

2024

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Recommended Citation

Martinson, Ryan D. (2024) "War without Surprises—Education for Command in the People's Liberation Army Navy," *Naval War College Review*. Vol. 77: No. 3, Article 4.

Available at: <https://digital-commons.usnwc.edu/nwc-review/vol77/iss3/4>

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Naval War College Review, Summer/Autumn 2024, Vol. 77, No. 3/4

WAR WITHOUT SURPRISES

Education for Command in the People's Liberation Army Navy

Ryan D. Martinson

Today, the most likely—and most dangerous—wars that the People's Republic of China (PRC) might fight involve disputed territories, the vast majority of which are islands. These include Taiwan, the Penghus, Kinmen, Matsu, and dozens of tiny features in the East China and South China Seas.¹ Given the high likelihood that China's next military conflict will require it to project power over water, its Central Military Commission (CMC) has taken steps to reorient the People's Liberation Army (PLA) force structure and strategy for a maritime conflict. As a result, the People's Liberation Army Navy (PLAN) has grown more prominent, acquired a greater share of China's military budget, and assumed more leadership across the joint force.²

The PLAN would play a key, possibly central, role in the conflicts the PRC is most likely to fight in the near to middle term. In a Taiwan invasion scenario, the PLAN would operate at the heart of a joint force that would include the PLA ground forces (PLAGF), PLA Air Force (PLAAF), and the PLA Rocket Force (PLARF). PLAN landing ships would ferry PLAGF troops and PLAN marines across the Taiwan Strait to land on beaches, seize ports, and capture airfields. PLAN destroyers and frigates would protect troop transport ships from missile, artillery, and torpedo attack. Minesweepers would clear routes to selected invasion beaches, and logistics ships would support forces ashore. PLAN submarines and other assets—potentially including aircraft carriers—would confront any U.S. or Japanese military forces attempting to intervene in the conflict. PLAN ships, submarines, aircraft, and coastal-defense missile batteries on the Chinese mainland would implement a naval blockade of the island and provide fire support to PLA ground forces on Taiwan.³

The PLAN would play an even more prominent role in a conflict over a disputed land feature in the East China Sea or South China Sea. It likely would be tasked with seizing and maintaining local air and sea control, conducting an amphibious landing—possibly in the face of resistance from an existing occupant—and ultimately maintaining control over the feature. It would operate in conjunction with other forces—especially the PLAAF and PLARF—to deter the United States and others from intervening, and it would strive to minimize the impact of that intervention if deterrence fails.

Most analysis of these scenarios has focused on the quantities and capabilities of the platforms that the PLAN might employ to achieve its campaign objectives.⁴ To date, there are very few studies about the *people* who would operate this hardware or the officers who would command them.⁵ This article seeks to contribute to this neglected area of China security studies. Specifically, it examines the role of professional military education (PME) in preparing PLAN officers to command forces in combat.

PME is a key part of military officers' preparation for command. It teaches them to look beyond the narrow confines of individual platforms or units and to consider the political, operational, and strategic issues relevant to joint action. Perhaps most famously, the USN officers who led the campaign to defeat Japan in the Pacific War—Chester W. Nimitz, William Halsey Jr., Raymond A. Spruance, Richmond K. Turner, and others—leaned heavily on knowledge and experience gained while students at the U.S. Naval War College. The education they received in Newport in the 1920s and 1930s prepared them for leadership by forcing them to grapple with the scenarios, situations, and challenges they later faced in a war with Japan. Repeated simulation of that conflict through strategic- and tactical-level war games was a core component of their educational experience.⁶

In the PLAN, midcareer officers on the path to senior command are required to complete two separate certificate courses at the Naval Command College (海军指挥学院) in Nanjing. These programs respectively prepare officers to command forces at two different levels of warfare: the high-tactical level (i.e., combined arms) and the campaign level (i.e., operational). In the event of a conflict, the success of China's maritime operations will depend heavily on its naval officers' leadership acumen. Thus, the type and quality of instruction they received at the Naval Command College will have a direct bearing on China's wartime performance.

This article examines how their time at the Naval Command College prepares senior PLAN officers for wartime leadership through careful review of the available record of PLAN PME practices.⁷ It comprises four main parts. The first part briefly describes the main command positions, or "billets," for senior Chinese naval officers in the PLA's current organizational structure. This discussion

serves as foundation for the second part, which closely examines the educational programs at the Naval Command College that are designed to prepare PLAN officers for higher leadership. The third part analyzes the culminating event of officer education at the Naval Command College—the capstone graduation exercise—for insights into how the college uses war gaming as a learning tool. The fourth part profiles three officers who received their midcareer education at the Naval Command College to illustrate the types of officers who attend the college and where this education fits into their career paths. The article concludes with a summary of the main research findings.

