targets.
Combat Operations, Stemming the Tide, May 1965 to October 1966 (CMH)				
VWR25 VWR26 VWP3	Early in the morning of 5 March, as Bowie's troops prepared for the day, the company patrol to the north of the perimeter heard noises. Led by Company B's 2d Lt. Robert J. Hibbs, the unit went on the alert and kept low. Although it was still dark, Lieutenant Hibbs could see well enough through his Starlight scope, a night-imaging device that intensified the existing light. Half an hour later, shortly before daybreak, Hibbs' men spotted an enemy supply column of about one hundred women and children moving slowly from the east along a road that lay on the northwest corner of the Lo Ke Plantation. The women were carrying weapons, while the children bore ammunition. The file stopped fifty to one hundred meters short of the patrol's position, meeting up with about a company of Viet Cong coming in from the north. Hibbs noticed that they were breathing hard, "as if they had been running for some distance." As Hibbs watched through the wavy green hues of the Starlight scope, the commander appeared to issue instructions to his men and then moved a short distance down the road to meet with the women. Hibbs slipped quietly from concealment and repositioned two of his claymore mines." The Viet Cong commander returned to his column. Accompanied by some of the women and children, the insurgents continued south toward Bowie's perimeter. As they passed Hibbs, he detonated the two claymores. A blast of steel flechettes tore through the column, killing almost everyone in their path. One small boy miraculously survived, but was stunned and ran around in circles. Hibbs' men extended the killing zone by hurling grenades	2-28DNF	US Ambush	Limited visibility conditions; engaged multiple targets; engaged moving target; close engagement. Close engagement; shoot on the move; engage multiple targets. Close engagement; shoot on the move; engage multiple targets.

	<p>onto and beyond the road. After the volley of grenades exploded the Viet Cong began to return fire, and the Americans withdrew toward the battalion perimeter. They were a mere hundred meters from safety when they ran into another enemy force, which was probably preparing to attack Bowie's position. At first, Hibbs thought they were Americans, but when he realized his mistake, his men opened fire and tossed grenades to clear the way back to the battalion.³ Lieutenant Hibbs did not make it to safety. One soldier was wounded in the hail of gunfire, and Hibbs and his sergeant stopped to help him. But as they reached their fallen comrade, two machine guns ripped into them. Hibbs ordered the others to keep going and then, armed only with his M16 and a pistol, charged the gun crews. He fell, mortally wounded, in a hail of bullets. As he lay dying, he smashed his Starlight scope to keep it from falling into enemy hands." (PAGE 176-177)</p>			
Engineers at War (CMH)				
N/A	<p>Moving from ad hoc methods practiced during CRimp, allied units developed techniques and teams to deal with tunnels. Two-man teams usually explored the tunnels, one member staying at the entrance and the other descending into the tunnel. Equipped with a telephone, communications wire, compass, bayonet, flashlight, and pistol, the man in the tunnel explored the network, keeping in communication with his partner at the entrance. pg. 190-191)</p>	N/A	N/A	N/A
N/A	<p>Basically, however, the 1st Engineer Battalion's tunnel rats had the main job, going where a flashlight guided the way and a pistol was the primary weapon. "Charlie is in there. All we have to do is dig him out," explained Pfc. Michael R. Tingley, who served in a team of seven tunnel rats working in conjunction with the division's chemical detachment. Other team members carried gas masks, nauseating gas, grenades, smoke grenades, a telephone, and fifty-foot lengths of reinforced rope. One team member, Pfc. Roger L. Cornett, noted, "Handling explosives is real touchy at times. You can't really worry about it but you often wonder." Another tunnel rat with six months' experience with explosives, Pfc. Stephen E. Sikorski, added, "I'm most concerned about booby traps," and regarded his work as a "specialty that can either build or destroy."³⁷ (pg. 226-227)</p>	N/A	N/A	N/A
Taking the Offensive October 1966 to September 1967 (CMH)				
NO NARRATIVES AVAILABLE				
Turning Point 1967 - 1968 (CMH)				
NO NARRATIVES AVAILABLE				
Transition November 1968 -December 1969 (CMH)				

VWP4	<p>Most incidents amounted to small-scale attacks on hamlets, outposts, and supply routes. One of these actions took place on 11 January 1969 along Highway 13 in northern III Corps. A platoon from Troop A, 1st Squadron, 11th Armored Cavalry, had just escorted a supply column to Quan Loi, ninety-six kilometers north of Saigon. The operation had been incident-free, but on the return trip a reinforced enemy company ambushed the column of seven M113 armored personnel carriers. A recoilless rifle round hit one of the carriers and set it ablaze, seriously wounding the leader of the column, 1st Lt. Harold A. Fritz. Realizing the enemy had his platoon surrounded, Fritz climbed to the top of his burning vehicle from where he directed his troops into defensive positions. He then dismounted and ran from vehicle to vehicle, encouraging his men, assisting the wounded, and directing fire. One vehicle in particular was crucial to the platoon's survival—an M113 equipped with a six-barreled Vulcan 20-mm. antiaircraft gun that flashed continuously. When the enemy launched an assault, Fritz manned a machine gun to help repulse the attack. No sooner had the first wave receded than a second wave of enemy soldiers nearly overran the platoon. Armed with a pistol and a bayonet, Fritz led a small group of men in a daring charge that routed the attackers. His actions bought the platoon enough time to survive until a relief force arrived from the 1st Cavalry Division. The U.S. government recognized Lieutenant Fritz's valor by awarding him the Medal of Honor (PAGE 21-23)</p>	A Troop, 1st SQDN, 11th ACR	Ambush on Armored Convoy	Close engagement; shoot on the move.
VWR27	<p>On 13 July, one element of the 101st Airborne Division—Company B, 1st Battalion, 506th Infantry—was moving along a ridgeline in Thua Thien Province to attack a fortified position that had pinned down an adjoining company. Suddenly, from a nearby hill, the North Vietnamese unleashed heavy fire that stopped the unit in its tracks. Sp4c. Gordon R. Roberts, a rifleman who had received a Silver Star at Hamburger Hill, crawled through the grass toward the nearest emplacement. He then jumped to his feet and, with rifle blazing, headed straight into the enemy's fire. He killed two gunners and, after pausing to load a fresh magazine in his M16 rifle, advanced on a second bunker. When enemy fire knocked the weapon from his hands, he picked up an M16 dropped by a comrade and continued his assault, killing the crew at the bunker with rifle fire before eliminating a third position with an accurate grenade toss. By then, he was cut off from his platoon, but he continued forward, knocking out a fourth enemy position. He then helped move wounded men while under fire to an evacuation area. (PAGE 61-62)</p>	Infantry	Unit Attack against Viet Cong	Close engagement; shoot on the move; engage multiple targets; reload.

Source: Created by author using narratives collected from publications listed in Appendix C.

APPENDIX G

OIF DATA COLLECTION TOOL

Code	Engagement Narratives	Unit Type	Condition	Engagement Summary
Between the Rivers, Combat Actions in Iraq, 2003-2005 (CSI)				
OIFR1	There are people up on the roofs, and more than what we could fight through at that point. So we engaged and then turned around. I think I was driving behind a tank. I saw two or three RPG rounds fly between me and the tank and we were no more than 10 to 15 meters apart from each other. There were guys popping around corners, firing and popping back in the houses. I had my window down in the 1114 and was firing at them. My 240 gunner was up top and was engaging targets as well. (pg. 29)	C Company, 2-108th Infantry, New York Army National Guard	Ambush	Engaged seated; engaged from a vehicle; engaged on the move; close range.
OIFR2	When the ambush began, Rodriguez was in his up-armored HMMWV at the head of the column. "For about the first minute there was a lot of chaos, and after about 30 seconds, the soldiers started dismounting out of the 5-ton," he remembered. ²⁰ "At this time, I received word that we had one KIA and five or six wounded." ²¹ By now, all the uninjured soldiers from Charlie Company had dismounted their trucks and were firing back. "When we dismounted," Rodriguez remembered, "it seemed like the insurgents were really taken by surprise and didn't know what to do." ²² Unable to get a good view of the situation from inside his vehicle, Rodriguez leaped out of the HMMWV as bullets skipped across the street and whizzed past his head. The first vehicles of the convoy had travelled beyond the kill zone of the insurgent ambush. "From the angle we were at, we could actually see into the side of the ambush positions where they were laying down," he recalled (pg. 25)	C Company, 2-108th Infantry, New York Army National Guard	Ambush	Close engagement.
OIFR3	After linking up with Rodriguez, Haag and MacDonald ran back to their truck. As they scrambled up the ladder into the back of the vehicle, Haag unleashed a torrent of fire from his SAW at the enemy along the rooftops. Just as he moved to this new position in the truck bed, an RPG round bounced off the road precisely where Haag had been standing only a second before. Out of ammo for his SAW, he grabbed the nearest available weapon and continued to fire back as the truck began slowly lurching forward. ²⁴ (pg. 25)	C Company, 2-108th Infantry, New York Army National Guard	Ambush	Shooting from vehicle; shooting on the move.
Red Devils, Tactical Perspectives from Iraq (CSI)				
NO NARRATIVES AVAILABLE				
Surging South of Baghdad, The 3d Infantry Division and Task Force Marne in Iraq, 2007-2008 (CMH)				
OIFP1	Another assault against Cahill came on 20 May. This time several insurgents moved in close to the base and fired small arms into the perimeter. Upon seeing the enemy, Sgt. Robert L. Lady raced to one of the nearby M1A1 tanks and climbed in. He planned to man the tank's .50-caliber machine gun, but, upon determining the gun did not work, he jumped out of the tank and ran toward another, pulling out his pistol and firing madly at the enemy to cover his movement. Once in the hatch of the new tank, he traversed the machine gun and sprayed the insurgents with bullets. In the tactical operations center, observing the action via a video camera mounted in the base's watchtower, 1st Lt. Justin S. Patton saw Lady dashing from tank to tank "firing his 9mm pistol toward the southwestern corner" of the base. Tracer fire streamed back at him. Once Lady was safely in the working tank, other soldiers joined the defense, sliding into hatches and taking up station inside. (pg. 103)	Armor	Attack on FOB	Shooting on the move, multiple shots, multiple targets.

