Does Military Education Matter?

Written by Nathan W. Toronto

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What is the relationship between military education and battlefield success? Experts have pointed to unit cohesion, numerical superiority, and technology, effective leadership, or ideology to explain battlefield success, but fewer scholars have acknowledged the role of military education (Schifferle, 2010; Matheny, 2011). Military education does not seem essential for motivating a squad of soldiers to repress all natural human instincts and clear a house full of booby traps and bad guys, and it can be argued that Dwight Eisenhower did not succeed as commander of Allied forces in WWII because he came in first in his class at Fort Leavenworth, but because he had natural political instincts that would have led to his success anyway. While senior military leaders have emphasized the importance of military education (Dempsey, 2012), these doubts and similar doubts about military education are a persistent refrain in uniformed and civilian ranks (Peters, 2007; Anonymous, 2012; Kelley and Johnson-Freese, 2013; Metz, 2013; see also Ricks, 2013; McGivern, 2014). If military education is of limited battlefield value, however, then why do militaries spend so much money and time on it?

Military education is valuable because it provides an intellectual architecture for battlefield success. It contributes to stable civil-military relations, a culture of reflection, and a capacity for critical analysis. This article specifies these conceptual links between military education and battlefield success, and then suggests statistical correlations linking military education and battlefield success. The main point of this exercise is that questioning the purpose of military education is like questioning the purpose of education, period. National education systems are chock full of students who think they are taking useless general education classes, just as there will always be officers who question why they have to go to military schools. The reason is that, regardless of what people do, education helps them do it better. Military education matters because it cultivates an aspiration to excellence.

This is especially true for military education, because the military usually only has to fix things when they are truly broken, like combating Ebola in West Africa, battling Islamic State, or conducting humanitarian aid and disaster relief operations. We do not give the military the easy problems. We give them the hardest possible problems we can find. What is more, we cannot even predict what those problems will be, much less devise solutions to them ahead of time. For military organizations, which often thrive on predictability and routine, this is the most challenging aspect of the job (Dempsey, 2012; Bruscino, 2013).

This nettlesome environment requires a daunting command of everything from book-learned knowledge of history and social science to hard-won experience from the world's remotest battlefields and military headquarters. Military officers get this through their education, not only by being exposed to new ideas in the classroom, but also by reflecting on their experience in new ways. Military education becomes a 'force multiplier,' meaning that it magnifies the positives in what the military is already doing (Lamb and Porro, 2014). However, war is complex. It will always be the province of reason and passion *and* chance (Clausewitz, 1989[1832]), so it is unreasonable to expect that more military education will always lead to more military success. This article proposes reasons why military education is related to military success, but the claim is probabilistic. Military education is not an insurance policy against failure, but it is likely to establish the conditions for military success.

Military effectiveness in modern land warfare

Military education helps establish the conditions for military success by creating the intellectual architecture to make

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military operations more effective, and to do so on a continual basis. To assess this assertion, let us examine, briefly, military effectiveness in modern land warfare.

The principal tactical problem of modern land warfare is how to survive the lethality of the battlefield longer than an opposing force. Biddle (2004) argues that the most effective military organizations do this by employing the modern system of military tactics. This modern system is characterized by effective communication and coordination between different combat arms (such as armor, infantry, artillery, and air power) in order to maintain the initiative and exploit an opponent's inability to maneuver. For example, artillery barrages roll forward, with infantry advancing behind, squads leapfrogging one another, alternating between moving forward and stopping to lay down suppressive fire on enemy positions. Another example would be creating enough depth in defensive lines and keeping sufficiently mobile forces in reserve to blunt an enemy advance if it achieves breakthrough. The US Army calls this tactical system 'combined arms maneuver', and it is the predominant solution to the lethality problem in large-unit land warfare, or the kind of warfare that has prevailed to date in Iraq, Syria, and eastern Ukraine.

But not all land combat is conducted by large units seeking to out-maneuver an opponent. Sometimes military units spread out over a wide area in order to neutralize an insurgency. Tactical engagements involve smaller-sized units, but when they do occur the objective is still to make the battlefield more lethal for foe than friend. How to do this when firepower cannot be massed (rolling artillery barrages and civilians do not mix well) and when it is not clear in which direction the forces should move (the front is all around you)? Informed by the US Army's 'wide area security' concept, one solution is to use time between engagements to gather intelligence on enemy combatants, and then use precision munitions or raids to eliminate or capture them. Close air support with precision munitions can dramatically increase the lethality of the battlefield for the enemy when engagements occur, and friendly forces can maintain initiative by drawing the enemy into engagements at the most favorable time, when the enemy's logistics and manpower resources are strained, and when friendly forces are sufficiently massed. Wide area security is still warfare by maneuver, but it is conceived differently than for combined arms maneuver warfare (Demarest, 2011). It is the type of warfare that has prevailed to date in northern Nigeria and its environs, the Democratic Republic of the Congo, and Afghanistan.