POSTREFORM COMMAND BILLETS FOR PLAN OFFICERS

Overall control of PLA operations resides in the CMC Joint Operations Command Center (军委联合作战指挥中心), located in Beijing. The center allows CMC members—above all, Chairman Xi Jinping, who serves as the center’s commander in chief—to exercise “strategic command” over all operational forces.⁸ It is staffed by officers from all PLA services, including the PLAN.⁹

The PLAN headquarters is subordinate to the CMC Joint Operations Command Center. Prior to the 2016 military reform, this headquarters exercised supreme operational command over all PLAN forces.¹⁰ Today, it is largely responsible only for manning, training, and equipping the service, but in some cases it “assumes command functions assigned to it by the CMC.” These functions are likely carried out by personnel assigned to the PLAN Staff Department’s Bureau of Operations (海军参谋部作战局).¹¹ These delegated responsibilities almost certainly include command over forces operating beyond the jurisdictions of the PLA’s five geographic theater commands—akin to the U.S. “combatant commands”—such as Gulf of Aden escort task forces, and possibly nuclear-powered ballistic missile submarines (i.e., SSBNs) on deterrence patrols.

As a result of the 2016 reforms, however, the bulk of the PLAN’s command responsibilities were transferred to three joint theater commands (Eastern, Northern, and Southern), which have operational control over the forces of all services within their geographic areas of responsibility.¹² Theater commanders exercise this authority through their own joint operations command centers. These centers are staffed by officers from all PLA services, including the PLAN.¹³

Subordinate to the theater joint operations command centers are a number of command posts responsible for directing the operations of all forces active in a given functional domain.¹⁴ Operations conducted by the PLAN and any other service operating over water are commanded by maritime operations subcenters (海上作战分中心), with one for each coastal theater command.¹⁵ These maritime operations subcenters may be housed in the same headquarters facilities formerly used by PLAN fleet command posts.¹⁶ Even if that is not the case, PLAN

personnel almost certainly comprise the bulk of the staff officers assigned to the three maritime operations subcenters, given the nature of the domain.

Maritime operations subcenters mostly are focused on employing major combat platforms: amphibious landing ships, maritime patrol aircraft, submarines, destroyers, aircraft carriers, and frigates. A different PLAN organizational entity,

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called “bases” (基地), is responsible for directing smaller platforms generally tasked with coastal defense, such as missile boats, corvettes, and minesweepers. Base commanders and the staff officers who serve them would make

operational decisions within this narrow domain, presumably in coordination with theater command maritime operations subcenters.¹⁷

Beneath the maritime operations subcenters are ship formations (舰艇编队), which are commanded by a senior officer, usually from the flotilla to which the ships belong. In peacetime, formation commanders can rely on real-time guidance from superiors ashore, but in wartime they would need to be capable of acting independently, owing to either degraded communications or lack of time.¹⁸ Most of, if not all, the staff assigned to a ship formation command post would be PLAN personnel.

In sum, although the 2016 reforms stripped the PLAN—and therefore PLAN officers—of certain command authorities, service personnel still sit in positions of influence in the existing chain of command. They serve as ship formation commanders, with ultimate responsibility for the success of operations involving two or more warships. They serve as base commanders responsible for the operations of coastal-defense forces. They serve in the theater command joint operations command centers, and the maritime operations subcenters beneath them. At the behest of the CMC Joint Operations Command Center, officers at the PLAN's Bureau of Operations do command some PLAN forces—likely those operating outside the theater command areas. Lastly, the CMC Joint Operations Command Center itself is staffed (in part) by PLAN officers. Given the prominent roles of PLAN personnel at all levels of command, their competence as leaders and staff officers would have a direct bearing on the course of any maritime conflict. Their preparation for these weighty responsibilities largely takes place at the Naval Command College.