OIFC1	<p>But the most spectacular action occurred at Warrior Keep itself. The outpost near the Euphrates was manned by Company B, 2d Battalion, 14th Infantry Regiment, and its job was to secure the crossings from insurgents who often slipped in from the west as they circled into the southern belt before proceeding into Baghdad. The base's strategic location was a thorn in the enemy's side. On 10 June, a suicide bomber driving a dump truck loaded with 14,000 pounds of explosives moved innocently down the main road—known as Route Edsel by the Americans—then veered sharply toward the base's southern gate in an attempt to break through and blow himself up inside the perimeter. However, two alert sentries, Spec. Brandon D. Rork and Spec. Charles L. Osgood, saw what was happening from their guard post atop the command post. Rork immediately opened fire with his M240B machine gun, pouring rounds into the truck's cab, while Osgood emptied the magazine of his M4 rifle.²⁶ (pg. 110)</p>	Infantry	Outpost attacked by Suicide Bomber	Shooting from elevated position; multiple rounds.
OIFR4	<p>A few minutes after 1600 a crackle of small-arms fire resounded from south of the base. Two insurgents carrying AK47s were spotted beyond the southern gate and fired on by the M240B machine gun sited near the base entrance. Other insurgents—about ten in all—popped up to the southeast and southwest, firing from concealed positions about two hundred and fifty meters away. The defenders shot back. Pfc. Jose Rodriguez, a member of 3d Platoon, was on the roof of a building on the eastern side of the base, but he moved south toward the main enemy gunfire, shooting as he went. S. Sgt. Elias D. Cowell was in the Eagle's Nest—a concrete watchtower constructed to give guards a longer view over the flat desert—and he yelled to the nearest soldier, Pfc. John J. Borbonus, to fire on the attackers coming from the south. On the east side of the base, from a fighting position called the Crow's Nest, Spec. Manuel Miranda spied about ten insurgents and immediately took them under fire.⁶ (pg. 74)</p>	Cavalry Squadron	Attack on COP in Baghdad	Mid-Range Engagement; shooting on the move; engaged moving targets.
In Contact! Case Studies from the Long War Volume I (CSI)				
OIFRS	<p>As the insurgents' bullets continued to pelt the street around him, Bellavia stated, "I became livid."² Grabbing an M16A4, he proceeded toward the front of the house... One of the Soldiers threw a grenade over the wall. After the resulting explosion, all five men ran back through the gate, across the carport, and up to one of the windows of the house...</p> <p>In the house (see figure 1), which was eerily illuminated by burning pieces of paper and smoldering walls, Bellavia could hear the insurgents whispering behind the wall of the second room near the stairwell. Advancing toward the room, Bellavia ordered Ware to run if gunfire erupted. Ignoring the danger, the reporter followed Bellavia into the second room. Gunfire erupted almost immediately as Bellavia traded shots with the insurgents near the stairwell. Peering into the room, he saw an enemy fighter firing an RPK light machine gun and another loading an RPG. Bellavia immediately engaged the insurgents under the stairwell shooting and killing the one with the RPG. As the other enemy fighter fired and ran toward the kitchen, Bellavia shot him in the shoulder. Turning to Ware he said, "I could see their eyes, and there was no fear. I'll never forget those eyes."²⁹ Outside the house, Soldiers could hear the insurgent screaming in pain from the kitchen. In the midst of the shouting from the house, Bellavia and Ware heard yet another insurgent yelling from the second floor. (pg. 12-13)</p>	A/2-2 Infantry	Building Clearing in Fallujah	Limited visibility conditions; engaged targets standing; engaged multiple targets, fired multiple rounds; close range; engage from cover/barricade.

OIFP2	<p>Responding to the gunfire, Lawson ran into the hallway and joined Bellavia. Armed with only a 9-mm pistol, Lawson blasted away at the kitchen door while the still-screaming enemy fighter behind the door opened fire with an AK47. As both men fired round after round through the door, a large fragment of either the door or the wall hit Lawson's right shoulder. Bellavia remembered Lawson "beating his leg" in anger and "shooting the dead guy on the ground." With Lawson injured and down to his last magazine, Bellavia ordered him out of the house. (pg. 13)</p>	A/2-2 Infantry	Building Clearing in Fallujah	Multiple rounds fired; reload; close range.
OIFR6	<p>This was the master bedroom. As Bellavia peered through the doorway, he heard someone moving in the room. Firing into the corners of the bedroom, he noticed a large wardrobe with six doors on the west side of the room. As he attempted to orient himself, an insurgent charged down the stairs from the second floor, moved into the hallway, and began firing into the bedroom. Taking cover behind the wall near the doorway, Bellavia listened as another insurgent began screaming from the second floor. To his astonishment, yet another insurgent started screaming from somewhere in the master bedroom. Thinking quickly, Bellavia began to scan the room with his AN/PEQ-2A laser sight. Certain that an enemy fighter was hiding in the wardrobe, he began firing from left to right into each door. Before he could place his last shot into the sixth and final door, the wounded insurgent in the kitchen made a mad dash across the hall and began pumping rounds from his AK47 into the bedroom. As the enemy fire ripped through the doorframe, Bellavia fired back and moved briskly to the east corner of the master bedroom...Suddenly, tracer fire erupted from the wardrobe, the rounds impacting against the far wall. At that moment, the insurgent from the second floor reappeared, showering the bedroom with bullets. As he appeared in the doorway, Bellavia fired, mortally wounding him. Writhing in pain, the insurgent crawled away from the door.³² While Bellavia attempted to catch his breath, all manner of clothing flew out of the wardrobe followed closely by an insurgent firing an AK47. Bellavia recalled his night vision goggles flying off his head as he turned and the sound of the gunfire piercing his ears; as a large wooden splinter hit him in the shoulder. As he emerged from hiding, the enemy fighter tripped on the base of the wardrobe, causing it to fall forward on its doors. Despite his many wounds, the insurgent near the doorway stood up and ran out of the master bedroom and up the stairs. Bellavia fired at the man, but missed...Bellavia hit him with his M16A4, swinging it like a baseball bat. As he swung, the enemy fighter countered hitting Bellavia in the side of the head and cracking his front tooth. During the struggle, the insurgent managed to draw a .4 -caliber pistol. As they fought, the gun went off, the round slamming into the wall. Bellavia remembered firing two rounds at the man, but was uncertain as to whether he hit him. (pg. 15-17)</p>	A/2-2 Infantry	Building Clearing in Fallujah	Close range; multiple targets, multiple shots, shooting on the move; limited visibility conditions; shooting from cover/barricade.
OIFR7	<p>Battered and stunned, Bellavia staggered out of the room and into the hall without his weapon. Without warning, an insurgent jumped from the third story roof onto the second story roof, dropping his AK47 as he landed. Looking at him from a window, Bellavia realized he had no weapon and ran back into the smoke-filled room. Grabbing his M16A4 and running back to the window, Bellavia saw the insurgent scrambling for his AK47. Firing rapidly, Bellavia shot the man in the lower back. Believing he was dead, Bellavia headed toward the roof. As he approached the entryway, he saw the insurgent he had just shot "straddling a water tank at the edge of the roof." Slapping in his last magazine, Bellavia unloaded every round into the insurgent's legs. He then headed back toward the smoking room to retrieve another weapon. As he did, the insurgent fell from the roof into the garden. (page 17-18)</p>	A/2-2 Infantry	Building Clearing in Fallujah	Multiple shots; reload; close range; firing from elevated position.

OIFC2, OIFR8	<p>When the commando vehicle column was about 100 meters short of the 4-West station, it was ambushed in a sudden hail of rocket-propelled grenades, small arms fire, and mortar rounds... Coffman faced a dilemma. He had accompanied the commandos as an observer, and as such, he was not within their chain of command... Coffman also demonstrated to all what was required by personal example, engaging the enemy and tenaciously holding his position. In these moments, he was able to solidify a defense and bolster the determination of the commandos to hold their positions. Fortunate to escape injury during the initial ambush, Coffman's luck ran out about an hour into the fight when an enemy round shattered his shooting hand and damaged his carbine. After bandaging his wound, Coffman grabbed a nearby AK47 rifle from a fallen commando and continued to fight. Unable to insert another magazine into the weapon because of his injuries, he simply dropped the rifle and picked up another from a nearby commando casualty. With a burst of adrenaline and pain numbed by shock, Coffman was able to operate fully a third AK47 he acquired and went through several magazines of ammunition. When all that remained were loose rounds, Coffman held magazines between his legs and loaded the rounds with his good hand. At one point, the insurgents made a desperate assault and came within 20 meters of Coffman's position. "... I had to beat them back by firing. Most of the guys around me were wounded and pinned down. There wasn't really much cover so we were just trying to stay out of sight." (pg 25-28)</p>	Observer (SF) for Iraqi Special Police Commando Brigade	Mosul	Close range; multiple targets, multiple shots, reload, alternate firing position.
OIFR9	<p>"S___! Contact left!" The driver of Regulator 1, the lead guntruck in the northbound convoy, heard the shots strike the driver's side of her vehicle and shouted the news into the radio. After stopping at the shock of the initial assault, she pulled the vehicle forward and to the left side of the northbound lane and stopped south of the access road. The three other Soldiers opened fire on targets in the trenches and among the structures on the left side of the road. Within minutes, the M2 .50-caliber machine gun jammed, and the gunner switched to the M249 Squad Automatic Weapon (SAW). The sergeant in the passenger seat dismounted and fired his M16 rifle over the hood of the vehicle. 13 (pg. 66)</p>	MP Unit, Convoy Escort	Route through Baghdad	Shoot from cover/barricade (hood of HMMWV).
OIFC3	<p>The second vehicle, driven by Pullen, pulled up 15 to 25 meters behind the first truck, and the gunners for both vehicles—the revived Cooper on his .50-caliber, and SPC Jesse Orduñez alternating among his MK19 grenade launcher, M240B machine gun, and SAW—continued shooting at insurgents in the field north of the access road. Their fire gave Nein, Morris, and Hester (the vehicle commander of the second HMMWV) the chance to dismount and take up firing positions with their M4 rifles along the berm on the right side of the road. Pullen dismounted and took up a firing position on the rear left side of her truck. 34 (pg. 71)</p>	MP Unit, Convoy Escort	Route through Baghdad	Engage from cover/barricade; engage multiple targets.

