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REPORTS & STUDIES

MAKING THE VIRTUAL INTERNATIONAL MARITIME STAFF OPERATORS COURSE A REALITY

Kenneth M. Sandler

Among the global impacts of the onset of the coronavirus pandemic for many resident-education institutions was a rapid shift of their operations to an exclusively virtual environment. While online education has existed for decades and collaborative tools have matured greatly over that time, the massive scope and compressed timeline of this endeavor created significant challenges—and opportunities—for educators of all types and at all levels. This included those at U.S. Department of Defense (DoD) professional military education (PME) institutions.

One course with unique characteristics that adapted rapidly to this new paradigm was the spring 2020 International Maritime Staff Operators Course (IMSOC) at the Naval War College (NWC) in Newport, Rhode Island. In doing so, it provided lessons for PME at all levels, especially with regard to courses on planning.

IMSOC itself was designed jointly by NWC's International Programs Department and College of Maritime Operational Warfare. Its purpose is to prepare midgrade international naval officers to support the planning and execution of complex maritime operations in a coalition environment. It originated in

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response to U.S. maritime partners' demands for a course similar to the U.S.-only Maritime Staff Operators Course (MSOC). The twelve-week unclassified IMSOC course is taught at NWC, and uses the U.S. Navy Planning Process (NPP) and the maritime operations center (MOC) construct. Objectives include understanding the art and science of multinational maritime, operations,

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operational-level planning processes, and the organization and functions of an operational-level-of-war maritime headquarters, as typified by the MOC, as well as building enduring professional and personal relationships within the international community.

In response to the heightened threat situation caused by COVID-19, the President of NWC ordered that starting on 16 March 2020 all resident courses had to be held online; any courses for which this was not possible were to be terminated. This coincided with the start date of IMSOC, which was scheduled for 16 March to 5 June. Nine students from six countries arrived from their home countries and U.S. locations on some of the last flights completed before tighter restrictions were put in place.

THE COURSE—OLD AND NEW

A key element of the DoD PME system is the integration of international officers into each class, which broadens perspectives and builds relationships. What made transitioning IMSOC to the virtual environment compelling was that the curriculum consists predominantly of team-based practical-application exercises conducted with an *exclusively* international student body—from diverse backgrounds, languages, and cultures. Normally, instruction is accomplished via seminar format, augmented by team planning exercises, tabletop discussions, case studies, and site visits. Faculty traditionally deliver lessons during seminars, mentor students and facilitate during practical-application sessions, and serve as role players during the capstone planning exercise.

However, there were significant doubts whether course objectives could be achieved in a remote environment. The first question was whether the collaborative technology would support team practical-application exercises and the NPP. Second, how would students and faculty build relationships and trust, given minimal social interaction? This concern was amplified because several students were visiting the United States for the first time. So staff members worked overtime surmounting these hurdles, including coordinating basic subsistence. The staff established assumptions that not all objectives would be accomplished to the same standard, and therefore expectations should be lowered. The revised standards, however, still would have to meet all the criteria necessary to graduate from the course.

While significant challenges had to be overcome, ironically they also aided in unifying everyone toward the common objective of making the course a worthwhile endeavor and completing it successfully. Our strength was motivated, “digital-native” students; they were key to overcoming technical obstacles. Reviewing how the curriculum evolved over the course of the three progressively

complex segments (the foundational portion, the NPP, and the command-post exercise [CPX]) serves to highlight how adaptation and innovation were key to enabling success without overly diluting the desired end state. The course still produced graduates able to perform as staff officers on a national or multinational maritime staff.

Blackboard Collaborate Ultra (BCU) was the primary software infrastructure used for distance learning, since it had been available for all faculty and students as an online course-management tool long before the pandemic. However, various other software infrastructures could have served as long as they provided the essential elements, such as a virtual classroom with breakout rooms, presentation tools, a whiteboard, and audio and video communication channels. Later, some faculty and staff additionally implemented the use of Zoom, focusing primarily on video chats to support academic discussions.

The networked environment represented both a critical capability and a vulnerability, both enabling and limiting our freedom of action.¹ Early business rules and lessons learned included the following:

- Limited video: using video clips for various lectures (but not cameras, owing to bandwidth limitations)
- Radio discipline: using standard naval communications (e.g., saying “Over” when done talking)
- Moderator role: conducting roll call, with audio and chat communication checks on a daily basis; having faculty and students “raise hands” and the moderator granting permission to speak
- Faculty coordination: using the moderator chat room widely during class to coordinate among staff members; WhatsApp groups were an alternative means for faculty and students to communicate
- Nonverbal communication: enhancing student interactions via use of emoji
- Silence in the classroom: striking the correct balance between interjecting when there was a lack of engagement and practicing patience to allow students to formulate responses to sometimes abstract issues; this is a necessary skill for instructors to cultivate in any educational setting, and even more so when the discomfort that silence can bring is exacerbated in an online setting by an inability to read body language

