

Tank Master Gunner Course 40 Years Later – What’s Next?

by retired 1SG Jack Cooper

Forty years ago, GEN Donn A. Starry, then commander of the Armor Center at Fort Knox, KY, decided the Tank Corps needed some expertise to take it to the next level and so he created the Tank Master Gunner Course (mainly due to lessons-learned in the 1973 Yom Kippur conflict). The first class graduated in May 1975 with 15 graduates and never looked back. Now, 40 years and 4,080 graduates later, the course still continues to put out the best master gunners in the world. But is it enough? Are we giving the force what it needs? In this article, we will look at where the course came from, where it is now and explore ideas for where it needs to go to continue to produce the quality master gunners the force needs.

The Tank Master Gunner Course started with the M60A1 platform and progressed through the M551, M60A2, M60A3, M1, M1A1, M1A2 and Mobile Gun System (MGS) platforms. Many of the graduates returned to attend some of the other courses as the Army continued to equip units with updated vehicles. Master gunners quickly built a reputation as the “go-to” guys for all things gunnery and turret-maintenance related. As we moved into different conflicts, the role expanded further to advising the commander on enemy capabilities vs. U.S. capabilities, employment and battlefield training and sustainment. Master gunners soon permeated the Army structure from company level through corps and major commands (MACOMs).

The reputation tank master gunners enjoy spread throughout the Army. In the 1980s, the Bradley community climbed on board and started a Bradley Master Gunner Course. (In the early 2000s, the artillery and aviation communities also started their version of the Master Gunner Course.) This emulation has continued to expand, and there are different courses offered throughout the Army that have a connotation of being a master gunner for their specific career field (digital master gunner, for instance).

The one thing these courses have in common is that they all have their roots in the Tank Master Gunner Course. Commanders throughout the Army have been influenced by working with and observing tank master gunners during their early formative years (i.e., branch-detailed officers) and have taken this vision of mastery and pushed to create that type of expertise within their career fields.

Qualifications

Over the last 40 years, the Tank Master Gunner Course has changed, but not significantly. We have updated classes to reflect the platforms and incorporated lessons-learned from combat. What we haven’t changed are the core precepts of the course.

For those of you not familiar with what the course teaches, here is a brief overview of the path to becoming a tank master gunner.

A Soldier must:

- **Have a 19K military-occupation specialty (MOS).** Pretty self-explanatory. Only tankers are allowed to attend the course designed for tanks. Makes good sense.
- **Be a promotable sergeant to sergeant first class.** Experience is definitely an indicator of success. Could someone pass the course as a specialist? Possibly, but the application of skills leans heavily on a person’s experience level.
- **Have a general-technical score of 105 and combat-operations score of 110 on the Armed Service Vocational Aptitude Battery (ASVAB).** These dictate the Soldier’s ability to achieve the course standards. It’s a tough course, and information is given at a fast and furious pace. Those with scores below the requirement may not be able to keep up. There are always exceptions, and the best indicator for someone who doesn’t have the requisite score is the Test of Adult Basic Education (TABE) test. If a Soldier scores at a 12.9 level on the TABE, he should be able to keep up with the course. (This also is an indicator that he could probably raise his ASVAB scores if he retested. Sometimes high-school ASVAB scores are not a good indicator of what a Soldier can achieve.)
- **Possess one year of tank/MGS commander time.** See Bullet 2. Experience helps.
- **Have qualified as a tank/MGS vehicle commander (VC).** VC duties are different than gunner duties, and the experience is necessary.
- **Complete the Gunnery Skills Test within the last three months.** These are skills we build from and having them down cold is important.

- **The Soldier must volunteer for the course.** It can be a thankless job, and if you don't want to be there, the odds of your passing are greatly diminished.
- **The Soldier must have a remaining service obligation (RSO) of at least 10 months.** The Army has a right to get a return on its investment. Personally, I think it should be 24 months.
- **The Soldier must be personally interviewed and recommended by the battalion commander.** This is probably the single most important interview you should have. Some commanders have the command sergeant major do the interviews, and in some cases, it isn't done in person but on the recommendation of the current master gunner. Commanders at all levels should interview the candidates, and the commanders and Soldiers should both understand what being a master gunner entails.