OIFC4	SPC Jason Mike, dismounted and took up firing positions on the left side of the vehicle. The insurgents could see that they had no chance if they did not take out Rivera's truck, so they turned much of their attention to the third HMM/WV. Mike saw firsthand the effects of the intense enemy fire. At that point SPC Mack had given me his M4 and he took SPC Haynes' M249 [SAW]. I begin to fire and that's when I heard SPC Mack yell out he was hit. I went over to him and uncovered his wound and observed a gunshot wound to the left arm. At that time I gave him a first aid bandage to put pressure on his wound and I put him into cover under the vehicle. SGT Rivera and SPC Haynes were still laying down suppressive fire to keep security. I then proceeded to fire because we were taking heavy fire from the trench still at this point. Soon after I begin shooting SGT Rivera yelled out he was hit and that he couldn't feel his legs. ³⁵ (pg. 71)	MP Unit, Convoy Escort	Route through Baghdad	Engage from cover/barricade; multiple targets; firing multiple rounds.
OIFC5	One of the things we always talked about was that if we had to go head-to-head with somebody, always try to keep our body armor square with the bad guy: that way we had the best ballistic protection from our vest. We stayed squared up. I stepped off to the left and she shot two 203s [grenades], but she couldn't get them low enough because they were about 50 meters in front of us at that time. I told her we just had to keep going and so we started throwing grenades and shooting our M4s. She would shoot over my right shoulder while I prepared the grenade to throw it, or I would be shooting while she threw a grenade. I had three grenades when I left that morning. I'd already thrown one. I threw two more in the canal off my vest and she had two on her as well. I threw one of hers and she threw one of hers. Basically, 5 or 10 minutes into the canal system we'd killed the four guys. ⁵³ It had not been easy, in part because the shorter barreled M4s did not have much stopping power. According to Nein, "There wasn't one guy we shot with our M4s that went down with one hit; most of them had to be shot three or four times before they went down." ⁵⁴ (pg. 75-76)	MP Unit, Convoy Escort	Route through Baghdad	Shoot on the move; engage multiple targets; shot multiple times.
The Surge 2007-2008 (CMH)				
NO NARRATIVES AVAILABLE				
Battleground Iraq, Journal of a Company Commander (CMH)				
OIFR10	As we passed an alley, I spotted two guys with AK-47s. I yelled for the Humvee to stop, and we all piled out for the chase. These guys freaked out; the unit assigned here never chases guys. They ran down to a corner, Sassaman, the master gunner, and I started maneuvering on them. I had a fleeting shot but didn't take it due to the abundance of little kids on the street. We started running the alleyways using the gun jeeps in support. I took cover behind a corner and pulled security on an internally opening gate. Well, it opened, I switched my rifle to semi, and drew a bead ... on a four-year-old little girl. Fortunately, I didn't fire, and she ran back in after my hand signal. We rummaged through the AO for awhile but realized we didn't have the combat power to seal off the area. (pg. 77)	Infantry Company in 1-8 INF	Patrol in City	Target discrimination.
OIFR11	An IED detonated in front of Sassaman's track, so we started in on the firefight. I got down and linked up with the guys at the end of the IED wire (they initiate these things with 100-meter-long strands of stereo wire). I confirmed the TAC's frontline trace and then took over the fight. We started bounding forward on line emptying a magazine every fifty meters and lobbing 203 rounds to keep them close. We finally hit a canal that the wire was running across; Sergeant Hays and I tried to get across, but the mud, water, and reeds were way too thick and our gear was way too heavy ... so I just ended up covered in murky, nasty water. The Brads meanwhile were moving around the flank of the firing position, and they reported a bridge. I had the M203s blasting the far side, keeping the bad guys hemmed in. We got around the far side but couldn't find the body—just all his gear and some blood. (pg. 137)	Infantry Company in 1-8 INF	Patrol in City	Shooting on the move; reloading.

Eyewitnesses to War Volume I (CSI)				
OIFP3	There was Staff Sergeant Jimmy Amyett, another one of my right hand men, who climbed down to clear a spider hole with a flashlight and a pistol and shot an insurgent in the head. I know people preach about how great the NCOs are but it really was impressive to see those guys operate and do their thing. I never had to worry. (pg 313)	Cavalry Unit		Close range; limited visibility.
OIFR12	Then there was Specialist Dawes, one of the loaders on Neil Prakash's tanks. An insurgent fired an RPG that hit a wall a few feet from him and he didn't miss a beat. He just picked up his M-16 and shot the guy before he could put an RPG into the backside of their tank – yet I had to fight to get him an award because the leadership in 2-2 thought he was sitting safe inside a tank the entire battle and couldn't possibly have done anything heroic. (pg. 314)	Armor Unit		Close range; from vehicle.
Eyewitnesses to War Volume II (CSI)				
OIFR13	We had just finished pushing through a section of the city and were in a big square – there were buildings on all four sides. Lieutenant Colonel Newell's Bradley was there, Sergeant Major Darrin Bohn's Bradley was there and I believe we were in a holding pattern. It wasn't totally light outside but it was light enough to see around us and we were just sitting there listening to the radio. There was an M88 maintenance track behind us – the big ones that can tow Bradleys and Abrams – and they started shooting their .50 cal machine gun behind us. I turned to see what they were shooting at and they were messing with the machine gun and the ammo tray, and so I figured they were just doing a test fire. There wasn't really a lot of radio traffic so I figured everything was fine. Then a couple of M16s went off behind us. I had turned to cover our rear with my M16 and out of the corner of my eye, about 50 to 60 meters to my right, I saw a streak come flying down this alleyway and it seemed like it was head level to the ground. It looked like a laser beam that came flying through and I watched it and saw it hit Lieutenant Iwan's vehicle but it didn't explode. Because of the light conditions it was a little hazy, and I didn't know he was standing up in his turret when this happened. I didn't see an explosion so I thought maybe it hit the reactive armor that was on the turret and sort of fizzled out or bounced away, because there was no radio traffic. My driver asked me if I had seen that and I said yes, that it looked like it hit Lieutenant Iwan's Bradley. He was wondering if Lieutenant Iwan was okay and there was still nothing on the radio. (pg. 294)	Infantry Unit	Halted unit in City	Close range; limited visibility conditions.
Convoy Ambush Case Studies Volume I (Trans. Corps Historian)				
OIFR14	On 22 March, the 1487th escorted a 70 plus convoy north. An IED exploded next to an M-915 just past the second bridge on ASR Mobile. McCormick turned the Zebra and the M-915 gun truck back to secure the damaged vehicle. It received fire from two insurgents maneuvering behind a small building. The Zebra did not have any crew served weapons, so the crew dismounted and laid down suppressive fire with their M-16s and SAWs. The 5-ton made four passes firing its M-60 machinegun. In ten minutes of fighting, the Americans killed the two insurgents. 192 (pg. 69)	1487th Transportation Company, National Guard from Eaton, Ohio	Convoy Ambush	Multiple targets; multiple rounds; engaged from cover/barricade (vehicle).

OIFR15	<p>At the same time, Church drove aggressively to avoid the blast of IEDs and enemy emplaced obstacles, such as guardrails, concrete barriers, and vehicles, intended to slow down the convoy. Within the first five minutes of the ambush, two enemy rounds struck the convoy commander, 1LT Brown, wounding him in the head. While still driving, Church grabbed his first aid pouch, ripped it open and instructed 1LT Brown to place the bandage over his left eye. Church continued to fire his M16A2 out the window with one hand while navigating through the obstacles all the while encouraging his platoon leader to prevent him from slipping into unconsciousness. He told 1LT Brown to close the ballistic window to prevent further injury just moments before another IED detonated on the front right side of the vehicle and blew out the front right tire. Continuing to fire his weapon with one hand, PFC Church kept his other hand on the steering wheel and pushed the vehicle ahead on three inflated tires.215 (pg. 75-76)</p>	724th Transportation Company (POL), 7th Transportation Battalion	Convoy Ambush	Firing from vehicle; firing while seated; alternate firing position.
OIFR16	<p>An RPG hit the fuel truck driven by William Bradley, seventh in line of march. A heavy volume of small arms fire riddled the gun truck behind it, driven by Row, blowing out the mirrors. All the while, McDermott, eighth in line of march, blazed away with his .50 caliber machinegun as brass cartridges piled up at his feet. SPC Row simultaneously fired out the window with his M-16. As they reached the exit ramp to make the left turn onto the overpass, the burning fuel truck in front of them slid off of the road and flipped on its right side killing the driver. The smoke from the burning fuel swept across the road obscuring vision.217 (Page 76) From Convoy Ambush Volume II: SPC Row drove as fast as he could, but with the tires shot out and the highway slick with fuel, he was barely making ten miles per hour. He was firing his rifle, as well, and thought he hit one Iraqi before he ran out of magazines. When the gun truck reached safety at the dairy, Row, a trained combat life saver, went to work helping with the casualties (pg. 51)</p>	724th Transportation Company (POL), 7th Transportation Battalion	Convoy Ambush	Multiple targets; shooting while seated; shooting from vehicle; limited visibility conditions.
OIFR17	<p>I looked down the bridge in front of my truck and saw two little kids on the bridge, about a hundred to a hundred-fifty meters away. They both had AK-47s; one kid was about ten years old and the other was about seven. The seven-year old was holding his weapon upside down by the magazine, and the ten-year old was firing three rounds at a time at me. His first round hit the driver's side windshield on the truck - right next to my head. I turned around to grab my gun, and when I did, he shot me two more times in the back; the rounds went through me and into the cab of the truck 228 "It infuriated me as he kept shooting me. I grabbed my weapon, jumped out, and fired two rounds over their heads; I didn't want to shoot them - they were just I'il kids. After I fired over their heads, they turned around and ran down the bridge. Then I fell down onto my hands and knees; I couldn't breathe or move. (pg. 79)</p>	724th Transportation Company (POL), 7th Transportation Battalion	Convoy Ambush	Target discrimination; multiple rounds.

OIFR18	Walsh claimed, "I continued to stand on the side of the truck as we went only about twenty-five to thirty miles per hour; there were no tires left on the truck, it was driving completely on the rims. As we entered Baghdad, I fired into the city buildings and just about everywhere trying to keep the suppressive fire down. Unfortunately, it wasn't working. The more I fired, the more rounds were fired at us. And I couldn't stabilize my weapon; I was attempting to hold onto the truck with one hand while firing with the other. I decided I would be more stable on the hood of the truck."236 Hamill remembered, "He was standing up on the running board and had absolutely no protection. He was shot in the arm but kept firing away and trying to hold on. A couple of times he grabbed another clip, bumped it, and slammed it in his M-16. He was sweeping his gun back and forth and firing, not really picking his targets. He realized he needed a better prone position. Using as a rest, he continued firing at anything that moved. We steadily crept along, barely moving at all."237 (pg. 80)	724th Transportation Company (POL), 7th Transportation Battalion	Convoy Ambush	Reload; multiple targets; multiple rounds; alternate firing position; firing from vehicle; engaged standing.
OIFR19	"I tried again. I reached back, grabbed the truck's passenger window, pulling myself back up onto the truck, then I jumped up onto the hood and lied down. I fired left and right into the city. There were people everywhere with weapons firing at us, it was horrible. I have no idea how I did not get shot. I heard a weapon fire really close to us, closer than the others, coming from my right side, which was the driver's side of the truck. I looked over and saw the two little kids that were on the bridge earlier, they were firing at me again. The older one, who had shot me earlier, was firing at the trailer and the semi, and the younger kid was firing two to three rounds at a time directly at me. I fired another round over their heads but they didn't budge, and apparently they were not about to. Then I aimed at the younger kid's chest and fired the round. It went into his throat and out the other side, and he dropped to the ground dead.239 "The older kid looked down at him, then up at me, and started laying into it, firing twenty to thirty rounds at a time at me. I rolled over, trying not to get hit, then I aimed at his head and shot, but I missed and it went over his head and hit the wall. Luckily it knocked enough debris down on him to drop him. I knew he wasn't dead, but he was down on the ground and that was good enough for me.240 (pg. 81)	724th Transportation Company (POL), 7th Transportation Battalion	Convoy Ambush	Close engagement; multiple targets; multiple shots; prone position; target discrimination.
OIFR20	SPC Lloyd drove the lead HMMV gun truck, while SPC Delaney fired his M19 from the ring mount and SSG Steven G. Wells kept the rest of the convoy informed of the actions of the insurgents while firing his M16 out the window. Wells selected a floating rally point two to four miles outside of the town. He positioned his HMMV so as to pull security and block southbound traffic from driving into the kill zone. The rest of the convoy followed through the cross-fire as both the drivers and assistant drivers fired out of their trucks. 323 (pg. 101)	1486th Transportation Companies	Convoy Ambush	Engage multiple targets; engage from vehicle; engage from seated position.
Convoy Ambush Case Studies Volume II (Trans. Corps Historian)				
OIFP4	So Raz and Hanson climbed up on top of it only to discover the hatch was locked. Hanson then brought up a pair of bolt cutters from his gun truck but could not cut the lock. They then started receiving small arms fire from the right side of the road since the Strykers were on the left side. Hanson and Raz immediately jumped to the ground. Hanson dropped his M4 and returned fire with his M9 Berretta pistol then the small arms fire increased. Wilson nearby could see one Iraqi to his right and fired four to five rounds from behind the rear wheels of trailer with the tank, and the enemy fire stopped. (pg. 196)	217th Transportation Company (HET) & A Battery, 121st Field Artillery	Vehicle Recovery Operation	Engage from cover; transition to secondary.
OIFR21	PFC Miller's truck, with SGT Riley and PVT Sloan as passengers, was disabled by enemy fire about 400 meters north of where 1SG Dowdy's HMMWV hit SPC Hernandez's tractor-trailer. PVT Sloan was killed by enemy fire before the vehicle came to a stop. PFC Miller and SGT Riley dismounted from their truck and moved to assist the occupants of the HMMWV and tractor-trailer just ahead of them. The occupants of the HMMWV appeared to be dead or beyond help. SGT Riley attempted to secure 1SG Dowdy's M16, since his own rifle had malfunctioned, but was unsuccessful. SGT Riley then directed SPC Johnson and SPC Hernandez to take cover. Riley also attempted to fire Johnson's and Hernandez's M16s, but both jammed. Johnson and Hernandez were both wounded.	507th Maintenance Company	Movement through An Nasiriyah	Malfunction.
Transformation to Combat, The First Stryker Brigade at War				
NO NARRATIVES AVAILABLE				

