

Cultivating Future Airpower Strategists

On “Developing Twenty-First-Century Airpower Strategists”

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In 2008, Major General R. Michael Worden forecast specific challenges for airpower strategists including emerging technology, transnational terrorist organizations, an explosion of information power, budgets, and resourcing. His predictions have borne out in what the Air Force faces today, and Air University is responding, providing the next generation of airpower strategists.

Connecting operations to strategy seems easy, but the last 20 years of conflict for the United States shows that is not necessarily the case. Developing effective operations to achieve national strategic outcomes in an era of renewed and heightened strategic competition, especially in the air, space, and cyber domains, will be even more challenging than what was attempted over the past two decades. But the process for developing airpower strategists has proven sound for over a century; continuing it should serve the US Air Force and US Space Force well for decades to come.

Major General R. Michael Worden’s 2008 article in *Strategic Studies Quarterly* forecast many challenges facing future American airpower strategists because of technology, transnational terror organizations, rapid and unfettered information power, and fiscal and recapitalization challenges for the force. Many of the issues and the rate of change he postulated are spot on and, more importantly, his prescription for human capitalization and the development of new generations of airpower strategists is still quite sound.

Worden channeled the wisdom of many icons of military thought—Sun Tzu, Carl von Clausewitz, and John Warden. These thinkers advocated the serious study of military, political, and cultural history; honing and sharpening one’s capacity for critical thought and communication through written expression; and developing a sound, professional tactical acumen through training and field experience.

Worden specifically mentioned familiarity with the technologies that undergird current capabilities and those expected to transform air, space, and cyber power.¹ He further refined the traditionally accepted notion of

developing strategists by adding that the Air Force must inculcate a “winner’s creed” consisting of a commitment to innovation, integration, and incorporation of the results of the application of this process regularly and rapidly.²

From the vantage point of more than a dozen years later, Worden’s analysis and recommendations are still useful. When it comes to preparing for the future, there is no substitute for a broad education that instills habits of mind and patterns of inquiry coupled with rational and thoughtful analysis. For the US Air Force and the US Space Force, there have been several changes in organization and focus that reflect the wisdom of Worden’s reasoning. Many of these changes can be found throughout the services, particularly at the intellectual and leadership center of the Air Force, Air University. This is only fitting because Worden’s article centered on developing and teaching the study of war, history, politics, and culture as the bedrock of cultivating future airpower strategists.

There is nothing like failure to inspire introspection and change. Much of Clausewitz’s motivation for writing *On War* stemmed from Prussian defeat at the hands of Napoleon. The transformation of the US military in the late twentieth century was animated by failure stemming from the Vietnam War. And today, it is apparent that elements of the push for rapid change in the US military are driven by a response to strategic competitors and frustration with the outcome of the campaigns of the last two decades. Worden’s article highlights rapid changes in technology, awareness of changes in the domains of conflict, and the need for introspection and hard thinking based on intellectual development to respond to the challenges he presents and ones that will emerge.

Worden begins with a discussion on innovation. He describes the value of training and testing at the tactical level and then challenges both Airmen and the institutional Air Force to invest in intellectual and academic pursuits such as advanced degrees. Worden also advocates for simulations or war games, conferences and roundtables, and sponsored research initiatives all intended to develop innovations and agility at the strategic level. Whether in direct response to Worden or not, the Air and Space Forces have changed education and training accordingly over the better part of the last decade. The services are leveraging virtual reality and other twenty-first-century models of learning in essential areas such as pilot training and technical training.³

Air University has been the vanguard of professional military education reform. The institution has increased its intellectual rigor, enhancing the professional standing of faculty. Air University faculty today publish more

relevant pieces in traditional venues—books, scholarly journals, and newspapers—and emergent publishing fora including blogs, online journals, and social media.