On a daily basis, various technical glitches impacted students and faculty alike, becoming an expected nuisance. An accepted part of the staff’s daily routine was responding to these glitches with a wide range of mitigating actions. Issues included the following:

- Intermittent Wi-Fi: Students living in the bachelor officer quarters (BOQ) routinely were dropped, albeit briefly, out of classes before rejoining. On one occasion, a BOQ outage caused class to end two hours early. When a wind-storm impacted a faculty member's power supply, he tethered to his phone, a method that worked adequately but suboptimally. Having a plan in place for veteran instructors to back up the primary instructors proved useful, even though it was employed only rarely.
- Equipment limitations: Initially, students who used iPads faced equipment limitations, producing limited functionality. This was rectified midway through the course by a rapid procurement of Chromebooks.
- Microphone issues: One faculty member needed to "warm up" his mic before the audio would function; another's mic kept fading out. The solution was to connect to the room on a separate cell phone solely to provide audio.

GETTING STARTED

During the foundational portion, faculty and students adapted to the new way of teaching and learning. This phase consisted of approximately forty-five lectures; these ranged from "Introduction to Combined Maritime Operations" to "Operational Law." For the first three weeks, sessions routinely took longer than anticipated, but by week 4 that became the exception rather than the rule. Each day the previous day's instructor conducted a five-minute review of that session to gauge how well the material had been retained. Translating these class recaps for the virtual environment was accomplished effectively. Various means were used to ensure interaction and interest, including having students type their answers in chat or respond via voice, conducting multiple-choice polls, and even using the *Jeopardy!* game-show format. However, recaps using these methodologies often exceeded the five minutes allotted per class, with cascading effects on the entire day's schedule, so this too was adjusted, with questions limited to four.

Practical-application exercises exceeded expectations. They were accomplished using breakout groups; such subgroups followed the same business rules as the main room. Trial and error could be a painful teacher, at times; for example, a dean's virtual visit did not go smoothly because placing students in the correct groups took an inordinate amount of time. However, once such mechanics were ironed out the methodology saved substantial time and worked well. Lessons learned included the following:

- Moderator role: Until students are familiar with moving among breakout groups, assign one person to manipulate students in and out of rooms.

- Prestaging students: Blackboard permits the queuing of students in their selected breakout rooms before moving them, which speeds up the process.
- Breakout group leads: Assign a lead and recorder for each subgroup. Students became adept at combining the use of chat and audio, while the recorder shared Word documents and PowerPoint slides to assist participants in building their products “in stride.”

BCU’s whiteboard function was rudimentary, and regrettably its shortcomings made it easy for students to lose their work. This hindered brainstorming by multiple students, traditionally done using sticky notes on a whiteboard. So instructors encouraged and empowered students to experiment with several alternative online whiteboard tools and provide feedback. Incorporating students as part of the solution demonstrated a shared commitment to replicating the classroom environment as closely as possible. An effective approach at this point was to have faculty members assist as recorders, including by capturing students’ input. Although the students’ English was excellent, this capitalized on limited time and made it easier to combine group efforts onto the same slide during outbriefs to compare and contrast solutions. During some of these initial, intensive practical-application exercises, faculty members also acted as the operational planning team (OPT) lead, helping to move the process along.

The ability to overcome impediments had been successful to this point. But would it prove to be enough to enable the teaching and learning of each step of the collaboration-intensive Navy Planning Process?

THE NAVY PLANNING PROCESS, FROM MISSION ANALYSIS TO EXECUTION

On top of the increased workload that normally accompanies the transition to the NPP, the virtual OPT environment imposed additional demands whose resolution required creativity, persistence, and patience. Beginning in the mission-analysis phase, the control cell played a central role in answering student-planner questions in a timely manner. Traditionally, Collaboration at Sea on a closed network is the tool used to establish a common operating picture, simulate MOC processes, and access scenario-related documents. Since this was not available, organizers set up—on a compressed timeline—a new BCU room, with a similar file structure. In addition, the curriculum was retailored to function for the majority of the steps with only one OPT, with the control cell simulating another team. Instruction of the NPP required an exponential increase in parallel breakout sessions, to divide up work. Multiple breakout rooms were created, along with a separate, persistently manned control-cell room to conduct internal discussions and respond to student questions. At this stage, the function of moving students

between rooms transitioned from being faculty to student managed, and eventually this became second nature.

Even though being reliant on the online environment slowed progress, students exceeded expectations during mission analysis. Granted, there was a significantly higher demand for the lead faculty member to intervene and give detailed advice, compared with the equivalent experience in the classroom environment. The increased self-reliance of students during the planning phases also raised the likelihood of introverted students remaining in the background; however, faculty members ensured that all students were placed in leadership roles—and all rose to the occasion. Running several concurrent breakout groups—some with as few as two students—allowed more participants to shine, enabling the spring 2020 officers to produce a product and briefing comparable to those of previous course convenings.

