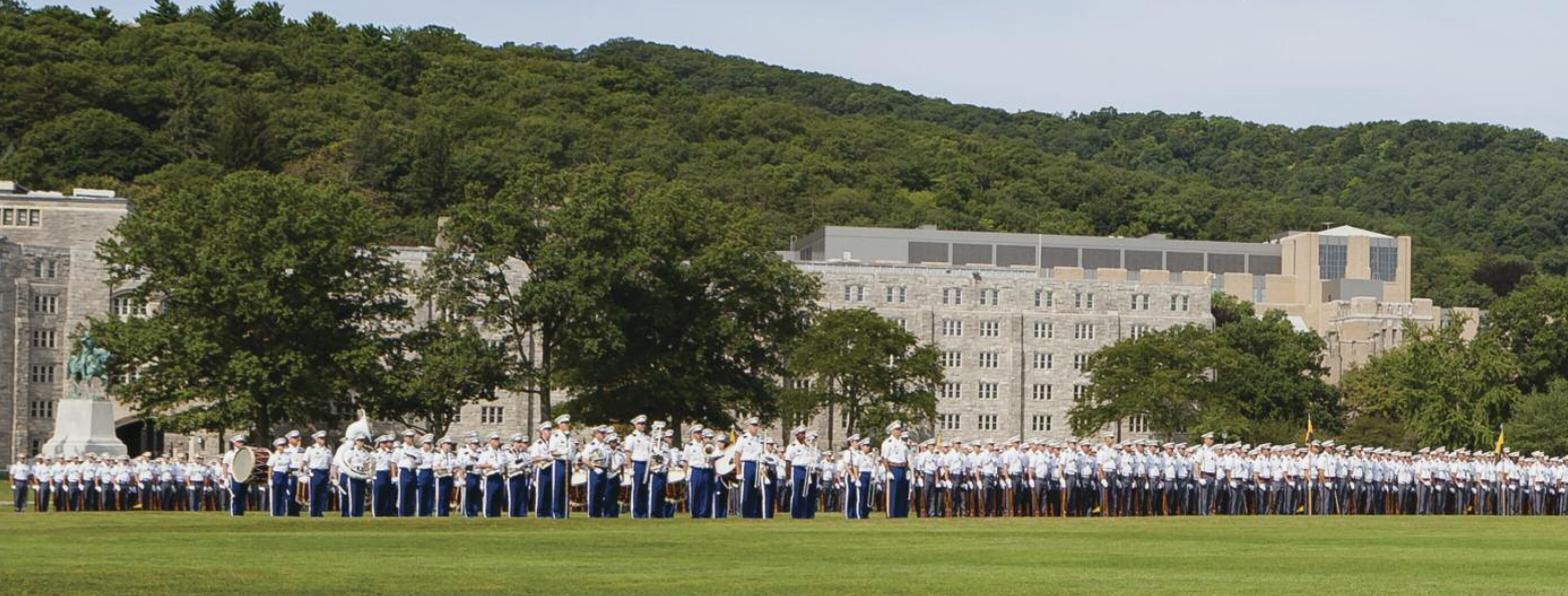# The Long (Digital) Gray Line

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The successful transformation of West Point's History of the Military Art course could hold the key to dramatic improvements in Army learning. In order to educate and train the next generation of professional soldiers, content and curricula must be delivered in the way that the millennial generation consumes information. This has now been tested and proven by leveraging technology to breathe new life into a course best remembered by many for its massive war atlases, often 300 pages or more, depicting the movement of divisions, corps and armies on hundreds of detailed maps.

While the beautiful maps are remarkable in their own right, current technology offers the opportunity to create powerful new instructional tools with animated maps to enhance the understanding of warfare. In partnership with the Viola Foundation, West Point has transformed "MilArt" (as the class is known to cadets) by creating a dynamic and interactive digital curriculum entitled The West Point History of Warfare. As a result of this initiative and follow-on efforts, the U.S. Military Academy is breaking new ground by capitalizing on technology to help future Army leaders better prepare for the profession of arms.

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Public-Private Partnership

The Viola Foundation, a not-for-profit strategic investment organization headed by West Point graduate and former Army officer Vincent Viola, was contacted in 2011 by the West Point Association of Graduates to determine whether sponsoring a complete curriculum overhaul for MilArt would be within the foundation's interest and budget. After a review of this complex undertaking, the Department of History and the foundation agreed to create an entirely new curriculum.

The Viola Foundation's leadership decided the most effective path to accomplish this was to create a new organization dedicated to breaking new ground in digital education called Rowan Technology Solutions. With the framework in place, the team hosted an authors' conference for pre-eminent military historians at West Point in June 2012. Less than a year later, cadets were using a prototype of the curriculum on iPads in summer school. By August 2013, more than 1,200 cadets and 30 instructors began using the beta version of The West Point History of Warfare in the classroom.