EDUCATION FOR COMMAND

Located in the city of Nanjing, the PLAN's Naval Command College is the center of education for midcareer Chinese naval officers.¹⁹ The college provides two

main courses of study: (1) an intermediate course, Naval Combined Arms Command (海军合同指挥), for captains, and (2) a senior course, Naval Campaign Command (海军战役指挥), for senior captains.²⁰ The intermediate course lasts ten months, the senior course five months. Officially, both courses are required for officers on the path to flag rank, but it is unclear to what extent this requirement is enforced.²¹ Neither course confers a graduate degree, though the college does also offer separate MA and PhD programs for qualified officers.²²

Only PLAN officers may enroll in the two courses. While the college does matriculate foreign students, they take a separate course of study. This allows PLAN students to be fully immersed in the best available (i.e., classified) information about their own military and the militaries of potential adversaries. Officers from other PLA services do participate in short-term learning opportunities at the college and may apply to its graduate-degree programs, but none appear to enroll in the naval command courses.²³ PLAN officers who promote to flag rank will later attend a third educational course on joint operational command at the National Defense University in Beijing.²⁴

Intermediate Course

As the course title implies, students enrolled in the intermediate course focus their studies on the theory and practice of combined-arms naval warfare—that is, the employment of forces from two or more service arms (surface, submarine, air, marines, and coastal defense) to achieve operational objectives on or from the sea. The curriculum is intended to prepare them to serve in leadership positions at the high tactical level, such as commanding an operation to degrade or destroy an enemy aircraft carrier strike group.²⁵ Since 2012, the college has required intermediate students to study topics in military and national strategy, in recognition that naval officers—perhaps more so than the officers of any other service—must be prepared to make tactical decisions that could have major strategic consequences. To that end, students take courses such as Strategic Guidance for Maritime Military Operations, taught by Professor Huang Chunyu.²⁶ While in Nanjing, students are almost certainly required to demonstrate proficiency in Chinese Communist Party dogma, especially as reflected in the speeches and writings of party “core” and CMC chairman Xi Jinping.²⁷

Student learning objectives are met through several different pedagogical approaches. Courses had long been taught using a traditional lecture style. However, in 2014 the college began exploring the use of the “flipped classroom” methodology to increase student engagement. This approach requires students to come to class already prepared to discuss the content of outside readings.²⁸ It is unclear what portion of courses are taught using this method today. Students are also assigned research projects relevant to real-world concerns and germane to their individual experience and expertise. One past project for intermediate

students involved research on the best tactics for Chinese ship formations to “raid” (突击) enemy task forces.²⁹

Classroom lectures are supplemented by presentations from outside experts, both military and civilian, akin to the U.S. Naval War College's Lectures of Opportunity.³⁰ Operational commanders are invited to visit the college to share their firsthand experience from the fleet. For example, in the summer of 2022, soon after completing a major training mission aboard a nuclear-powered submarine, the deputy chief of staff of a PLAN submarine base, Wang Jun (王俊), came to the college to present a lecture on the PLAN's operational employment of submarines.³¹

In recent years, the college has created programs to foster online collaboration with students and instructors from other Chinese PME institutions. The goal is to bolster student familiarity and awareness of the equipment and weapons (装备性能), operational characteristics (作战特点), and operational methods (战法运用) of other services. This represents an effort to cultivate naval officers capable of serving in joint leadership positions—an imperative in the postreform PLA.³²

Aside from traditional academic course work, students engage in “practical learning activities” (实践性教学活动) while at the college. Since students cannot practice their new knowledge and skills through the movements of *real* ships, submarines, missile batteries, and aircraft, they use simulation tools. These are made available in the college's wargaming center, the Naval Combat Laboratory (海战实验室中心). Students use the laboratory's facilities to conduct scenario development; one-sided simulations; two-sided, opposition-force simulations (双方对抗); and joint exercises.³³ For example, students might play out a scenario in which Red (i.e., Chinese) surface, air, submarine, and coastal-defense forces must provide “cover” (掩护) for a Red submarine as it tries to break through a Blue (enemy) blockade.³⁴ Students and instructors also participate in major training and analytic games hosted by the Naval Combat Laboratory.³⁵ All these simulation activities culminate in a capstone graduation war game, discussed in detail in the next section.

For some students, these practical learning experiences take place beyond the college walls. In 2012, the college created a program to include students in fleet opposition-force exercises by “embedding” (嵌入) them in Red or Blue command posts.³⁶ The intention was to provide students with opportunities to “digest the theoretical knowledge” (消化理论知识) they accumulated in the classroom, “master use of operational methods” (掌握战法运用), and “gain familiarity with the real situation at the fleet” (熟悉部队实际). This initiative reflected a deliberate effort by the college to “get closer to the fleet and focus on real combat” (向部队靠拢, 向实战聚焦).³⁷ Students participate in these exercises under the guidance of college instructors.³⁸