Source: Created by author using narratives collected from publications listed in Appendix C.

APPENDIX H

OEF DATA COLLECTION TOOL

Code	Engagement Narratives	Unit Type	Condition	Engagement Summary
In Contact! Case Studies from the Long War Volume I (CSI)				
OEFR1	The three ATV riders, SFC Larry Hawks, SFC Bruce Holmes, and SFC Bob Thibeault, still mounted, tried to evade the intense and murderous fire. Hawks, the lead ATV, moved up to the high ground directly to his front, a position to the immediate southwest of Syahcow, dismounted his ATV, and immediately started returning fire. Among the rocks of a bald desert hill, from his still exposed position, he killed four of the enemy. For his actions on this day, he was recommended for the Distinguished Service Cross. (pg. 109)	SF ODA	Early Morning Raid in Village	Engage multiple targets;
Enduring Voices, Oral Histories of the U.S Army Experience in Afghanistan 2003-2006 (CMH)				
NO NARRATIVES AVAILABLE				
The United States Army In Afghanistan, Operation Enduring Freedom March 2002 - April 2005 (CMH)				
NO NARRATIVES AVAILABLE				
The United States Army In Afghanistan, Operation Enduring Freedom October 2001 - March 2002 (CMH)				
NO NARRATIVES AVAILABLE				
A Different Kind of War, The United States Army in Operation Enduring Freedom October 2001 - September 2005 (CSI)				
OEFR2	Though Wiercinski was committed to engaging the confirmed enemy fighters, he still had to decide how he was going to do it. The three enemy fighters had suddenly increased to nine , almost equal in number to their own group on the ridge. The Rakkasan commander decided to direct an airstrike at them, but the JDAM hit too low on the ridge to kill any of them. The next attempt involved an Apache that flew directly over the TAC position west to east, dipped its nose just beyond the crest, and launched several rockets while hovering only 6 feet over Wiercinski and his small element. The rockets also failed to kill any of the fighters. The enemy squad simply took cover and proceeded toward the TAC's position again once the Apache departed. 79 Apparently, the enemy fighters were still oblivious that there were American Soldiers on top of the ridge. Left with no choice, the men of the TAC chose to ambush the enemy fighters as they came closer. The SOF team located with Wiercinski initiated the action with their noise-suppressed M4 assault rifles. After killing one of the fighters when the ambush began, Corkran and others spent the next several hours picking off the remainder in a sort of cat and mouse game. Eventually all nine Taliban fighters were killed with no losses to the TF Rakkasan TAC.80 (pg. 149)	TF Rakkasan TAC w/SOF	Ambush on Taliban Fighters	Shooting from an elevated position (down); engaged multiple targets; engaged moving targets.
Strykers: In Afghanistan 1st Battalion, 17th Infantry Regiment in Kandahar Province 2009 (CSI)				
OEFR3	The enemy fired five unaimed rifle shots near the Strykers. The men guarding the Strykers returned fire. Sergeant First Class Rande Henderson popped off ten rounds while Staff Sergeant Justin Prince, the company's fire support NCO, laid down and fired his rifle. The enemy fire ceased. At the explosion site, everyone did a head count but Tom did not respond. Sergeant First Class Bobby Ciman rushed to Tom's location with two medics, but he was nowhere to be found. Zangenberg called Pope, "We've encountered one IED." Zangenberg reported, "one possible casualty." ⁵⁹ The men began searching the area and walking the canal looking for Tom. They only found ID tags and parts of his equipment. ⁶⁰ (pg. 26-27)	Platoon from 1st Battalion, 17th Infantry Regiment	Providing Security after IED Blast	Fired multiple rounds at a single target.
OEFC4	The two teams headed to the eastern berm, laying down covering fire as they went. Along the way, heat exhaustion overwhelmed Specialist Hill. Sergeant Brown grabbed Hill's 240B and fired at the enemy while carrying the fatigued Hill forward. "He was basically dragging [Hill] with him and shooting at the same time," recalled Staff Sergeant Nikola Tersiev. ¹⁴ Once at the berm, the two teams focused their fire at the muzzle flashes across the 200-meter field, while Hill fired Brown's M4. The berm offered little protection. "[Brown's] gun team was probably the most exposed," recalled Weiss, "just because they were on that little mound." ¹⁵ (pg. 44-45)	Platoon from 1st Battalion, 17th Infantry Regiment	React to Contact on Dismounted Patrol	Mid-range engagement (200meters); engaged multiple targets.

OEFC5	While the firefight raged, a group of insurgents made their way to the tall grass along the river and opened fire on the TAC's vehicles with RPGs, AK47s, and PKM machine guns. Staff Sergeant Nick Furfari was hammering his OE-254 antenna stakes into the sand when the enemy opened fire. Everyone else dove into the vehicle, but he remained, banging away at the stakes until the antenna array was complete. Major O'Connor fired a few rounds from his M4 rifle but the .50-caliber machine guns from Alpha Troop and Bravo Company's Strykers quickly dispatched the insurgents attacking the TAC.58 (pg. 68)	TAC from 1st Battalion, 17th Infantry Regiment	React to Contact From Insurgents firing on Position	Engaged multiple targets; engaged moving targets.
OEFC6	Once the mortars hit the area, Pope ordered Boirum to work his way through a grape row toward the hut from which his unit was being engaged. Meanwhile, the rest of Pope's men provided covering fire. Two Kiowa helicopters flew over the area and the insurgents stopped firing. Pope directed the pilots to the hut. The first pilot fired two 2.75 mm rockets while the second fired 20 rounds from his .50 caliber machine gun. The rockets collapsed the roof, trapping an insurgent. The pilot circled the hut and, instead of firing another rocket, pulled out an M4 rifle and shot the insurgent.66 "My Soldiers were like, 'damn, that was a good shot,'" recalled Pope.67 (pg. 69)	Kiowa Pilot supporting Ground Troops in Contact	Engaged Insurgent group firing on dismounts	Engaged from vehicle (Kiowa); engaged from elevated position (down).
OEFC7	About 10 minutes into his shift he heard the sound of tree branch snapping under a foot . Instinctively, he knew that no animal weighed enough to do that. He closed his eyes and cocked his left ear toward the noise, holding the Claymore's trigger in his hands. When he heard a second snap, he squeezed the firing device, exploding the Claymore. After the detonation, a Soldier near Knowler whispered, "That stick didn't even finish snapping and you hit it." ⁷⁷ Knowler listened again and this time heard some rustling by a tree where he was supposed to have set up his original OP. He fired five rounds at the sound and heard a thud and someone grunting , followed by coughing. Knowler knew he was listening to someone with a punctured lung. (pg. 71)	Company from 1st Battalion, 17th Infantry Regiment	Night Time Perimeter Defense	Limited visibility conditions; engaged with multiple rounds; engaged moving target.
OEFC8	Enemy rounds pinged off the Strykers. Some of the men dismounted their vehicles and engaged the insurgents , who were firing RPGs and machine guns while retreating northwest through the town. First Sergeant Eugene Hicks could see the enemy moving from building to building and escaping into a wooded area . He wanted to enter the buildings but Hallett refused, preferring that the Afghan Security Forces be used for this purpose. ⁶⁶ Hicks dismounted his vehicle anyway and closed on a building where the enemy fired RPGs. From a distance of only 15 feet, Hicks opened fire on four men . "I think I hit one guy twice," explained Hicks, "but he was just kind of lurching forward. He wasn't going to stop."(pg. 28-29)	Company from 1st Battalion, 17th Infantry Regiment	Attack on a Taliban Stronghold	Engaged moving targets; engaged multiple targets; fired multiple rounds; close range engagement.
OEFC9	Osborne dispatched his sniper team to a side of the hill to fire down onto the enemy, then deployed the mortar Stryker to maintain rear security while Faver anchored the right side of his position on the hill with his Stryker. The Strykers returned fire with their M240 machine guns and Mk19 grenade launchers while Soldiers stood and fired from the Strykers' hatches . In Faver's Stryker, Briolla stood in an air-guard hatch firing rounds when he suddenly yelled at Faver, "RPG! RPG!" just as the round screeched over his head. Faver immediately began conducting survivability drills—moving his Stryker in bursts every few minutes to prevent the enemy from locking on to his position—and he directed the other vehicles to do the same. (pg. 25)	Company from 1st Battalion, 17th Infantry Regiment	Reacting to Enemy Fire	Engaging from vehicle; engaged targets while standing; fired multiple rounds.