Training phases

OK, a Soldier has been interviewed, meets all the prerequisites and reports to Fort Benning, GA, for training. The training follows three basic phases: maintenance, advanced gunnery methodology and training management. (See Figure 1.)

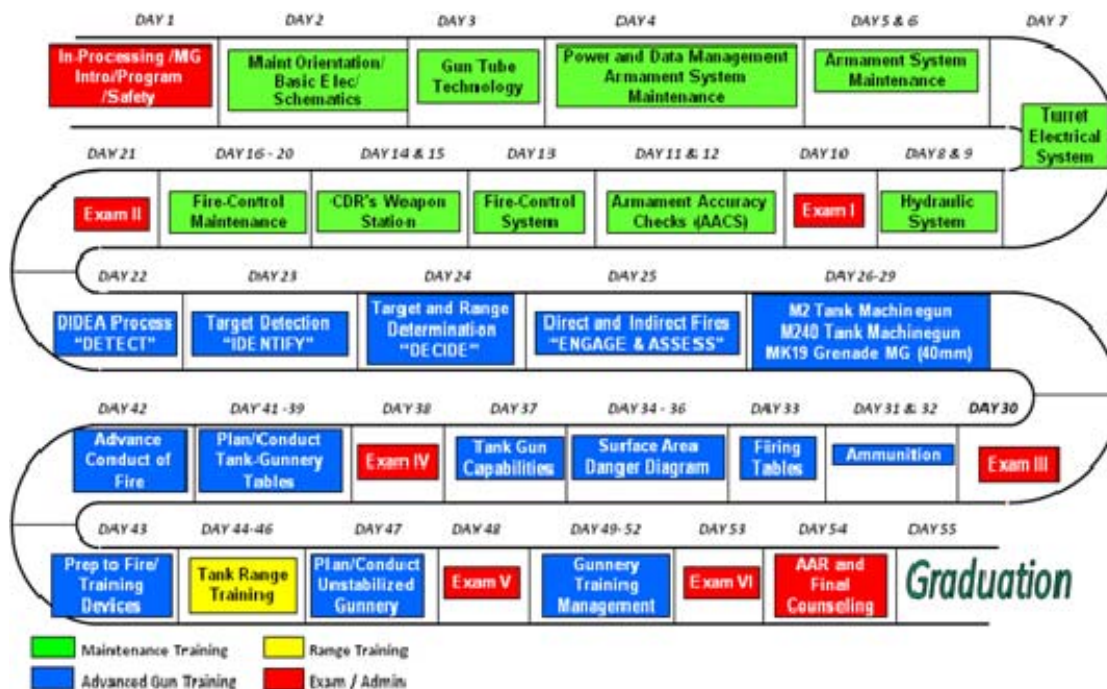


Figure 1. The M1A2 System Enhancement Program master-gunner course is 11 weeks/55 days.

Maintenance. When I was the Tank Master Gunner Branch chief, I was asked many times why we train maintenance first in the course, or heck, why at all. It's simple, really. To effectively understand the system and how to best use it, you have to know how it works. A NASCAR crew chief is responsible for training his entire maintenance crew, prepping and preparing the car, and adjusting it to meet the driver's needs. He does this by understanding the complete system – similar to our mechanics who work on our equipment. The driver has to understand how the adjustments the crew chief makes affect the car and works with the mechanics to get the best performance out of his car. The driver is not a mechanic but knows enough about the mechanics of the car to advise the crew chief when something is wrong or is potentially going wrong. The Tank Master Gunner Course follows the same principle: you can't effectively train or advise a crew to perform to the highest possible standard unless you know how things work.

This does not mean we train the candidates on everything mechanical; we have proficient mechanics, and a master gunner is not a replacement for them – not even close. We teach them about the systems that impact the crew's ability to effectively fight and maintain their vehicles in combat and training. If a system breaks in combat or training, the master gunner, often over the radio, may be able to troubleshoot or provide workarounds a mechanic may not know (like a driver telling his crew chief about a vibration caused by a loose lugnut). The mechanic is concerned, rightfully, about the *mechanics*, of the platform, while the master gunner is concerned about the *overall performance* of the vehicle and crew.