The ultimate potential and limitations of this approach were tested severely during Course of Action (COA) Development, arguably the most complicated step of the NPP. War on the Map is the foundational exercise for this step. It focuses students' attention on a map of the area of operations by encouraging them to identify where capabilities are needed, with sticky notes placed in suggested locations. These inputs then are translated into actual forces, which facilitates task-force organization and a description of actions. While there was nothing new about using PowerPoint to develop the resultant slide, this function normally was performed after all the pieces were on the physical map. Now, prior to the OPT taking the reins, the instructor methodically demonstrated how the forces would be moved and control measures emplaced, with the recorder moving them. Doing this online in real time placed the burden and stress on a single person who manipulated the map, forces, and control measures, while every faculty member and student closely monitored progress and provided verbal and nonverbal guidance. This exaggerated every second of delay and any perceived "mistake." Since students needed to maximize their screen to see the crowded map, they could not monitor the chat function, but they devised a clever work-around by using the speaker's notes to communicate. The OPT lead navigated the process masterfully, while the recorder served as the linchpin; both demonstrated grace under pressure, thereby proving that the NPP could be taught even in a distributed and degraded environment.

Three main trends became more visible as the NPP progressed. The first was that by its nature the virtual environment yielded decreased one-on-one interaction between individual faculty members and student OPT leads. The COA Analysis and Wargaming step reinforced the need for extra attention and time set aside for informal coaching, mentoring, and back briefs prior to each step. The second trend was OPT leads spending significant time outside class—in the

evenings and on weekends—preparing work. This helped keep the course on timelines and provided a “running start” each day; however, it also negated some of the benefits of teamwork, and more than once proved counterproductive. The third trend was recognition of the limitations of the collaboration tool, with its constraints of sharing only one application and product at a time. An online environment in which students individually could reference multiple products—as they are developed, and without relying on the recorder or having to toggle to other tabs on their laptops—could collaborate simultaneously, and could communicate with audio *and* chat would have improved the process. Numerous products are available along this line, with one experiment during the assessment phase producing positive results by involving everyone in brainstorming through placing virtual sticky notes to identify measures of performance and effectiveness for each of the essential tasks. This closely simulated the classroom environment, with student feedback stating overwhelmingly that it significantly improved their ability to collaborate, understand, and apply how assessment measures and indicators help recognize performance and achieve progress toward objectives.

The added complexity of planning for multiple time horizons during the CPX provided invaluable experience, yet it also exposed limitations of the virtual environment and the collaboration tool. The CPX normally is conducted with three planning cells (Current Operations [COPS], Future Operations, and Plans) running concurrently. Instead, owing to the smaller class size and technical constraints, the cells ran sequentially, with students beginning in COPS and then rotating to the other cells. This provided the students effective experience working within each cell; however, the normal student-driven exchange of information among cells was absent. The extended time in front of screens during this phase added to the cumulative online fatigue and was draining for students and faculty members alike; guarding against this well-known phenomenon via frequent breaks is essential to avoiding burnout.

Regardless of the drawbacks, students’ positive attitude, strong work ethic, and ability to deliver high-quality products exceeded faculty expectations and enabled the course objectives to be met. Students’ feedback stated that they found the experience challenging but that they were confident they had gained the ability to apply the NPP. It might have been easy for the students to lose motivation while attending remote classes eight hours a day for three months, yet the students maintained focus throughout. They built rapport and—of their own volition, even though they were peers—instituted the naval tradition of adding “Mr.” before their names when addressing each other. This small gesture had the intangible effect of maintaining a degree of decorum and professionalism when complacency easily could have taken hold. The faculty unanimously agreed that

the products met the standard, and while instructors could not *see* the light bulb go on, they could *hear* that it had.

Students did express disappointment about having traveled to the United States only to attend a virtual course, and there was consensus across the faculty and students that face-to-face teaching remains the preferred method for this type of course. General observations about the online offering include the following: class times were longer, and faculty involvement was greater—sometimes too much so; product quality was commensurate with that achieved by previous classes; there were limitations to the tool used itself, although promising alternatives are available; and the valuable student interaction that normally occurs on a daily basis was irreplaceable. The inability to travel within the United States limited professional development and personal enrichment, and made building camaraderie difficult.

Even given these limitations, boundaries were pushed and the art of the possible was demonstrated. Even after IMSOC transitions back to the physical classroom, elements of the online curriculum will be retained.

The coronavirus pandemic has impacted educators across the world. But they have demonstrated remarkable dedication to their students, and they have delivered—when it was needed most. Lessons learned abound for transitioning to the virtual environment, and many of those shared here are similar to what thousands of others have experienced. The added, noteworthy circumstances that characterize IMSOC make this experiment widely relevant to PME institutions, and it is especially applicable to courses on planning at all levels. With distributed-planning tools widely used, the students learning this “harder” way will be *better* prepared in some ways to conduct planning functions in coalition operations, especially in a degraded collaborative environment.

NOTES

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1. U.S. Navy Dept., *Navy Planning*, NWP 5-01 (Norfolk, VA: Navy Warfare Development Command, December 2013), annex C, pp. C-3 to C-4.