OEFC10, OEFC11	Boirum's men pushed south through the town and an adjacent open field until they reached a narrow road between mud walls. A pomegranate field and a canal were to their left. As the Soldiers approached an L-shaped turn with another wall to their front, they heard a loud "ka-chunk," the sound of a PKM machine gun's bolt hammering forward, but failing to fire. ²¹ Insurgents then opened up with AK-47 rifles from behind the wall to the Americans' front. Specialist Richard Thibeault took a round to the chest from only 20 feet and dropped to his knees. Staff Sergeant Joshua Meyers grabbed him and threw him behind cover while returning fire. Everyone else opened fire at the enemy muzzle flashes. Despite his pain, Thibeault emptied his magazine at the enemy and, as he reloaded, slipped his hand underneath his body armor. When he didn't see any blood he shouted to Meyers that he was okay and continued to fight. ²² (pg. 17-18)	562d Engineer Company	Reacting to Enemy Fire following IED blast	Close engagement; shooting on the move; Close engagement; fired multiple rounds at target; reload
Vanguard of Valor Part I (CSI)				
OEFC12, OEFC13	As the sun rose the next morning, the enemy opened fire again. "It's like they were punching in a time clock at work," said Sergeant McMillan. Instinctively, the Soldiers began looking for targets asking, "Where's it coming from, where's it coming from?" Fire came from a compound with a red door to the southwest. The scouts laid down suppressing fire with an M240B machine gun as M-203s and sniper rifles added to the fray. "We let them have it," said Spear. The second fight for OP Dusty had begun. ⁴¹ Hearing the commotion, Specialist Howes woke up, grabbed his rifle, and climbed up to the roof where he found Captain Faucher directing fire. By this time, the enemy was firing from various locations. "Hey, we're taking small arms fire from over here," shouted one of the scouts while pointing north. Rounds started flying over everyone's head. Spear fired his M320 at the location while Howes fired a number of red smoke grenades to mark targets for the helicopters that had been circling since dawn. ⁴² Enemy fire intensified just as it had the day before. At the OP's entrance, Sergeant Brilla fired his M4 from behind the tractor plow until an RPG round flew in and bounced off the wall behind him, leaving a fourinch hole without exploding. "It really scared the hell out of me," he said. ⁴³ (pg. 169)	Scout Platoon from 2/502nd	Enemy Attack on OP Dusty	Limited visibility conditions; engaged from elevated position; engaged multiple targets. Engaged from cover/barricade.
OEFC14	At the strongpoint qalat, the Soldiers of 2d Platoon worked to return fire against the many enemy positions. With all of 2d Platoon, the ANA Soldiers, and the support assets inside the structure, crowding quickly became an issue. Making matters worse, the qalat only had one window from which the Soldiers could effectively return fire. From this window facing the south, 2d Platoon's Soldiers returned fire as best they could but many of the known enemy positions were outside of the field of fire offered by the window. Because the trapped elements of 3d Platoon lay to the south, the Soldiers in the qalat directed their fire carefully in an attempt to avoid any friendly-fire incidents. Unfortunately, these precautions further limited the platoon's freedom of action. In spite of this, the Soldiers in the qalat managed to restore some measure of fire superiority over the insurgents, thanks due in part to Nesse and his team leaving the cover of the qalat to return fire. Inside the qalat, Specialist Michael Patterson fired his M4 rifle and M203 grenade launcher through the window at enemy positions on the ridgeline to the southeast. The volume of fire increased when 2d Platoon brought an M48 machine gun into action. ²¹ (pg. 190)	Cougar Company, 2d Battalion, 327th Infantry Regiment (2-327 IN)	Clearance Operations on villages	Target discrimination; engage from cover/barricade;

OEFC15	<p>Staff Sergeant Cunningham later recalled the intensity of the initial barrage by stating, "I've been in a bunch of firefights. That was probably one of the most intense."²⁷ Specialist Daniel Linnihan remembered being amazed by the "ridiculous" volume of RPG fire. Now well aware that the enemy group maneuvering against them was not just a few insurgents with AK-47s, but something much larger, Linnihan recalled, "They clearly came up there to kill every one of us."²⁸ After several minutes of intense fire coming from the woods to the north, it became clear to the Soldiers on that end of the perimeter that approximately 50 insurgents were coming toward them and attempting to flank the patrol base. The enemy had established two support-by-fire positions to the north and northwest and continued to pour machine gun fire into the patrol base. After the initial shock of the sudden attack wore off, the Soldiers of the kill team began to fight back. Those positioned closest to the enemy advance on the northern edge of the perimeter returned fire into the tree line but realizing that they were too exposed, began to fall back to the "Alamo" and the cover of the rocks. Specialist Shawn Heistand fired a burst from his assault rifle in the direction of the enemy and then got up and darted for the southeast corner of the team's position (PAGE 12-13)</p>	3-71 CAV	Enemy Attack on OP Position	Engaged multiple targets; fired multiple rounds; engaged moving targets.
OEFC16	<p>"Within seconds of the last person walking by our OP/LP, the patrol base initiated contact," said Sergeant Reese.³⁴ Lieutenant Smith whispered over the radio, "Fire, fire, fire."³⁵ Four of the enemies were directly in front of Trudel's location. At this point, every Soldier facing the trail opened up on the insurgents who attempted to fight back, died trying, or ran away. Smith blew one claymore sending shards of shrapnel into the enemy column. Private First Class Larson, nearest to the southern ravine, noticed two enemy heading in his direction but their close proximity prevented him from firing his 40mm grenades which require a minimum of 15 meters to arm. So he used his rifle instead. One fell within six feet of his position and Larson remembered, "The other fell and rolled down the cliff."³⁶ When the wounded insurgent at Larson's feet attempted to reach for his weapon, Larson killed him with a shot to the head. Sergeant Tanner saw three or four insurgents from the back of the enemy column head toward a draw that contained a claymore and yelled to his men to blow the mine and throw grenades. Sergeant Christopher Thompson, A Team Leader for 2d Squad, launched a 40mm grenade from his M-203 on a group of the enemy hitting three to five of them. Lieutenant Smith saw an arm flying off one of them. Private First Class Arturo Molano, a machine gunner for 2d Squad, hit one fleeing insurgent as he fell down into a ravine (see Figure 5). (pg. 38-39)</p>	2d Platoon, Bravo Company, 1st Battalion, 26th Infantry	Ambush against insurgent forces	Close range engagement; engage moving targets; engage multiple targets; engage in limited visibility conditions; engage from prone position.
OEFC17	<p>The enemy, caught totally by surprise, continued running in all directions during the deadly onslaught. In fact after the cease fire, platoon members discovered a right shoe and a left shoe about four meters apart with a blood trail leading towards a cliff edge. Apparently, one insurgent was either blown out of his shoes or ran right off a cliff. ³⁷ At the OP/LP, the Scouts remained prone as friendly fire flew over their heads. As soon as they noticed several insurgents running in their direction, they too joined in the fray. Sergeant Nightingale shot two of the enemy with his silenced M-4 potentially saving Sergeant Reese from harm because the enemy was within a few feet of Reese's location. Nightingale then threw a grenade at another insurgent heading south down the trail. Specialist Custer used both his M-4 and M-203 to fire on the fleeing men. Reese shot another insurgent with his M-110 Sniper rifle and threw a hand grenade in his direction. (pg. 39)</p>	2d Platoon, Bravo Company, 1st Battalion, 26th Infantry	Ambush against insurgent forces	Close range engagement; engage moving targets; engage multiple targets; engage in limited visibility conditions; engage from prone position; target discrimination.

OEFC18	<p>As 1st Squad took stock of its situation, their adversaries maintained a deadly barrage of machine-gun and small-arms fire. In spite of everything, 1st Squad kept up a blistering fire on the enemy. On the left, Chandler, Iacoviello, and Hall fought back with a vengeance while on Faggiano's right, Lee, Thompson, and Bonilla put up the same determined resistance. Looking down the line and shouting out fire commands, Faggiano saw an enemy bullet bounce off the ground and fly right between Thompson's arms as he fired his M-4. The squad leader watched in amazement as Thompson momentarily slid back behind cover and then quickly popped back up to engage the enemy. "They did a great job," Faggiano stated afterward.³⁰ Both Faggiano and Chandler could still see a large group of fighters running in and out of the building southwest of their position. Neither Soldier knew it at the time but Captain Crawford, the Squadron S2, had already confirmed that the structure was in fact, a hardened Taliban fighting position and a command and control point. (pg. 142-143)</p>	Headquarters Troop, 1st Squadron, 75th Cavalry Regiment	Clearance Operation in Zhari District	Engage multiple targets; engage from cover/barricade.
Vanguard of Valor Part II (CSI)				
OEFC19	<p>Murphy stood behind the wall, holding his M4 rifle against his chest with his right hand when he felt something impact on his chest plate. He reflexively struck his hand under the plate to see if he had been hit. Seeing no blood, he continued to call in rounds and fire his rifle. As rounds smacked around Murphy's head, he had his machine gunner set up a firing position at a gap in the wall, then reported the situation to Priscock, and called in aerial support fire from the on-station AH-64 Apache and OH-58 Kiowa helicopters. Staff Sergeant McDonald asked Murphy if he was okay and began checking his body when he noticed blood dripping from Murphy's right glove. Murphy had, in fact, been hit in the wrist. McDonald applied a tourniquet to Murphy's arm as a precaution.⁴⁴ When Staff Sergeant Jaime Newman heard what happened, he brought up the medic, Specialist Michael Babinski, who loosened the tourniquet and wrapped a Kerlix bandage on the wound.⁴⁵ Everyone kept telling Murphy to get his wrist examined, but he just brushed them off. "I'm good, I'm good," he insisted.⁴⁶ (pg. 10)</p>	Bravo Company, 1st Battalion, 502d Infantry Regiment	In Makuan to clear the area of IEDs, bomb-making facilities, and insurgents	Engage from cover/barricade.
Weapon of Choice, ARSOF in Afghanistan (CMH)				
OEFC20 OEFC21 OEFP1	<p>At Objective Brigid, a guard opened fire when he spotted Ashford's assault teams as they ran through the main gate of the compound to their breach points. His alarm shots started firefights as the assaulters fought their way across the courtyard and into the main building. Once inside, it was close-quarters combat from room to room, and the resistance was sharp. Having initially stunned the enemy fighters in the room with flash-bang grenades, the assaulters killed five enemy fighters as two escaped out windows. When MSG Albert Payle and SFC Jon Hsu (pseudonyms) burst into another room, an enemy fighter ran out right between them. Hsu spun about and pursued him, shooting him down before he could escape. Alone and wearing NVG, Payle faced three enemy fighters surrounding him in the darkened room. He quickly killed two of them with his M-4 carbine before the third jumped him from behind, clawing at his eyes. Payle, using combat jiu-jitsu, threw the enemy soldier over his shoulder, sharply snapping the man's head to one side. In the darkness, Payle felt the enemy fighter, even with a broken neck, still grasping at him. Payle drew his 9mm pistol and fired twice, finally finishing his opponent. As he started to move, Payle realized that his opponent was still hanging on him, his hand having been caught in his body armor during their struggle. Not all fought so violently or so stubbornly. In the next room, a single enemy fighter dropped his rifle when assaulters charged in and was readily subdued and flex-cuffed.¹²⁴ (pg. 239)</p>	5th Group	Raid Objective	<p>Limited visibility conditions; close engagement; engaged multiple targets; engaged moving target; shooting on the move.</p> <p>Limited visibility conditions; close engagement; engaged multiple targets.</p> <p>Limited visibility conditions; transitioned to secondary; fired multiple shots at single targets.</p>