After completing the intermediate course, officers are eligible for deputy division leader (副师职) command.³⁹ A surface warfare officer, for example, could be assigned to serve as the deputy commander of a destroyer flotilla (副支队长). From that position, they may, for example, deploy as the commander of a PLAN surface task force operating in contested areas of the East China Sea, with ample opportunity to apply the skills and knowledge learned in Nanjing.⁴⁰

Senior Course

Beginning in September, the senior course lasts five months.⁴¹ While in Nanjing, the officers study “the theory of joint operational command” (联合作战指挥理论), “familiarize themselves with the employment of forces from other services and service arms” (熟悉军兵种运用), “research joint campaigns and operational methods” (研究联合战役战法), and study historical naval campaigns.⁴² Stu-

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dents likely master current PLA campaign doctrine and strategic guidelines as promulgated by the CMC, in preparation for their future roles.⁴³ Instructors assign senior students research projects relevant to their warfare foci, such as best approaches to prevailing in a contest over a disputed island.⁴⁴ Like students in the intermediate course, senior students sometimes are sent out to the fleet to embed in command posts,

both Red and Blue, during opposition-force exercises. Given the new emphasis on jointness, students have the option of visiting other PME institutions to learn how different services operate.⁴⁵ As in the intermediate course, simulation is a major part of the curriculum, with a focus on the operational or campaign level of war. After graduation, senior students are eligible to serve in billets with the grade of division leader (正师职).⁴⁶ A graduate could, for example, command a destroyer flotilla, or serve as the deputy commander of a naval base.

THE CAPSTONE GRADUATION EXERCISE

In January or February each year, students from the intermediate and senior command courses participate in a campaign-level capstone war game formally called the “graduation joint exercise” (学员毕业联合演习).⁴⁷ The exercise, code-named SEA PLAN (筹海), occurs over seven to ten days and involves about two

hundred students plus approximately one hundred outside observers and participants from other PLAN units, the theater commands, and other PLA services.

Though called “exercises” (演习) or “drills” (演练), these events meet the basic definition of a war game (兵棋推演) as understood in both China and the West: namely, a simulated conflict involving opposing sides, who make decisions on the basis of established rules.⁴⁸ Participants are divided into Red and Blue—and often Green (i.e., third party)—teams. Each side comprises different cells representing different levels of leadership in the chain of the command. The teams are given objectives and develop plans to achieve them. The conflict progresses on the basis of alternating decisions made by the warring sides, expert judgments about the outcomes of these decisions, external circumstances controlled by game directors, and, of course, chance.

The annual SEA PLAN exercise is a major event at the college. The college's president is heavily involved in the game; he or the political commissar serves as the overall exercise director (总导演).⁴⁹ The head of the college's Training Department and the college's vice president serve as his deputies (副总导演).⁵⁰ Executive game directors are senior members of the college faculty. The game director (导演组组长) for the 2021 SEA PLAN exercise, for example, was Ji Shixun (计世勋), head of the college's Operational Command Department.⁵¹

The capstone exercise is also a major event for the PLAN and the rest of the military. Personnel from the theater commands, other services, and PLAN Headquarters commonly send observers to the games.⁵² SEA PLAN is considered a model for a campaign-level “command opposition-force exercise” (指挥对抗演习).⁵³ Therefore, training departments from across the fleet send personnel to watch, participate, and learn.⁵⁴

The SEA PLAN exercises are held in the college's Naval Combat Laboratory.⁵⁵ The laboratory is considered the PLAN's most advanced facility for campaign and tactical-level war gaming.⁵⁶ It has been designated a “key warfare laboratory” (全军重点实验室), one of the few within the Chinese military. It is the navy's only warfare lab (作战实验室) that does campaign and tactical simulation training, operational-methods research, and testing and validation of operation plans. One *PLA Daily* article described the laboratory as “famous across the whole military” (全军著名的). Housed in “a mysterious structure” (一栋神秘建筑) next to the main teaching building, it is rarely photographed, either inside or outside.⁵⁷

Students from both the intermediate and senior courses participate in the Red cells, with senior course students serving as campaign-level leaders. Students make the bulk of the decisions, applying the knowledge they learned in the classroom. College faculty members grade them on their performance.⁵⁸

While some students are assigned to the Blue and Green teams, many of these positions are filled by college faculty members—specifically, personnel from the

college's Blue Team Center (蓝军中心).⁵⁹ Created in August 2012, the Blue Team Center serves as a think tank comprising thirty-plus faculty experts who engage in intensive study of the strategies, doctrines, tactics, operational concepts, organization, and leadership culture of real-world potential adversaries.⁶⁰ Members of the college's Blue Team Center are much sought after by the fleet for their expertise and frequently travel to support fleet exercises, providing advice to exercise organizers and playing members of Blue or Green command posts.⁶¹