Many times I have witnessed (or have been) the master gunner talking crews through issues from the tower, finding the fault or a workaround that allowed the crew to continue the mission without getting maintenance involved. The time it

would have taken the crew to go to maintenance, have the problem diagnosed, repaired and then return to training can be the difference in mission success or failure. This is especially true if the problem is something that could have been dealt with by the knowledge and experience of the master gunner (i.e., incorrect input into the computer, having the sight in the wrong power, etc.).

These solutions and workarounds the master gunner uses are direct impacts of understanding the way the system works and what the likely problems are. Not all problems can be fixed; many are beyond the scope of the master gunner to fix or diagnose, and that is where maintenance personnel come in.

The Tank Master Gunner Course's maintenance phase has classes like basic electricity, fire-control system, power and data management, armament-system maintenance, turret electrical and hydraulic system maintenance, armament-accuracy checks or gun-tube technology. The maintenance phase is the foundation for everything else the master gunner will learn in the coming weeks and is probably the most important aspect of the course.

Advanced gunnery methodology. Once a candidate successfully completes the maintenance phase, he moves into the advance gunnery methodology phase. This phase builds on the maintenance phase and on the individual's experience. This is where tanking becomes a science. Candidates learn the entire *detect* (target detection), *identify* (target and range determination), *decide* (direct and indirect fires), *engage* (fire commands) and *assess* (DIDEA) process; how DIDEA works; and how to train crews in the DIDEA process. They learn the finer points of machineguns, how to build surface-danger zones (SDZs) and how to understand firing tables. They receive detailed knowledge on ammunition from 7.62mm through 120mm, training devices, environmental factors that impact tank capabilities, and how to plan and conduct training ranges.

The advanced gunnery methodology phase creates the detailed knowledge master gunners are known for having at their fingertips. Most crews understand that we give fire commands, load ammunition and shoot targets. They don't know how all of it interrelates or why. The master gunner does. He uses this knowledge to increase the capabilities of the crew, making them more knowledgeable and, more importantly, more lethal on a field of combat.

This phase culminates with the candidates building a live-fire range, conducting range preparation and vehicle preparation, and conducting a live-fire training event. The candidates are evaluated on all aspects of the range and are given opportunities to serve in every range position from master gunner to safety to RSO to officer in charge. This gives them a good understanding of the total range process and not just the targetry or tower aspect. Candidates are evaluated on inspecting ammunition and determining computer-correction factors, and are given an in-depth understanding of how the different inputs to the computer system can impact the round's strike.

The candidates also serve as the crews for the vehicles on the range, so they have to prepare them, boresight them, load them and shoot them. After all the shooting is done, candidates are also responsible for clearing and turning in the range.

Training management. Finally the candidate enters the training-management phase. This phase takes all the knowledge the candidate has received, leverages his experience and teaches him how to put it all together into a cohesive training plan for the commander. This phase also teaches a candidate how to present the data; explain development of the program, the program's goals and assessments; and be able to validate the program's objectives if necessary. A good gunnery plan is not built in a vacuum and is designed with the commander's intent in mind at all times. If we fail to build a program that allows the commander to achieve his goals, we have failed in our mission.

We don't lose too many people in this phase, but generally, the ones we do lose are unable to coherently present their plan and respond to direct questions involving the plan's detail. The instructors delve deep into the candidates' knowledge base and use that as a final check on training.

The instructors will not allow a Soldier to graduate the course who is not able to represent the quality of the master gunner we have developed over the last 40 years. We owe it to commanders and to the Army to only graduate the best master gunner we can train. In the last 40 years, that has worked out to around 100 per year. That may sound like a lot, but in reality, it is less the 1 percent of the Armor force.

Testing and attrition rate

Every few years the Master Gunner Branch gets asked to look at our grading criteria and attrition rates and find ways to reduce the failures. I understand the reasoning perfectly, and we have had studies done to assist us in doing so. Bottom line up front: the course is operating the way it should be, testing the way it should be and providing the candidates with all the needed information to pass the course.