<p>OEFC22</p> <p>OEFC23</p>	<p>Once on the ground, the bus-sized target was no longer moving, and it was easier to hit. The wounded Deese fell into the radio rack when the helicopter landed hard. On the floor he tore the lanyard off his M-9 pistol and used it on his leg as a tourniquet. The heavy volume of enemy fire penetrating the fuselage turned the cabin soundproofing into confetti. Smoke was smoldering from the tracer bullets. Three rounds slammed into SFC Lafayette's flight helmet, stunning and rupturing blood vessels in an eye as it knocked him backward. Ranger SPC Anderson was mortally wounded midcabin, and the Air Force PJ, Senior Airman Jason Cunningham was working on him. SGT Larken retreated from the open ramp to find cover inside the Chinook. Then an RPG flew through the open right cabin door, striking the oxygen console hanging above the left window. Although the grenade did not explode, the impact sparks set the soundproofing on fire. With the Rangers off, SGT Bradley Walters (pseudonym), the tail gunner; CWO Talbert; and the other Air Force PJ, SSGT Kerry Miller (pseudonym), set up a defensive position on the ramp.⁷⁴ The Ranger force exited the Chinook into a withering barrage of small-arms fire. SSG Raymond DePouli was the first Ranger off the ramp. Exiting, he was hammered in the back and spun around. The bullet hit his armor plate inch above his exposed area. He quickly located the enemy fighter wreaking havoc from the 8 o'clock position and emptied a full magazine from his M-4 into him. SGT Joshua J. Walker exited the right side, immediately took several hits on his Kevlar helmet, but managed to empty his M-4 toward the bunker on the right. (pg. 306)</p>	<p>Rangers</p>	<p>Downed Chinook</p>	<p>Fired multiple rounds at a single target.</p> <p>Shoot on the move; fired multiple rounds at a single target.</p>
<p>OEFC24</p>	<p>As CWO Mark Reagan (pseudonym) maneuvered to land his helicopter, SGT Roger Wilkerson (pseudonym), trying to follow his target simultaneously, only got off a short burst from his minigun before the ammunition belt broke and the gun jammed.¹³⁹ SSG Charles Martin (pseudonym), the flight medic and a former Ranger SAW gunner, immediately stepped into the open door with his M-4 carbine.¹⁴⁰ Firing semiautomatic, Martin killed the truck driver and then shot a second fighter as Wilkerson began to fire his M-4. As the aircrew and Special Forces element continued to fire from the window ports, the pilots quickly repositioned the big Chinook to a new spot just over the crest of a small hill. The new position masked the helicopter and gave the assault force a superb firing position overlooking all three trucks in the convoy. (pg. 331)</p>	<p>SF</p>	<p>Landing Helicopter under Fire</p>	<p>Engage from vehicle (helicopter); engaged multiple targets; engage from cover/barricade.</p>

OEFC25	<p>Bennington signaled for 12 Pashtun fighters to follow him, and with three guides, the group ran several hundred yards downhill toward the wadi. Long practiced in infantry tactics, Bennington quickly placed the riflemen and the machine gunner along the crest of the bank opposite the orchard by pointing out exactly where he wanted each to lie down. Moments later, about 30 Taliban soldiers emerged from the grove of leafless gray apple trees, slipped down into the dry riverbed, and started across. Taking careful aim at the approaching Taliban with his M-4 carbine, Bennington “triggered” the ambush by firing first. Instantly, his entire squad joined in, spraying the riverbed with bullets. The loud staccato of returning Russian-model PK machine gun fire and the “whoosh” and crash of rocket-propelled grenades (RPGs) could be heard over the Pashtun machine gun and rifle fire. With at least 10 of the enemy force wounded and down in the dry riverbed, the others turned and fled back to the cover of the apple orchard. The Pashtuns cheered out loud about their success. Bennington directed the senior Pashtun, a veteran fighter who the Americans had respectfully nicknamed “Sergeant Major,” to keep the squad ready for another enemy attack. Then he ran back to Forsythe’s location to report that the enemy assault had been repulsed. Forsythe realized that the Taliban might try a similar flanking maneuver on their right and dispatched American Special Forces soldiers with another band of 50 Pashtuns to the west side of the bridge. Both groups watched and waited for another attack, but the Taliban was content to harass them with small-arms fire for the rest of that day.269 (pg. 177)</p>	SF	Ambush	Engaged from prone position; engaged moving targets; engaged multiple targets;
OEFC26	<p>“I might need a tourniquet.” The Ranger replied, “Can you cover the left side for us right now?” Gaines said, “Yes” and pulled his leg around, twisting his kneeboard to use the elastic straps as a tourniquet. As he covered the left with his M-4, Gaines mentally prepared himself for a life without a leg. Bounding forward while the others provided suppressive fire, CPT Self, SPC Lancaster, and the ETAC, SSGT Vance, joined Walker at the rock cropping. In one of the fusillades of fire, Vance had forgotten his rucksack with the radio at the base of the ramp. The Ranger force was being fired on from multiple sides. An enemy fighter popped up at the 4 o’clock position and launched an RPG that skipped off the ramp. SSG DePouli saw him, moved to the right side, and shot him in the head. Then DePouli and PFC Gilliam bounded to another rock pile farther to the right of the other Rangers. Beside the rock pile they discovered an enemy fighter riddled with bullets and simply pushed him out of the way. With five Rangers and the ETAC abreast, Self concentrated on the boulder position on top of the hill 50 meters away. The enemy threw hand grenades, wounding Lancaster in the calf, Self in the thigh, and Vance in the shoulder. Several Rangers tried throwing hand grenades in return, but thrown uphill, they all fell short, exploding in the snow. (pg. 307)</p>	Rangers	Downed Chinook	Shoot on the move; close engagement; multiple targets; engaged from elevated position (shooting up).
OEFC27	<p>The damaged aircraft seemed unstable, “almost like it was shuddering from the hard landing,” so Corbin held the controls, knowing that the Rangers were exiting. Gaines reached up and pulled the engines to stop. He tapped Corbin on the arm, grabbed his M-4 carbine, released his emergency door, and because a bullet had shattered his femur, threw his body out of the open doorway into 2 feet of snow. Corbin stuck his M-4 out the shattered window and returned fire as smoke filled the cockpit from a fire in the power panel by his seat. Talbert, the AMC, released his seat harness, turned around, and saw total carnage in the back of the aircraft. He threw himself over the companionway seat, grabbed his M-4, and headed toward the ramp. (pg. 305-307)</p>	Rangers	Downed Chinook	Limited visibility conditions; alternate firing position.

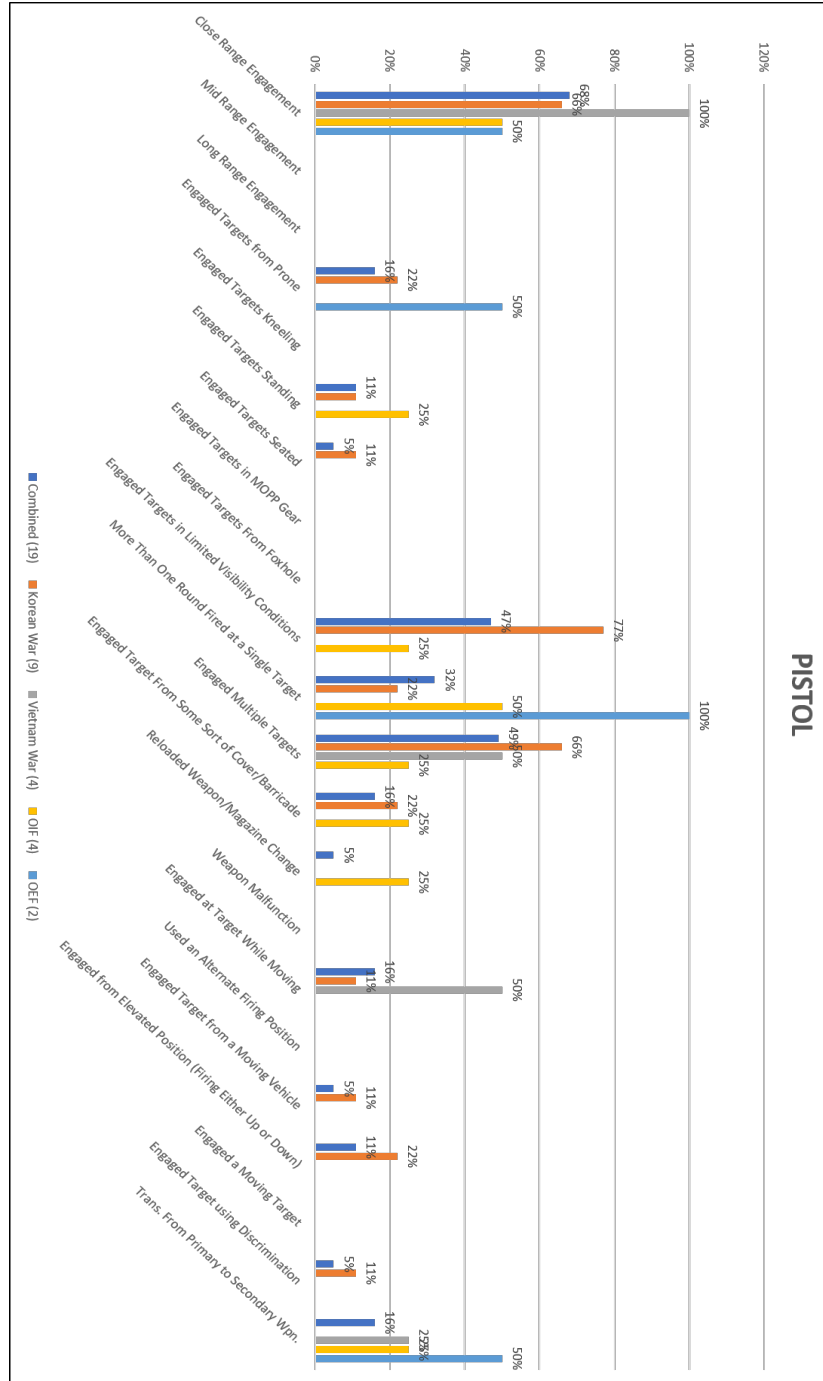
OEFC28	<p>With no other recourse, SFC Staunton, covered by CW3 Fontaine, inched down the smokey corridor to the edge of the doorway where the al-Qaeda were barricaded. 106 Staunton's first attempt to get a grenade into the room was caught by an al-Qaeda fighter who tossed it back outside the room. Staunton and the other two American assaulters managed to reach cover in an adjacent room before it detonated. Having run out of grenades, the holdouts threw chunks of masonry into the corridor. In the murky area, the Americans initially thought that they were grenades and retreated into a room. After that, SFC Staunton allowed his grenades to "cook off" before throwing them low inside the room and through an air vent. After both had detonated, Staunton fired a 5.56mm magazine into the strongpoint, reloaded, and then charged into the room, shooting the remaining al-Qaeda. His two backup men ensured that all were dead. (pg. 235)</p>	5th Group	Early Morning Raid Objective	Close engagement; reload; engaged multiple targets; fired multiple rounds at single target; shoot on the move.
Convoy Ambush Case Studies (Trans. Corps Historian)				
OEFC29	<p>The drivers received most of their small arms fire from the buildings, then a tree line and another compound to their left (east)... Again, Dolge's gunner realized they were taking fire from someone in door of a building. So Dolge pulled out his last magazine, which he had loaded with tracers, and fired three round bursts into the building. It then began to smoke and they no longer received fire from there either. 759 (pg. 258-259)</p>	Team Cadillac, 710th BSB	Ambush on Convoy	Fired multiple rounds at single target.
OEFC30	<p>CPL Lewis dismounted from his vehicle and banged on the door of Gun 1. Da Silva opened the driver's door and looked inside to see the crew was stunned by the blast and had moved to the rear of their vehicle. She reverted to her old drill sergeant voice and commanded the Soldiers to exit the vehicle. They began to climb out through the driver's door, the only operable door. Da Silva then passed them to her assistant gunner and he quickly hurried them into his gun truck through the passenger side door since the enemy fire from the high ground above them prevented them from entering through the rear door. Because of the cramped space, the crew of Gun 1 had to take off their body armor. Lewis borrowed Da Silva's M4 and began to return fire but could not see the enemy's muzzle flash to aim at. (pg. 277)</p>	286th Combat Support Sustainment Battalion	Ambush on Convoy	Engaged from elevated position (shooting up); engaged multiple targets.
Wanat, Combat Actions in Afghanistan 2008 (CSI)				
OEFC31	<p>With their M240 effectively out of action, Ayers and McKaig continued the fight at the Crow's Nest with two M4 carbines. Their technique was to pop up together at intervals, fire six to nine rounds at the muzzle flashes ringing the OP, then drop down before the enemy could respond. Although scared, the pair continued this maneuver until enemy return fire struck and killed Ayers, who collapsed over his weapon. Now alone in the position, McKaig began to experience problems with his M4. "My weapon was overheating. I had shot about 12 magazines by this point already and it had only been about a half hour or so into the fight. I couldn't charge my weapon and put another round in because it was too hot, so I got mad and threw my weapon down."⁵³ When he tried to use Ayers' rifle, he discovered that an AK-47 round had disabled it in the same volley that had killed his squad mate. (pg. 155)</p>	Company C, 2d Battalion, 503d Parachute Infantry Regiment	Wanat Outpost	Engage multiple targets; malfunction; fire multiple rounds at target.