The intellectual architecture of military excellence

How does military education create the 'intellectual architecture' to make military organizations better at performing these types of tasks? The answer has to do with aspiring to excellence. When military education includes critical thinking and exposes practitioners to theory, it contributes to excellence throughout a military organization. Over the years, I have discussed assessments of foreign militaries with dozens of American and allied military officers, and this notion of excellence has been a consistent theme. This is, essentially, inductive theory-building, so it should be regarded as a starting point, not an ending point. These informal (though prolonged) discussions suggest three characteristics of an intellectual architecture of military excellence.

The first characteristic is *stable civil-military relations*, and civil-military relations that allow space for the military to develop its expertise, as well as a specified role for the military in setting security policy and establishing spending priorities (Huntington, 1957; Toronto, 2015). The key point is not that the military should control these policy and spending priorities, but that the military's role in this process be well defined. For example, in the United States the Department of Defense submits budget requests to the White House, but does not act on those spending priorities without Congressional approval. Elements of the US military, both individual officers and Pentagon officials, also contribute to a vibrant discussion on the nation's security policies, at least those policies related to the military's mission. What is more, the US military has very wide latitude in training and equipping its forces. As an element of civil-military relations, this latitude is just as important as stability in contributing to military excellence.

But this is not the only characteristic of an aspiration to excellence. A *culture of reflection* also plays a role. In the United Kingdom, this culture of reflection often plays out in formal legislative oversight (UK Prime Minister, 2010), where the military publicly evaluates its own performance, but this culture of reflection also percolates from national, strategic spheres down to tactical ones. For example, the US Army has a Center for Army Lessons Learned that collects and disseminates lessons that soldiers learn from the battlefield, but junior officers also use resources like

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War on the Rocks and Small Wars Journal to share lessons from combat. A reflective military looks at itself and its performance, and often undertakes rigorous training regimes to consistently improve its competence, including exercises that practice integration between tactical and strategic decision makers, and exercises that operate on a twenty-four hour basis, instead of just eight hours per day (GlobalSecurity.org, 2015; Losey, 2015; NTC, 2015). Having a culture of reflection does not mean that military operations will always result in unmitigated success, but it does mean that a military can learn from its mistakes and train itself to avoid them in the future (Nagl, 2005).

In addition to having stable civil-military relations and a culture of reflection, militaries with an aspiration to excellence also cultivate a *capacity for critical analysis*. In fact, the most effective militaries seem to integrate critical analysis into school curricula and planning processes. Beginning prior to WWII, for example, the UK military developed its 'estimate of the situation' at all levels of military planning; British officers are now well-versed in the 'seven questions' they are to ask while planning military operations (UK MOD 2010: 6-15–6-17). The US Army has its 'design methodology' and the 'military decision making process', which fulfill similar functions (US Army, 2012). Furthermore, it is not uncommon for the hardest-hitting questions in classroom discussions and after lectures to come from officers who have spent time in combat. During the years I taught for the US Army, armor officers would consistently rail against the inability of crews to meet the tank gunnery standards necessary to be effective in combined arms maneuver warfare. This is not about disgruntled officers seeking out opportunities to step on a soapbox, but about them having an opportunity to examine elements of warfare that the military was not then participating in. Military organizations do not double as graduate school seminars, but manifesting a capacity for critical thinking seems to go hand-in-hand with the aspiration to military excellence.

So, an aspiration to excellence—stable civil-military relations, a culture of reflection, and a capacity for critical analysis—is the conceptual link between military education and military effectiveness. In fact, this aspiration to excellence may be the key for states to implement Biddle's (2004) modern system of military tactics. Biddle does not specify the conditions and causes of adopting the modern system of tactics, but I contend that developing this aspiration to excellence is a crucial step in this pathway. We might even call the aspiration to excellence the 'modern system of military thinking', constituting as it does the intellectual architecture behind adopting Biddle's modern system of tactics. Again, while doing so is no guarantee, militaries that adopt this modern system of military thinking are more likely to experience military success.