I have been asked why the Tank Master Gunner Course has a 90 percent grading criteria on written tests and a 100 percent

criteria on hands-on testing. Simple answer is we do not train or graduate the average Soldier. We call them *master gunners* for a reason. The Army has always set 70 percent as the requirement to graduate from any basic-level Army course. That is perfectly acceptable for the average Soldier and average course. It is not acceptable for a master of a craft. My analogy is that 70 percent = average, 80 percent = expert and 90 percent = master.

Does this mean the other courses that do not have 90-percent-or-better criteria are not putting out quality master gunners? No. It means they determined what was best for them. We are not in a competition. Our standard is what it is because that is what the tank community has said it wants, and we have striven to ensure we have continued to maintain the standard GEN Starry demanded from the course's inception. Every master gunner who has ever graduated from the course will defend the 90-percent standard. Even candidates who did not graduate would tell you they were given all the necessary information they needed to pass the exam, and it usually is a dumb mistake that causes them to fail the test.

There have also been suggestions made to retain the Soldier in the course even if he fails because something is better than nothing. I couldn't disagree more. As I mentioned above, 90 percent has always been the standard, and it is a standard that *has* to be maintained. If it is not, the knowledge base of the master gunner is compromised. There was an Army Research Institute study a few years back that specified that the course standards should not change, yet this issue raises its head again and again.

Our current testing cycle goes like this:

- Candidates are given an in-depth review the day before the exam.
- The next morning they take the initial test. Normally this covers four to six subject areas.
- Should a candidate fail an area, he is counseled by the team chief and is then retrained by the primary instructor of that block of instruction. That afternoon, after retraining, the candidate is given a retest of the failed areas only.
- Should the candidate fail a second time, he is then counseled by the dismissal authority (currently the battalion commander), retrained again and then given overnight to prepare. The next morning, the candidate meets with the primary instructor to review once again. After the review, the third retest is administered.
- If the candidate fails, his time at the course is over. If he passes, he joins the other candidates for the next block of instruction. This allows candidates to focus only on those areas they were deficient in.
- During the review process of each step of the exam, the instructor is required to show the branch chief and then the dismissal authority how, where and when the candidate was instructed on missed material. This is our system of checks and balances that ensures the candidate was given all the necessary material during the course.

Should there be any question about the presentation of the material (either in how the instructor presented it or in the reference itself), the benefit of the doubt is given to the candidate. The instructors are there to help the candidates and are required to make themselves available to the student 24/7. We have never "taught the test" – i.e., given oral or physical cues on "testable information." It is all testable, and candidates need to place the same emphasis on all aspects of the course.

The attrition rate is the number looked at after a candidate fails the course. The number varies from year to year and class to class. But, after 40 years, our overall average is right at 20.8 percent. That is comparable to most Army courses and better than quite a few. We have had classes reach 60 percent attrition or higher, and we have had classes with a zero-percent attrition rate.

Some of our highest attrition rates occurred during the last decade or so. This was mainly due to a loss of focus on the course. Soldiers were coming straight from combat deployments to the course (some literally straight out of combat) and had not been on tanks for a while. We granted a lot of waivers for qualification and tank-commander position-time requirements. This got worse as the Iraq and Afghanistan deployments continued over the years. It was tough on candidates who had been deployed for nine to 12 months or more to come to Fort Knox (or Fort Benning, GA) to attend the Tank Master Gunner Course for three months. They wanted to see their families and decompress. At the beginning, many deployed again within months of returning to their units. Not anyone's fault; it was just the way things were at the time.

Unit leadership was hesitant to send Soldiers right after deployments and asked us to put together mobile training teams (MTTs), which we did. They were not the resounding success we had hoped for. Why? There are many distractors at home station: candidates were still on the duty roster, had hey-you appointments or details, wanted family time, etc. ... the

normal things that impact Soldiers at home station. The MTTs had some of the highest attrition rates we ever had. Soldiers who physically come to the course tend to be more focused, and the distractions are at a minimum.

So why do people fail the course? There are a multitude of reasons, but the two most common are failure to meet course prerequisites and improper study habits. Why do we allow Soldiers to attend who fail to meet course prerequisites? Commanders can and do request waivers to some of the prerequisites, which are generally granted. Commanders know their Soldiers better than we do, and usually they do pretty well. But, by and large, the ones who did not succeed did not meet one or more of the prerequisites.

