# COVID-19

## A forcing function for distributed learning in the Information Age
### by LtCol Roy M. Draa

"*This 'contested world' is now at the start of a new industrial revolution. This revolution is underpinned by connectivity, biotechnology, and silicon-based technology that includes artificial intelligence. Described as the 4th Industrial Revolution, it is disrupting business, entertainment, communications, transportation, and national economies … the acme of prowess in achieving national security outcomes in the 21st century will be achieved by those military and other national security institutions that are able to harness their personnel in a way that nurtures and celebrates in them the intellectual edge, while applying this in a unified way to institutional challenges.*"[1]

*Major General Mick Ryan,*
*Commanding General*
*Australian Defence College*

### An Operational Imperative

The United States' Naval Services enjoyed a comparative technological advantage for several decades. However, the operating environment is increasingly more complex. Our potential adversaries have greater access to information and technology. Rising peer competitors have focused resources to asymmetrically counter vulnerabilities in our strategic and operational mobilization, deployment, and Joint and interagency basing, integration, and force projection strengths in all warfighting domains. Our technological edge cannot be assumed in the current age of Great Power Competition.

Recognizing the future operating environment's complexity and the cognitive imperative, the *38th Commandant's Planning Guidance* (July 2019), bluntly stated that

> the current force is not organized, trained or equipped to support the naval force—operating in contested maritime spaces, facilitating sea control, or executing distributed maritime operations. We must change.[2]

The Chief of Naval Operations' *FRAGO 1/2019: A Design for Maritime Superiority* laid out a similar assessment of the Fleet. Our Naval Services enjoy neither numerical nor technological superiority in an operating environment that requires a cognitive or intellectual edge in order to deter and/or achieve maneuver across all warfighting domains. The Commandant of the Marine Corps has directed the Service to transform how it learns (training and education) from an Industrial to an Information Age model. It must prepare to operate within the Navy's Command and Control doctrinal construct of composite warfare and revise formal programs of instruction to contain a greater naval orientation. This Information Age model shifts focus from episodic formal learning focused on rote memorization to a continuous, integrated learning environment focused on the learner's development and adaptation.

### Transforming Learning for the Information Age

While the character of the 21st century operating environment is changing, the maxim remains: those who can observe, orient, decide, and act at a greater relative tempo will continue to prevail in war. How then are the Naval Services to develop this "*acme of prowess*" or intellectual edge, toward that purpose? The recently published, *MCDP 7, Learning*, states,

> effective learning requires environments that foster flexibility of thought, reasoning, and the creation of potential solutions to problems, and encourages Marines to pursue alternate courses of action … All warfighting skills, from basic to advanced, require dedication to continuous learning.[3]

*MCDP 7* formalizes the philosophy, principles, concepts, and expectations of learning. It emphasizes that continuous learning is an institutional priority and professional expectation for all Marines. Continuous learning, effectively supported, enhances the ability of Marines to quickly recognize changing conditions in the battlespace, adapt, and make timely decisions against the enemy. This doctrine is the cornerstone upon which the transformation from an Industrial to Information Age learning model is based (see Figure 1). A commonly spoken aphorism is that our Sailors and Marines are our center of gravity. In the transition from an Industrial to Information Age model of learning, this dictum is exemplified.

The entire learning enterprise turns away from a process-bound to an outcomes-based orientation. In an Industrial Age model, learning is a formal, intermittent, and linear progression. In an Information Age model, learning becomes self-directed, distributed, active, and continuous. This new model is focused on the learner, enabled by the learning-leader, and supported by tailored, interactive, and experiential

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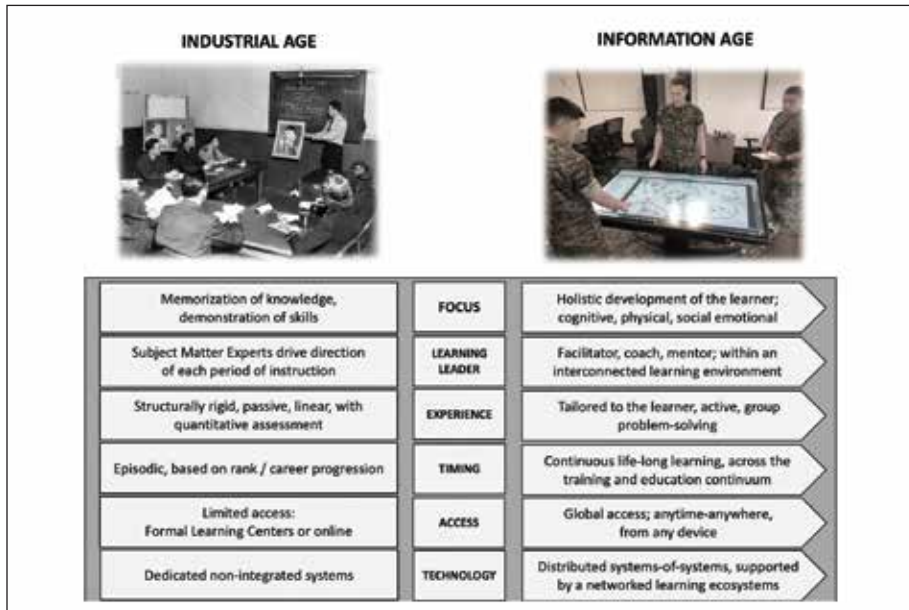
*Figure 1. What is an Information Age model? Comparison of Industrial and Information Age learning characteristics. Adapted from "Life-Long Learning," (Walcutt and Schatz, 2019, p. 65)*[4]

training and education experiences. This creates the conditions for student ownership of learning, which is key to lifelong learning and retention. This transition will rely heavily upon the enhancement of an already strongly engrained culture of learning within the Naval Services.