The response from cadets and instructors has been tremendous. The most powerful pedagogical tool—the animated maps—allows cadets to quickly master how a battle or campaign unfolded, enabling higher levels of discourse in classroom discussion. In terms of education research and, in particular, Bloom's Taxonomy of Learning, cadets now possess the digital tools to move beyond basic knowledge and comprehension and into areas of analysis, synthesis and evaluation.

Reaching Millennials

Interactive, digital educational content and tablet devices provide an opportunity to fulfill the mandate of *The Army Learning Concept 2015* to "provide Soldiers and leaders with more relevant, tailored, and engaging learning experiences."

Consider the last time you saw someone under 25 reading a "dead-tree" book outside an educational context. Increasingly, there is a gap between how information is con-

West Point Breaks New Ground In Education Technology

Interactive version of the West Point History of Warfare. Above: The Class of 2018 is welcomed at the U.S. Military Academy.

sumed in daily life and in the classroom. While the K-12 environment is adapting to this reality with blended learning models and digital technology in the classroom, higher education—including much of the Army's education system—has been slow to keep up for a variety of reasons. As the history department at West Point has demonstrated, not only is this adaptation possible, but the results can also be remarkable. When cadets are provided with an interactive digital curriculum, the level of engagement increases and overall academic performance improves. The same should hold true across the Army.

In delivering the interactive history curriculum to West Point, it became clear that not all interactivity is created equal. Editors and educational designers must constantly ask the question: What is the purpose behind this specific piece of content and how can interactivity lead to better learning outcomes? Rotating a 3-D model of a hoplite's spear may be cool, but it does not really enhance learning. On the other hand, a 3-D model of B-17 bombers flying in a "combat box" enables a powerful discussion about tactical innovation in warfare.

While print textbooks can certainly support classroom instruction, what often happens is the students (somewhat) engage with the textbook outside of class and then observe a PowerPoint lecture given by the instructor. *The Army Learning Concept 2015*, published in 2011 as *U.S. Army Training and Doctrine Command Pamphlet 525-8-2*, says the goal should be to "dramatically reduce or eliminate instructor-led slide presentation lectures and begin using a blended learning approach that incorporates virtual and constructive simulations, gaming technology, or other technology-delivered instruction." Interactive digital curricula enable the instructor to shift from an endless slide deck to a suite of dynamic tools that can be leveraged to bolster discussion and analysis in a way that traditional textbooks simply cannot.

For example, The West Point History of Warfare utilizes numerous links to *War of the Rebellion: Official Records of the Union and Confederate Armies*. This allows seamless examination of primary source documents to support analysis and critical evaluation in the classroom. Moreover, videos and interactive elements in the text provide additional tools for unpacking complex concepts within the context of a classroom discussion. One digital tool found particularly useful by West Point instructors is the interactive "hot spotting" of artwork and political cartoons. Hot spotting important components of an image (linking them to other

Above: Digital course material can be used anywhere. Below right: The West Point History of the Civil War is among the cutting-edge tools used at the academy.

Warfare. For many users, the multi-touch interactivity results in greater retention of the material.

The entire contents of The West Point History of Warfare can easily fit on a standard tablet, a marked contrast to the oversized atlases used in the past. Tablets also allow students to leverage the exploding application environment, leading to increased productivity and collaboration. Cadets and instructors quickly started integrating various apps into their personal work flows. Using tools like these, cadets could easily take a screen shot and import it into an app. Then the cadets could share their work on the classroom projector for the entire class to view and discuss.

Work is now underway to develop interactive digital curriculum content for military science courses at West Point and for initiatives in leadership and leader development. In *The Army Learning Concept 2015*, then-Army Chief of Staff Gen. Martin E. Dempsey said, "We live in a much more competitive security environment. This means that we have to learn faster and better than our future adversaries." This new and now proven technology provides a powerful way to make that happen. ★

sources) enables the user to dig deeper into the context through additional text, audio or video.

The Case for Tablets

Interactive digital content is the first step, but without the proper platform to support the information, utility decreases substantially. In beta testing for The West Point History of Warfare, the project stakeholders decided to use iPads as the delivery platform. IPads proved to be an excellent bridge between laptops and smartphones.

Many students own smartphones and carry them everywhere, but they generally do not haul laptops wherever they go. On a smartphone, the reading experience is tedious and taking notes is nearly impossible. With the tablet in the education environment, one can strike a good balance between mobility and functionality. The fact that tablets have a touch screen is critically important. A traditional e-book is simply a flat PDF and lacks the immersive interactive experience the team was seeking to build with The West Point History of

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