The other major cause is improper study habits. This is a demanding course, and working as part of a study group is critical. Candidates who attempt to go it alone are rarely successful. Candidates are in class eight hours a day and usually have two to four hours of homework and study groups nightly. The dedication required is prodigious, to say the least. The candidates are informed upfront about the study requirements and necessity of study groups. But, periodically, some try to go it alone. They are rarely successful.

Recycling

As I mentioned, the attrition rate is always a concern – not just to units, but also to the schoolhouse and U.S. Army Training and Doctrine Command (TRADOC). We have had many studies done on the course over the years, and the most recent one reversed some of the changes we had made in the last seven to eight years. Why? Our attrition rate had gone up as a result of the changes, and the information was not being retained as well as it should be. Once the course realigned the classes and duration, the attrition rate decreased. At this point, the schoolhouse has done as much as it can to minimize attrition rates at its level.

Are there other ways to mitigate the attrition rate? One issue that gets raised a lot is recycling candidates. Currently, if a candidate fails to meet course standards in any week, whether it is Week 1 or Week 10, they have to start the entire course over. Units have been hesitant to send a Soldier back to the course if they drop for academics. Their reasoning is twofold and justified:

- *Cost* – The unit does not receive a return on investment from the Soldier, and they do not know if the cost to send him back is worth it.
- *Unit mission requirements* – This has been the most likely reason. Once a Soldier returns to his unit, mission requirements take precedent, and the unit cannot afford to lose the Soldier for a second time.

How can we fix this? There are two ways to do it fairly easily. One is to have a candidate recycle to the start of the phase (maintenance, advanced gunnery or training management) he failed. This would help keep the Soldier focused on the task or tasks he failed and give a refresher on the classes he may have passed within that phase. The negative to this one is the timeframe he would wait for the next class to catch up. It could be a week, or it could be a month, depending on how many classes are taught each year.

The other option is to recycle him to the last successfully completed test point. This would allow him to pick up where he left off and would reduce the amount of time he would spend at the course on his recycle return. This is the better of the two options, in my opinion, but still has the same problem of how long it will be before the next class reaches that point. If the courses are overlapped the entire year, it is pretty easy and manageable. If they are staggered, it is likely the candidate would return to his unit and be recycled to a later class.

This has several pitfalls that would have to be tracked closely. If a candidate is dismissed for academics, he needs to return to the course while the information is still foremost on his mind. Anything over three months will likely result in a candidate failing again on information given in the course's early weeks. Unit mission definitely has a major impact on recycling a candidate.

Either of these methods will help mitigate the attrition rate, but the biggest reducer of the attrition rate will come from ensuring we are sending the most qualified candidates to the course and minimizing areas to be waived.

Looking to future

There have been a lot of changes going on at Fort Benning in the last few years to better streamline the training base. One of those changes placed the Tank and Bradley Master Gunner Courses into the same company; another moved the MGS Master Gunner Course into a different company that was Stryker-Course-pure.

There are ongoing discussions on how the courses may change and what the future holds. I have heard people talk about

combining all the master-gunner courses into one course. Another course of action (CoA) was deleting the maintenance phase and creating a “system” master gunner. Another CoA has all courses consolidated into one school while maintaining platform proficiency, and another has the courses remaining as they are.

Change is inevitable, and we need to ensure that the change in the master-gunner courses is viable and maintains the standard set for the last 40 years.

Path forward

In the last 14 years, we have been fighting the war on terror continuously and doing it in ways we had not projected. There was no doubt that times had changed. Gone was the Cold War mentality, and terms such as *HIC*, *MIC* and *LIC* went by the wayside. Now that things have toned down in the Middle East and we have returned most of the force to the training base, we are starting to discover that a lot of historical knowledge on how and why we train has been lost. As we are starting to re-engage in decisive-action training, we are finding out the master gunners who were building and running training 14 years ago are by and large gone – lost to retirement or promoted to positions that take them away from the Soldier’s daily training. This has created a knowledge deficit that will take time from which to recover.