### Enhancing the Service Learning Culture

In light of the *38th Commandant's Planning Guidance*, *MCDP 7*, and the Secretary of the Navy's *Education for Seapower Strategy 2020*, the Naval Services have taken stock of their respective learning cultures. We have a clear picture of what is required for the 21st century:

• Learning (curriculum) development processes are agile, adaptive, and more decentralized vice top-down, process-oriented, and isolated from the learning environment.

• The learning environment leverages outside academic knowledge in how adults learn best.

• Learning is outcomes-based and problem-focused where the learner actively engages in group problem solving and takes ownership of learning.

• Learning fosters a deeper understanding and application of maneuver warfare in a naval context, experienced through wargaming against a thinking adversary force.

• Individuals value academic, technical, and ethical excellence and embrace a commitment to become continuous, lifelong learners.

• Leaders at all levels create a climate of intellectual exchange and actively engage in debates over the future of our force structures, strategy, and tactics, ensuring that the learning continuum is properly resourced.

The *Marine Corps Force Design 2030* demonstrates,

> *The warfighting impact of all other future capabilities is directly tied to the level of commitment we make to training modernization. We have a lot of ground to make up in this area, and must allocate adequate resources now and into the future to close this gap.*[5]

The conclusions from recent force design planning and wargaming outcomes demand a significant personal and organizational effort to deliver a Fleet and Fleet Marine Force that will meet the nation's future strategic and defense objectives (see Figure 2).

Almost simultaneously with the Marine Corps' confirmation of the criticality of this "*Intellectual Edge,*" the Service's task in delivering it became significantly more challenging. The COVID-19 pandemic threatens to degrade operational readiness and unit effectiveness on a scale not seen since the close of the First World War.

### Disruption or Opportunity?

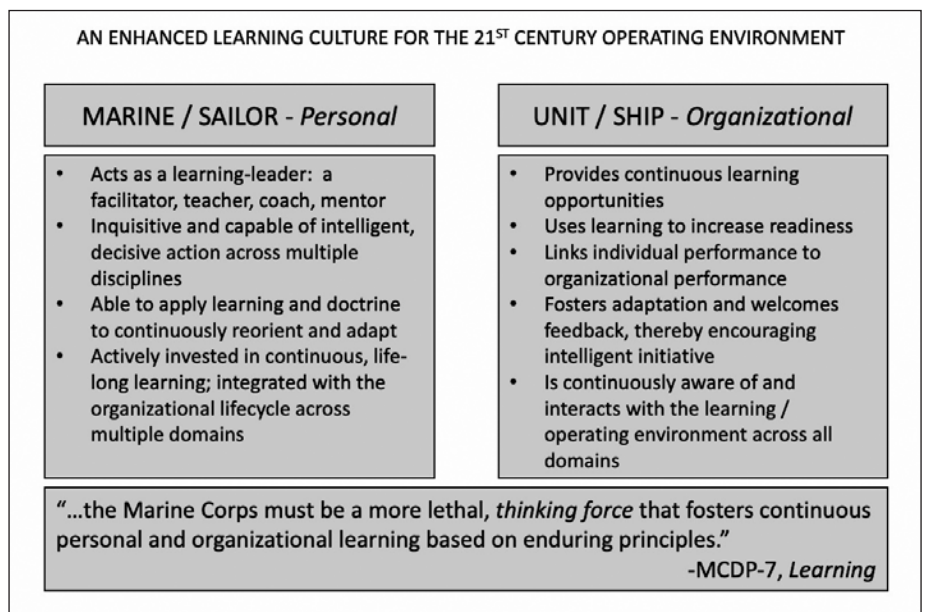March 2020 will long be recognized as the month that the COVID-19 pan-



*Figure 2. The 21st century operating environment requires an enhanced learning culture in order for the individual and organization to effectively support fleet operations across all domains.*

*Mr. Stuart White, Marine Corps Training Operations Group, Marine Air Ground Task Force Training Command. (Used with permission.)*

demic disrupted business as usual, having far-reaching impacts upon the Naval Services' force development. Marine Corps Service-level training (Integrated Training Exercise, Mountain Training Exercise, Adversary Force Exercise, and Weapons and Tactics Instruction) and the Navy's Ballistic Missile Defense Exercise were cancelled in order to comply with federal and state guidance on restrictions of movement to protect the force from exposure to the contagion.