Worden also detailed the challenges regarding the recognition of space as a contested domain well before the US Space Force was established. A decade later, the Air Command and Staff College collected a premier faculty and developed an innovative and rigorous space curriculum concentration in the Schriever Space Scholars program that has already produced significant research and served as the basis for space professional military education at the intermediate and senior levels and beyond.⁴

Knowledge generation is often associated with the ivory tower syndrome where scholars are isolated from populations that could benefit from their research and discoveries. Worden understood integration of ideas and best practices was the key to agility and adaptability. If ideas and procedures did not make it to the field or did not get incorporated in operational units as normal practice, they were not useful toward preparing for future challenges.

Development of research task forces at Air University has helped bring relevant operators and subject matter experts together to examine pressing tactical and operational problems. Online education through the Global College of Professional Military Education tailors learning modules for all ranks and programs of the Air and Space Forces. This allows for more education at home stations, fewer expensive TDYs away from operational bases and units, and potentially more responsive course content.

For resident education, concentrations such as the Joint All-Domain concentration at Air Command and Staff College and the Grand Strategy program at Air War College help develop officers who are educated to implement tactics, operations, strategy, and whole-of-government solutions at the theater level and higher. Graduates of these programs look beyond military solutions and seek to integrate operational art with political and economic frameworks of analyses.

Worden discusses incorporation—taking the results of innovation and integration of the ideas and practices stemming from new thinking—as the final step in the process of developing the twenty-first-century strategist. It is not enough to produce ideas or develop lessons from mistakes. To be meaningful, solutions must be integrated into organizations; tactics, techniques, and procedures; and operating instructions.

Those who understand the technology and practices that differentiate and define their profession also need to understand the broader national security and policy implications of their profession. Those who do can

then incorporate their understanding and expertise correctly with other military forces into a whole-of-government approach and with Allies and partners to achieve greater and more significant results.

Some sources have pointed to a moribund or ineffective professional military education structure as an impediment to the future effectiveness of the US military and the cause of defeat in the last two decades of conflict.⁵ Critiques such as these, even if not universal across the military services or largely unfounded, rest on the same foundation as Worden's article. A truly effective airpower strategist is not merely a tactician or an operator. Such individuals make intellectual study and curiosity significant aspects of their personal and professional development because these pursuits are integral to effective implementation of national strategy.

Ultimately, generations of military professionals have understood the value of education, study, reflection, publication, and forums for discussion to the development of the best strategists. Technology has not changed the necessity of such education and of professional and personal development. American Airmen understood this in the 1920s and 1930s when, critical of what they saw as outmoded Army professional military education, they established the Air Corps Tactical School to provide an institution to promote these elements. More modern airpower strategists, John Warden and John Boyd among them, also embraced the ideas promulgated in Worden's essay as essential. The commitment of Air Force professional military education to these ideas today solidifies the service's dedication to training and educating tomorrow's leading senior strategists. ❧

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Notes

1. R. Michael Worden, "Developing Twenty-First-Century Airpower Strategists," *Strategic Studies Quarterly* 2, no. 1 (Spring 2008): 23–24, <https://www.airuniversity.af.edu/>.

2. Worden, "Airpower Strategists," 28–30.

3. John A. Tirpak, "USAF Hopes Undergraduate Pilot Training 2.5 Will Help Solve Pilot Shortage," *Air Force Magazine*, August 23, 2020, <https://www.airforcemag.com/>; and Rachel S. Cohen, "Virtual Training Yields Real Results in Early Crew Chief Course," *Air Force Times*, August 4, 2021, <https://www.airforcetimes.com/>.

4. Ken Scholz, "ACSC Schriever Space Scholars Expands to Meet Demand for Space Studies," Maxwell Air Force Base News, October 16, 2020, <https://www.maxwell.af.mil/>; and Phil Berube, "Air University Teaches Space as a Warfighting Domain," *Montgomery Advertiser*, August 7, 2020, <https://www.montgomeryadvertiser.com/>.

5. James N. Mattis, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge* (Washington, DC: De-

partment of Defense, February 2018), 8, <https://dod.defense.gov/>; and Thomas Brusino and Mitchell G. Klingenberg, "Putting the 'War' Back in War College," *City Journal*, September 2, 2021, <https://www.city-journal.org/>.

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