The Tank Master Gunner Course provides the basic knowledge for a master gunner to train his unit proficiently. We took a downturn in graduates during the war on terror due to mission requirements, and we are only now starting to recover from that. But there are other changes affecting the force we need to address as well. These include the emergence of the Stryker Brigade Combat Team (BCT), the realignment of heavy BCTs to armored BCTs and a myriad of other changes that have impacted Army units. Pure Armor brigades and battalions are gone; the armored Cavalry regiment has been reborn in a new image; and the National Guard has restructured as well.

All this has helped commanders identify the need for master gunners of various types at various levels of command. The ability for a tank or Bradley platoon to operate as a small unit drives the need for a master gunner at platoon level. In a company/battalion/brigade (troop/squadron/regiment) team, we may need a tank master gunner and a Bradley master gunner. What about in a Stryker brigade/regiment? MGS, anti-tank guided missile (ATGM), infantry combat vehicle (ICV), reconnaissance vehicles (RVs) ... do we need a master gunner for them all?

What about the skills at the different levels? Are the skills at platoon level the same as at battalion / brigade / division / corps / U.S. Army Forces Command etc.? I can tell you from experience they are not. The skillset you develop in the Master Gunner Course prepares you to be a company-level master gunner. It basically gives you a bachelor’s-level degree as a master gunner. You get a few classes to clue you in to some of the higher-level requirements, but we currently don’t take it to a master’s or doctorate level. Having served from company up through corps level, the skillset required to function at the higher levels is much different than at company level.

So how do we overcome these problems? To state them again, we need master gunners at company level with a standard skillset, and we need master gunners at higher-level positions with an advanced skillset. Why haven’t we done this before? Well, before the war on terror, we did a lot of on-the-job training and mentorship. However, as stated, over the last 13-plus years, our focus changed. We were focusing on the skills needed in Iraq and Afghanistan ... and they weren’t high-intensity-conflict focused. The master gunners who filled the upper-level positions and mentored the young, upcoming master gunners have retired or were promoted out of the master-gunner realm. We have lost a ton of experience, and the only way we can get it back quickly is to train it.

Proposal (one potential path)

In 2001, the then-U.S. Army Europe master gunner, Steve Krivitsky, and myself as the V Corps master gunner started bouncing around concepts of how we could better train our master gunners for higher-level positions.

Over the intervening years, we have continued to collaborate our ideas, and we have come up with “Master Gunner University.” Our biggest issue right now is everyone wants a master gunner, but the instruction is held in two different companies and some MOSs are not involved. This does not facilitate getting the right person to the right place with the right training. We fix this by combining the tank, Bradley and MGS courses into one school and adding another course for Stryker platforms. This would allow us to train the right master gunner and would also allow for the course’s future growth. This “university” should be a standalone school that teaches the bachelor’s-level, master’s-level and doctorate-level courses.

- **Manning.** The university should fall under a Noncommissioned Officers (NCO) Academy-type of construct with a sergeant major (or civilian equivalent) as the chief/commandant/director. The chief would preside over the university, with the assistance of branch chiefs for each course. Also, the instructor teams would be broken down

into maintenance, ammunition, safety, direct-fire and training-development teams consisting of instructors for each course. These instructors would become the subject-matter experts (SMEs) for their area – not only for instruction, but for doctrine and training development as well. The organization would look something like Figure 2.

- **Command group.** The command group would consist of the chief/commandant/director, an operations NCO and an administrative assistant (course developer?). The operations NCO would be an instructor-qualified NCO, and the administrative assistant would be a GS-12 position.
- **Basic instructor qualifications.** The university chief/commandant/director must be a master gunner (sergeant major) (or a civilian-equivalent position) and must have served as an upper-level master gunner during his career. The length of position would vary depending on how it is manned.
 - *Branch chiefs* – Each course should be managed by a branch chief (first sergeant). The branch chiefs should be branch-qualified (*key developmental* (KD) in today's language) and have served previously as an instructor and preferably in a higher-level master-gunner position. They should serve for 12 months' minimum to 24 months' maximum.
 - *Instructors* – Instructors should be in the rank of sergeant first class, be branch-qualified (KD) and have served at company level as a master gunner for at least 12 months. Higher-level positions are desired but not required. Instructors should serve for no less than 24 months and no more than 36 months.
- **Course organization.** The courses would be organized so they all begin and end at the same time. Candidates would attend core classes and platform-specific classes.
 - *Core classes* – Core classes are those classes that transition platforms. This would include things like DIDEA, SDZs, basic electricity, technical manuals and training management. All candidates regardless of MOS would attend all the common-core training and only be split out to their individual platform as required.
 - *Platform-specific* – As the name alludes to, these classes would focus on specific platform training from whichever course the candidate was enrolled for. This would include tank, Bradley, MGS or Stryker platforms. This is the maintenance-intensive aspect of the course. Candidates will learn the ins and outs of their platform and how best to use, troubleshoot and train crews on their specific platform.