<p>OEFP2 OEFC32</p>	<p>Meanwhile, a badly wounded Stafford crawled back into the northern firing position and emptied the magazine of his 9-mm pistol over the sandbag wall. Then Stafford reached for his two Claymores, recalling, "I grabbed one clacker and I brought it down, took the safety off, and I started clacking and there was nothing. I clacked it probably 10 times and nothing went off." The Claymore's wires lay on top of the ground and almost certainly one of the many RPG blasts had severed them. Stafford continued, "Then I saw the other one and so I grabbed it and clacked it. I don't know, the reports say [the] insurgents had turned them around and stuff like that, so I don't know if they had come in and turned them around, if they were that ballsy, or if all the RPG blasts had made them fall down but when I clacked, it blew up and back at us."⁵⁵ Startled, Stafford grabbed an M4 carbine that was in the position (either Pitts or Zwilling's) and began firing it. However, he recalled being hit almost immediately by enemy fire, "I probably got off four or five rounds before another RPG hit right in front of that wall and tore my hands up really bad. So I dropped the rifle and I was hurting really bad at this point . . . I'm bleeding out of both legs, arms, hands, stomach."⁵⁶ Stafford crawled back to the southern position where the other OP survivors had at this moment clustered. Bogar's earlier suggestion that the troops at the OP build the southern position had almost certainly saved the lives of those who remained at Topside.⁵⁷ (pg. 156)</p>	<p>Company C, 2d Battalion, 503d Parachute Infantry Regiment</p>	<p>Wanat Outpost</p>	<p>Engaged from prone position; fire multiple rounds. Fire multiple rounds.</p>
<p>OEFC33</p>	<p>When the action began, the two engineers who were operating the Bobcat next to the mortar area reinforced Phillips' men in the mortar pit. There, the defenders used whatever weapons were available to them, firing personal weapons furiously into the nearby trees and aiming 40mm grenades at more distant enemy positions. Without any machine guns of their own, the mortar men had to use M4 assault rifles firing at the maximum rate of fire simply to suppress the enemy in order to survive. In this way, Phillips burned out a series of three M4s. He then picked up an M249 SAW belonging to the engineers and tried to fire it but it failed to shoot. Mortarman Queck had previously tried to fire the SAW but it was jammed. Another trooper later fired it successfully after changing its barrel. Queck instead fired an AT-4 rocket launcher he found at one of the buildings from which enemy fire was coming. Soldiers nearby followed up Queck's effort with hand grenades.⁹ (pg. 144)</p>	<p>Company C, 2d Battalion, 503d Parachute Infantry Regiment</p>	<p>Wanat Outpost</p>	<p>Engaged multiple targets; engaged from elevated position (shooting up).</p>
<p>OEFC34</p>	<p>The new group consisted of Samaroo himself, Specialist Michael Denton from his 1st Squad, Sergeant Israel Garcia of the 3d Squad, and Private First Class Jacob Sones from the 2d Squad. The latter two had sprinted from the main position to the TCP when they heard about the desperate situation of the OP. Before moving across the open terraces to the OP, Samaroo carefully scanned the hillside where the OP was located for any enemy activity. He recalled, "That's when I engaged a man, shot him, he was directly on top of the OP shooting over a large boulder into the OP."⁸² Samaroo and his three men then ascended the hill. Their vigorous counterattack drove away the AAF who had entered OP Topside's perimeter, regained control of the position, and permanently secured it in American hands. (PAGE 161)</p>	<p>Company C, 2d Battalion, 503d Parachute Infantry Regiment</p>	<p>Wanat Outpost</p>	<p>Engaged multiple targets; engaged from elevated position (shooting up).</p>

Source: Created by author using narratives collected from publications listed in Appendix C.

APPENDIX J

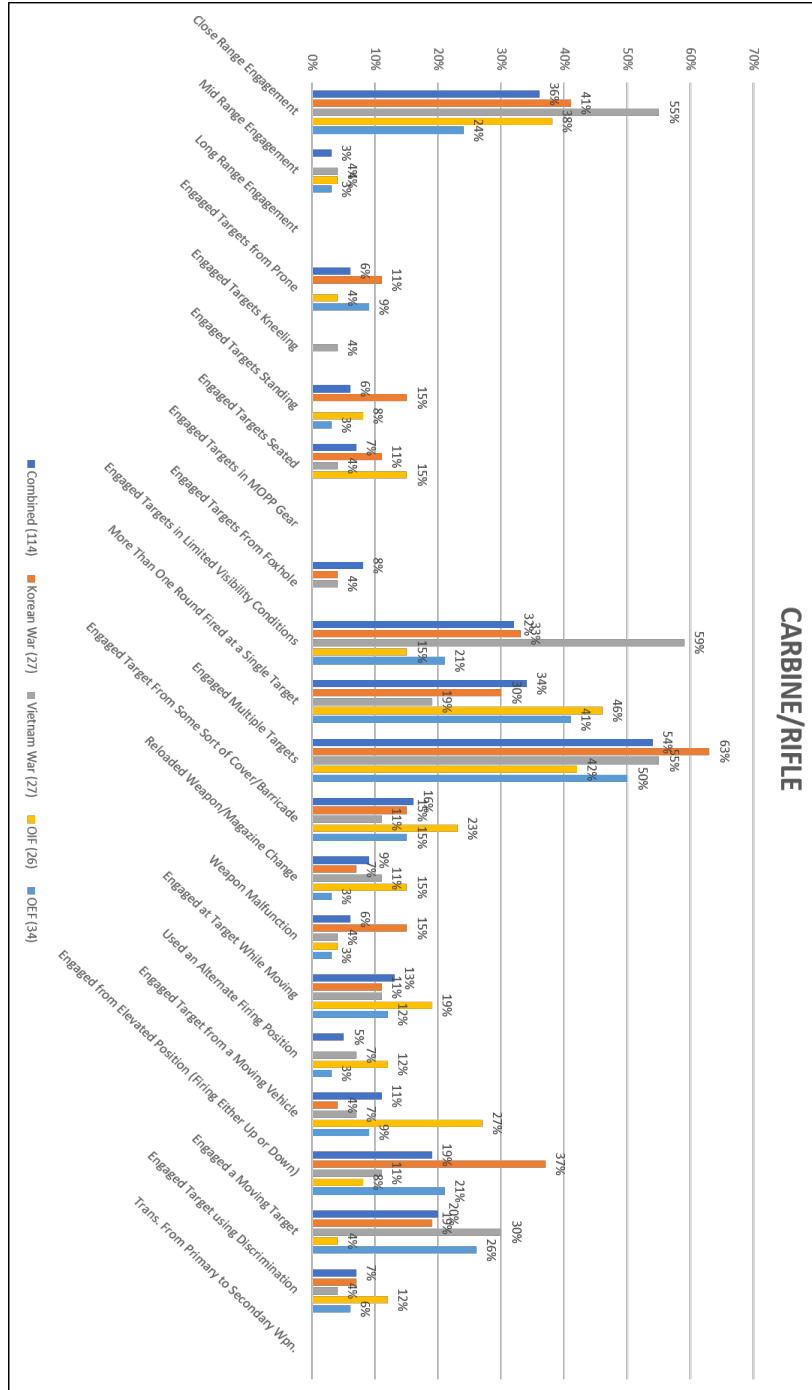
PISTOL DATA CHART



Source: Created by author.