History presents important challenges to this notion that the modern system of military thinking is the link between military education and battlefield success. For example, the German military was regarded as one of the most proficient operationally in the seventy years after the Franco-Prussian War, but German strategic blunders undermined victory in two world wars. The US military has arguably been the most effective force in the post-9/11 world (Anonymous, 2014), but this did not translate into strategic success in Iraq and Afghanistan. What is the point of being militarily effective if it does not result in political victory? The answer, of course, is that military success should be defined as political victory, while remembering that war is the province of passion and chance, as well as reason. Military education is a sensible risk mitigation strategy, but it is incumbent on advocates of military education to demonstrate the links to victory.

Statistical plausibility

This leads to a corollary question: if adopting the modern system of military thinking is the link between military education and military success, then how much of the modern system of military thinking (or the aspiration to excellence) is enough? Knowing the answer to this question would help countries decide when to stop spending on military education and start focusing on military effectiveness. While we can identify indicators of having adopted the modern system of military thinking, these measures will be inherently unsatisfying from a systemic perspective. Large-n statistics can inform theory-building in this case, but verifying the theory against empirical evidence will also require in-depth qualitative analysis. Systems, by definition, are more holistic than statistical indicators.

A brief glance at a statistical plausibility probe shows how this is the case. I have conducted a large-n analysis correlating elements of military education with military effectiveness. This is the peer-review equivalent of a back-of-the-envelope calculation, so it should not be considered definitive. Full descriptions of the data used here can be

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found in Toronto (2015). This back-of-the-envelope calculation uses two indicators of military education—the number of national military academies and the number of military periodicals published—and correlates them with the number of battle deaths per year of inter-state combat (Sarkees and Wayman, 2010). The data set reports one observation per country per war, and begins after World War I, when the need for the modern system of tactics became obvious. My working hypothesis is that more military education (more military academies, more military periodicals) is associated with military effectiveness (fewer battle deaths per year of combat).

The (preliminary) results are reported in table 1. Having more military academies (model 1) and publishing more military periodicals (model 2) are each negatively correlated with suffering combat casualties. This is true when controlling for military capabilities (Composite Index of National Capability, or CINC, score; Singer et al., 1972; Singer, 1988) and regime type (combined autocracy–democracy score>6; Polity IV Project, 2005). In other words, if a country has more military academies or publishes more military periodicals before becoming involved in an interstate war, it tends to suffer fewer battle-related combat deaths per year of the conflict than countries with fewer academies or periodicals.

Table 1. OLS Regressions, Battle-deaths per Year of Combat (log)

	1	2
Number of military academies	-.881	
Number of military periodicals		-.026
Material capabilities (CINC)	41.397	39.572
Regime type (Polity IV)	-6.095	-5.223
Constant	6.923	5.449
N	269	296
Adjusted R^2	.095	.087
Prob. F>0	.000	.000

Note: All correlations statistically-significant at the $p=.05$ level, one-tailed.

These back-of-the-envelope calculations suggest—vaguely—that military education is positively correlated with military success, but it leaves two sets of questions unanswered. The first set of questions relates to the statistics. What other factors should be included in the models, and how robust are these findings? The second set of questions concerns measurement. How confident are we that military academies and periodicals capture what we want to know about military education, and why should we believe that having fewer casualties is the same as military effectiveness? Even more importantly, how do we expect the modern system of military thinking to manifest in empirical terms?

It is difficult to see how statistical analysis would give truly satisfying answers to these questions. Collecting the necessary data simply would not be worth it, because it would still only demonstrate correlation, not causation. Further analysis needs to examine cases from a systemic perspective in order to show causal links. Historical studies of the interwar US officer corps (Schifferle, 2010; Matheny, 2011) suggest that an analysis of military education and military effectiveness in other countries could verify a link between the two. Conducting holistic, process-tracing analysis (Bennett and Checkel, 2014) on non-Western countries could show how they move from military education to the modern system of military thinking to battlefield success.

The point of this brief disquisition is that, while the preliminary, back-of-the-envelope calculations are encouraging, most of the research necessary to link military education to military effectiveness is ahead of us, not behind us. This

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article has suggested a theoretical link between the two: military education contributes to the modern system of military thinking and an aspiration to excellence, characterized by stable civil-military relations, a culture of reflection, and a capacity for critical analysis, which in turn makes military effectiveness possible. This article has also offered a statistical plausibility probe into the link between military education and battlefield success. In order to demonstrate this link systematically, however, a lot more work needs to be done. Perhaps then we could put to bed any lingering doubts that (military) education really is worth it.

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