Check-out. Once instructor-candidates are assigned to the schoolhouse, they are given the subjects they will instruct. They are then given time to familiarize themselves with the material and become the SME on the subject. They are assigned a mentor to assist them in the process, and they are given dates to prepare for check-out.

Check-outs begin with peer reviews and "murder boards." The harshest graders are the instructors themselves. They do not want someone to teach a subject until they are sure they have it down cold.

After the peer review, candidates present their class to all the instructors, including the team chiefs and the course developer. If the team chiefs and course developer feel the instructor has mastered the subject matter, he is certified to teach. He will then be assigned as an assistant instructor initially and evaluated in front of actual students.

Over the years, the Tank Master Gunner Branch has been evaluated multiple times on instructor check-out, and we have always had the highest scores for training instructors.

Should a candidate fail any part of the check-out, he is granted another look. If the team chiefs and course developer do not pass the instructor-candidate, he is given a final opportunity to present his class to the branch chiefs and commandant. Should the candidate fail to achieve the standard to be an instructor (rare), he would be reassigned out of Master Gunner University. We have always had the best instructors in the Army, and that is a standard that must be maintained. A non-master gunner cannot evaluate the standards of our instructors since they do not know or understand the level of detail we require of our instructors.

- **Maintenance team.** The maintenance team would consist of an overall team chief (normally filled by the senior instructor). Each course would provide instructors to this team, who specialize in the maintenance instruction of their platform. There are several core classes that would be taught to all students, and all instructors on the maintenance team would check-out on the core classes.
- **Ammunition team.** The ammunition team would follow the same structure as the maintenance team – with the

exception that all instructors would be checked-out on common ammunition classes and specialize in their specific platform's primary munitions.

- **Safety team.** Once again, the same structure would be used. The difference here is all instructors would be trained on all safety aspects. This includes surface-danger zones and firing tables.
- **Direct-fire team.** This would follow the same structure as the rest but would follow the basics of the current advanced gunnery methodology training currently taught. Instructors will be checked-out on all common-core classes but will focus on their specific platforms for Range Week.
- **Training development/doctrine team.** Personnel on this team would come to the team after first serving on one of the other teams. These instructors would augment the other teams and be the primary training developers for all courses and the primary instructors for the advanced courses. Also, they would be the primary writers of gunnery doctrine for their specific platforms.

Bachelor-level courses

The bachelor-level course would be structured similar to today's master-gunner courses. The concept would follow the maintenance ([Figure 1 on linked Excel file](#)), advanced gunnery methodology ([Figure 2 on linked Excel file](#)) and training-management standard ([Figure 3 on linked Excel file](#)). The main changes are that students would be consolidated for core classes where appropriate and separated for platform-specific classes.

Also, a new course, Stryker Master Gunner, would be introduced. This course would focus on the ICV, RV and ATGM platforms and systems.

(Key for the color coding on the linked Excel file: light green equals core classes; yellow means exams; and other colors signify platform-specific courses. These are just examples – actual task selections would determine the specific courses – but it is pretty close!)

This concept is not completely new. We have been discussing similar concepts for a while now. What is completely new is creating this concept under its own leadership. It is time for this mature course to truly stand alone.

Master's-level course

The master's-level course would be taught by the same instructors as the basic course, but instruction would focus on battalion-level master-gunner training. Classes would include such things as safety-of-use messages, ammunition information notices, Range Facilities Management Scheduling System, Total Ammunition Management Information System, composite SDZs, TRADOC Range Safety Level II, combined-arms live-fire exercise development, collective-training exercises, battalion gunnery training, ammunition and the Training Aids, Devices, Simulation and Simulators system.