APPENDIX K

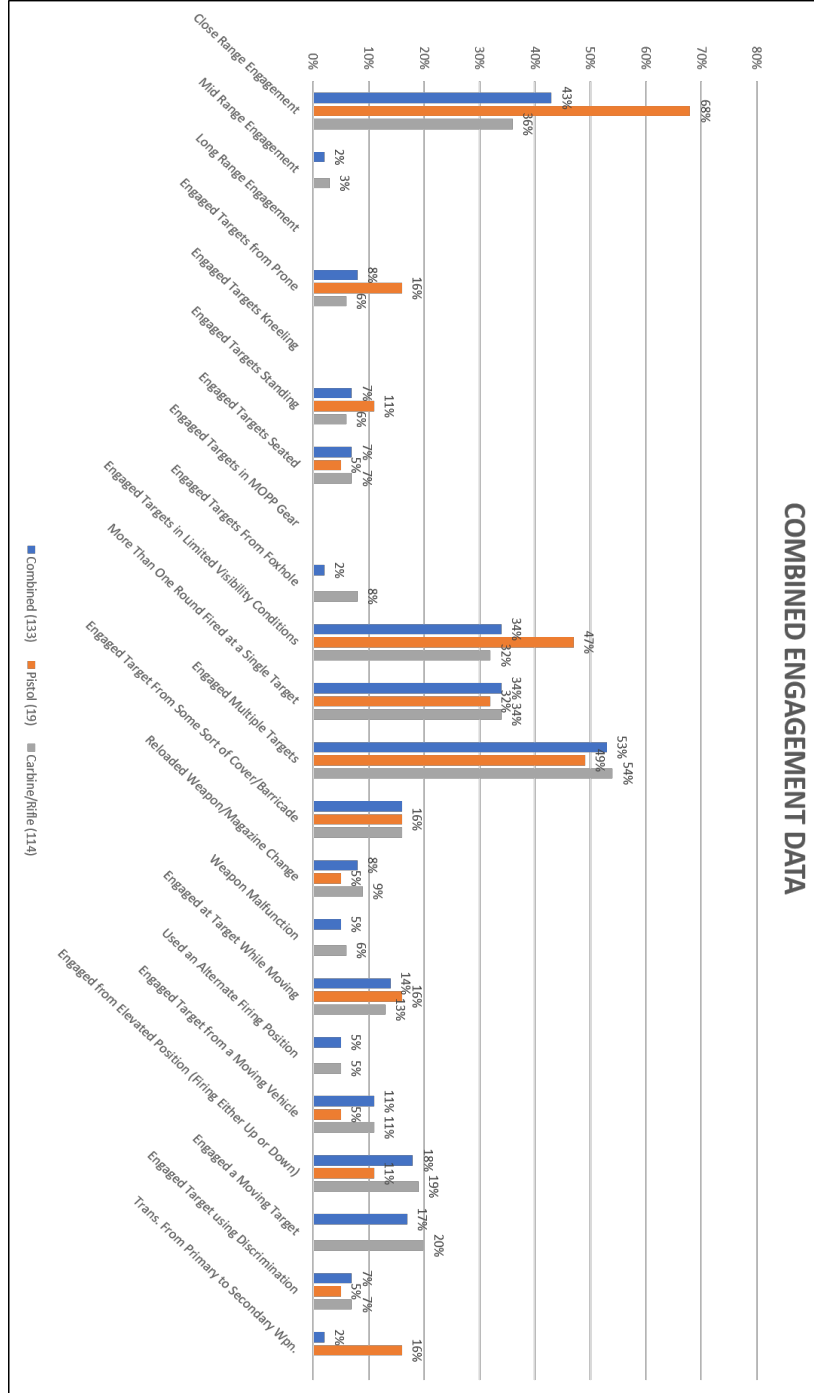
CARBINE/RIFLE DATA CHART



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APPENDIX L

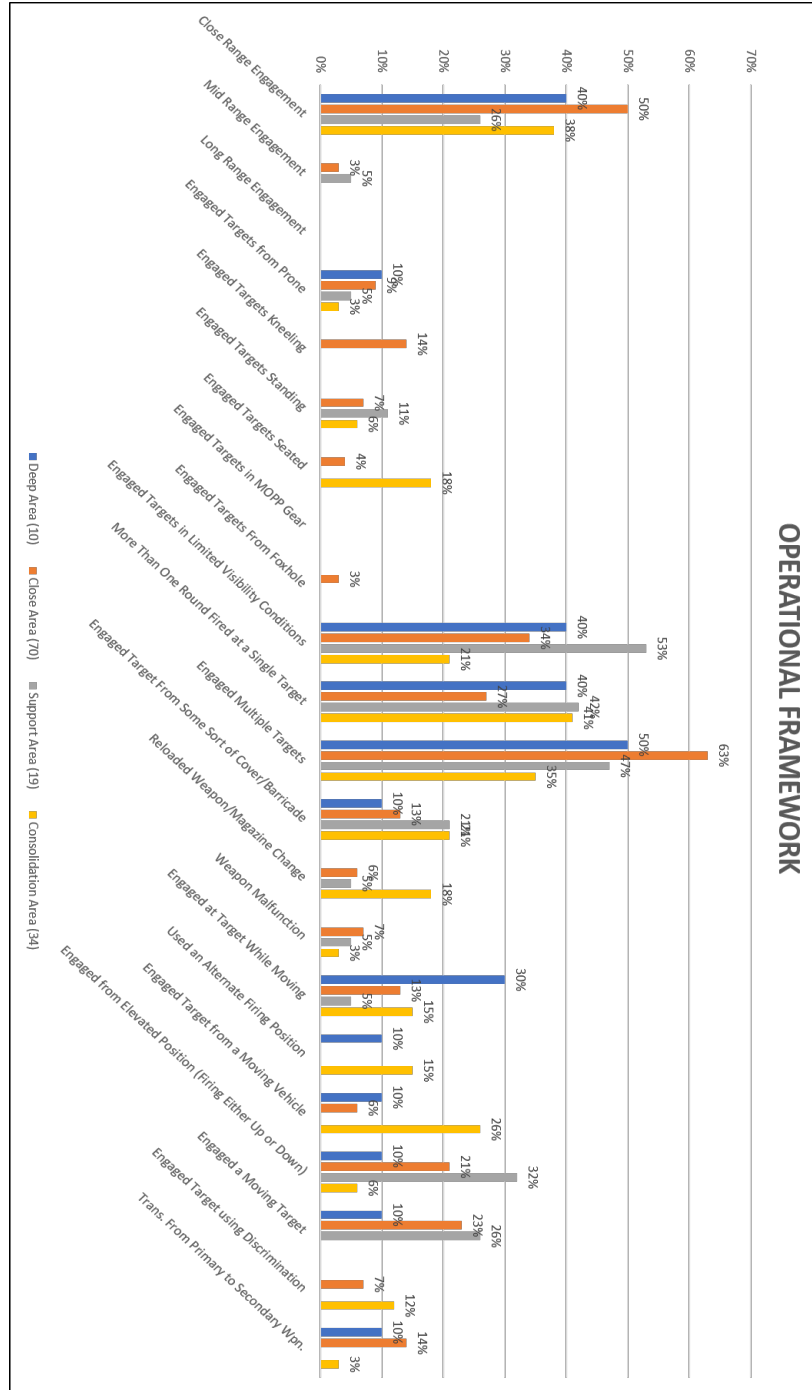
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APPENDIX M

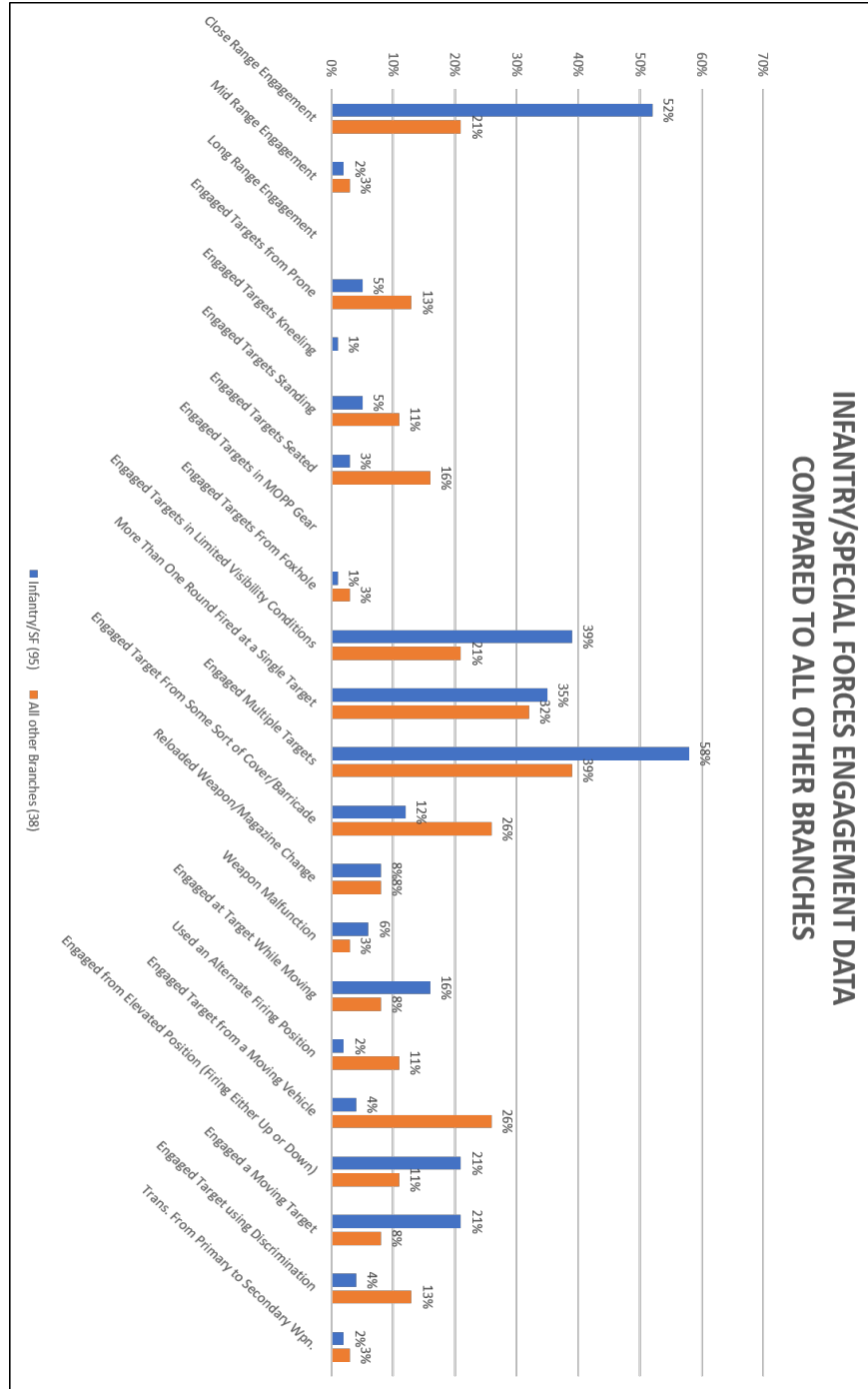
OPERATIONAL FRAMEWORK DATA CHART



Source: Created by author.

APPENDIX N

INFANTRY/SPECIAL FORCES ENGAGEMENTS VERSUS OTHER BRANCHES



Source: Created by author.

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