Formal learning centers were also faced with the challenge of continuing professional military education and provision of home station training support while ensuring compliance with social distancing guidance. Within days, the Naval Postgraduate School, the Naval War College, and Marine Corps Uni-



*Naval History and Heritage Command: https://www.history.navy.mil/content/history/nhhc/our-collections/photography/numerical-list-of-images/nhhc-series/naval-subjects-collection/l39-places--us/l39-18-02-02-classroom-instruction.html.*

versity began teleworking in preparation for the delivery of course content in an online, collaborative environment.

Yet, the disruption caused by COVID-19 provided a serendipitous opportunity to experiment with the temporary abandonment of brick and mortar Formal Learning Centers. Many institutions rapidly adapted to facilitate distributed learning, highlighting the necessity of a versatile network and availability of multi-domain learning platforms. Learning-Leaders (teachers, facilitators, coaches, mentors) began leveraging commercial technology such as Google Meet and Adobe Connect to continue to interact with students and mentees. This ad hoc shift can and should be judiciously applied throughout the learning continuum to include basic warfighting and advanced skills set training.

Existing virtual entities such as the Training and Education Command Warfighting Society, Mission Command and Decision Game Club social media groups, and the Center for Adaptive Warfighting have for quite some time, discussed and provided alternative options for continuous, self-directed learning in discussion of doctrine, simulations, tactical decision games, and micro-learning opportunities. These groups are leveraging virtual collaborative tools and social media to advance learning outside the services' traditional industrial learning models. Their functionality, membership, and proliferation are an argument for further analysis. A dedicated study of these activities promises a surfeit of lessons learned with respect to understanding the needs of learners, creation of learning plans, development of distributed learning spaces, and how to invest in environments that promote group problem-solving and innovation. Most importantly, they are emphasizing the very principles preached in *MCDP 1, Warfighting*, and *MCDP 7, Learning*.

## Way Forward

The Secretary of the Navy's *Education for Seapower Strategy 2020* calls for a modernization of education program delivery, a functional Distributed Learning environment.[6] What would

have likely taken months or even years to achieve has been rapidly effected (albeit for limited sectors of the learning continuum) in order to continue naval education despite the COVID-19 outbreak. Instructors and learners have been able to maintain contact and continue learning to some extent from this *ad hoc* arrangement that capitalized on existing platforms and enabling technology,

At present, Sailors and Marines outside the formal naval professional military education systems continue to prepare for deployment. Unit and ship lifecycles are highly regimented, requiring the right training at the right time in order to prepare for collective training events to meet pre-deployment training readiness requirements. Social distancing requirements have significantly hampered the delivery of advanced military occupational specialty training, enhanced skills set training, and other courses and training systems offered at home stations and ports. Nevertheless, social distancing is similar to how we fight: dispersed, relying upon the initiative and skills of individuals at all levels to accomplish complex missions.

In the coming months, we must collect and analyze the lessons learned from this experience to inform the development of a persistent, networked distributed learning ecosystem under the aegis of a learning doctrine that compliments Maneuver Warfare. The findings of this analysis should be applied throughout the learning continuum and not be limited to influencing the future of formal professional military education.

• Emphasize outcomes-based learning, a concept which is to learning what mission command or maneuver warfare is to operations.

• Encourage the use of web-enabled learning design tools to focus and aide learning-leaders in planning, designing, building, facilitating, and assessing distributed learning programs and initiatives.

• Develop interactive courseware and governance to allow Marines and Sailors to complete learning pre-requisites and group problem-solving any-time, anywhere on any device.

• Leverage off-the-shelf simulations software to conduct networked wargaming, weaponeering, combined arms / fleet maneuver, etc.

• Employ virtual collaborative tools to allow for continuity of learning in a distributed environment.

• Invest in a Navy-Marine Corps networked virtual training environment to support an experiential learning environment.

The Navy and Marine Corps will continue to grapple with the impacts of the COVID-19 pandemic for the foreseeable future. Sailors and Marines have risen to the occasion by adapting on the fly, exemplifying the doctrine of maneuver warfare and outcomes-based learning without waiting upon top-down guidance. We must seize this opportunity to overcome institutional inertia and make broad improvements to the education and training of our forces. Only by continuing to purposefully seek out innovative ways to maintain training readiness and enhance service-learning culture will we be able to set conditions for the distributed learning ecosystem the Naval Services require.

### Notes

1. Mick Ryan, *An Australian Intellectual Edge for Conflict and Competition in the 21st Century*, (Canberra, AUS: Strategic & Defence Studies Centre, March 2019).

2. Gen David H. Berger, *38th Commandant's Planning Guidance*, (Washington, DC: July 2019).

3. Headquarters Marine Corps, *MCDP 7, Learning*, (Washington, DC: 2020)

4. J.J. Walcutt, Sae Schatz, (ed.), *Modernizing Learning: Building the Future Learning Ecosystem*, (Washington, DC: Government Printing Office, 2019).

5. Headquarters Marine Corps, *Marine Corps Force Design 2030*, (Washington, DC: March 2020).

6. Department of the Navy, *Education for Seapower Strategy 2020*, (Washington, DC: March 2020).

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