This course of instruction would take about three to four weeks and could be taught as a resident course or via video teleconference (VTC). This course would be platform-immaterial and would provide the master gunner with the information he needs to succeed at battalion level.

Criteria for attendance would be 12 months served at company level and hand-picked by their battalion commander.

Doctorate-level course

Doctorate-level classes would be taught by existing instructors as well as assigned mentors from like positions or higher. Classes would include range design; range design (deployed); joint and/or international gunnery and training exercises; planning and conducting exercises at the joint and/or international level; simulation and constructive exercises; gunnery standard-operations-procedures development; doctrine development; and training development.

This course of instruction would last about two to three weeks and would be taught as a resident course or via VTC. This course would be platform-immaterial and would provide the master gunner with the information he needs to succeed as a brigade, division, corps or MACOM master gunner. This would also include combat training center (CTC) master gunners.

Criteria for attendance would be 12 months as a battalion master gunner and selected by the position commander (i.e., brigade, division, CTC, installation, corps or MACOM commander). Normally, a brigade-experienced master gunner would take a position at the higher levels.



Figure 2. Proposed organization of Master Gunner University staff.

Summation

There is no doubt we are still producing quality master gunners and will continue to do so. The question is whether we are fully meeting the force's needs. It is apparent we need to adjust our thinking in light of the changes made within the combat force, and we need to ensure master gunners remain relevant and viable within that force.

Attrition rates are always a concern, but they can continue to be mitigated or potentially even reversed by selecting the right candidates, ensuring prerequisites are met and using a pre-course. The course as a whole is still viable and continues to graduate quality master gunners.

What we are lacking is experience within the master-gunner realm. Master Gunner University helps close that gap and provides a repository for knowledge. We need to continue to leverage whatever master gunner experience is still available, and we need to document and maintain that information within the university.

If we do not move forward with a concept like I outlined, we will lose the battle for experienced master gunners, and the entire Armor force will be neglected because of it. The time is here. To wait is to stagnate and lose what little knowledge we have.

Retired 1SG Jack Cooper is a lethality consultant and liaison for the Program Manager-Maneuver Ammunition Systems (Large Caliber) to the TRADOC Capability Manager for the Stryker BCT, where he is the SME for 105mm ammunition. Assignments while on active duty included Master Gunner Branch chief and commandant, 2-16 Cavalry, Fort Knox, KY; first sergeant, Coalition Joint Task Force-7 Joint Operations Center, Baghdad, Iraq; master gunner and Tactical-Actions Center NCO in charge, V Corps, Heidelberg, Germany; observer/controller and live-fire master gunner, Joint Readiness Training Center, Fort Polk, LA; and tank commander, company master gunner and tank-platoon sergeant, Companies B and D, 3/8 Cavalry, 1st Cavalry Division, Fort Hood, TX. While with V Corps, he deployed in support of Operation Iraqi Freedom and was part of the advance team planning the Iraq invasion. His military schooling includes Abrams Master Gunner Course, M1A2 New Equipment Training, M1/M1A1 Tank Commander Certification Course, Operator Countermine Equipment Course, Advanced Gunnery Training System Senior Instructor-Operator Course, basic and advanced NCO courses, U.S. Army Recruiter's Course, Joint Firepower Controller Course, First Sergeant's Course, Commander's Course and Master Fitness Trainer Course. His awards and decorations include the Bronze Star Medal, two awards of the Meritorious Service Medal and the Audie Murphy Club.

Acronym Quick-Scan

ASVAB – Armed Service Vocational Aptitude Battery
ATGM – anti-tank guided missile
BCT – brigade combat team
CoA – course of action
CTC – combat training center
DIDEA – detect, identify, decide, engage and assess
ICV – infantry combat vehicle
KD – key developmental
MACOM – major command
MG – master gunner
MGS – Mobile Gun System
MOS – military-occupation specialty
MTT – mobile training team
NCO – noncommissioned officer
RSO – remaining service obligation
RV – reconnaissance vehicle
SDZ – surface-danger zone
SME – subject-matter expert
TABE – Test of Adult Basic Education

TRADOC – (U.S. Army) Training and Doctrine Command

VC – vehicle commander

VTC – video teleconference