SEA PLAN organizers craft games that are intended to be realistic. Scenarios are based on real-world concerns and real-world adversaries or potential adversaries. Students who play Red are playing China. Participants who play Blue or Green are playing Taiwan, Japan, Vietnam, the Philippines, or the United States, depending on the scenario. For Red, the game's command interface is based on the Integrated Command Platform (ICP) actually used by the PLA since late 2008.⁶² The capabilities of Red forces match existing Chinese capabilities. The same goes for Blue and Green. Students are required to give mock press conferences to explain and defend their side's actions, as military officers might be required to do in an actual conflict. Students apply real doctrinal concepts, such as the "Three Warfares" (legal warfare, psychological warfare, and public opinion warfare), to their campaign execution.⁶³

Red's command levels are based on existing command-and-control structures, which have changed in recent years. The designers of SEA PLAN-2016 eliminated fleet command-post cells, replacing them with joint maritime operations command posts, which, as in the real world, had the authority to command *all* PLA forces operating over water.⁶⁴ According to participants, the new command-and-control arrangements increased the speed and efficiency of force employment, though commanders apparently had a difficult time processing the larger amount of information they received.⁶⁵ To make these cells more realistic, the college invited outside experts to play other-service members in the joint cell. For the 2021 capstone exercise, for example, the college invited nearly a hundred outside personnel from the PLAGF, PLAAF, PLARF, and PLA Strategic Support Force from an unnamed theater command (probably the Eastern Theater Command) to play in the game cells.⁶⁶

SEA PLAN scenarios echo real-world events and concerns. In the Xi Jinping era (2012 to present), several of the games have involved "gray zone" incidents that escalated to armed conflict. For example, the 2014 war-game scenario started with a collision between a Red coast guard cutter and a Blue warship, resulting in injuries to Red personnel. The incident quickly escalated to conflict.⁶⁷ The 2016 game centered on Red's defense of a large oil-and-gas-drilling platform presumably placed in contested waters, a scenario identical to that which occurred between China and Vietnam from May to July 2014 in the South China Sea.⁶⁸ In

the 2017 game, Red installed an “ocean monitoring station” (海洋监测站) in a disputed area, leading to a forceful response from Blue, including “obstruction and sabotage” (阻挠和破坏).⁶⁹ At the time, the PRC was planning to install such a station at Scarborough Shoal, though it ultimately chose not to.⁷⁰ The 2021 game was a Taiwan conflict scenario, presumably reflecting the growing tensions over the status of the island nation.⁷¹

Naturally, U.S. military intervention in the types of regional conflicts being wargamed is a major concern for the players, and the college often includes a Green cell to play the United States (for those games where the United States is not the opposing Blue force). Green forces intervene in the conflicts in a variety of ways: they employ electronic warfare to obstruct Red operations; invent legalistic rationales for maintaining presence in the vicinity of the conflict, complicating Red's actions; and share intelligence on Red with their partners and allies.⁷²

In recent years, the college has created programs to foster online collaboration with students and instructors from other Chinese PME institutions. The goal is to bolster student familiarity and awareness of the equipment and weapons (装备性能), operational characteristics (作战特点), and operational methods (战法运用) of other services.

In the 2021 game, Blue (as the United States) directly intervened in a Taiwan crisis, leading to armed conflict with Red. The episode began with a battle of wills: Blue insisted on maintaining a humanitarian corridor by creating no-fly and no-sail zones (禁飞禁航区) adjacent to the island. It

then dispatched aircraft to the scene to conduct electronic-warfare attacks “to isolate the battlefield” (战场阻隔), putting Red in “a very difficult spot” (防不胜防). Red employed ocean surveillance vessels and antisubmarine warfare aircraft—which dropped large numbers of sonobuoys—to track Blue submarines operating in the area. Game adjudicators judged these efforts to be successful, with one Blue submarine sunk, the victim of a torpedo fired by a Red surface combatant. Blue responded with “integrated air and sea strikes” (海空一体打击行动) with the support of unmanned aerial vehicles employing electronic-warfare tactics, sinking or damaging several Red ships. Ultimately, Red prevailed by leveraging what its campaign commander—Senior Captain Jiang Zhonglin (蒋忠林), profiled in detail below—described as its “obvious joint strike advantages in the theater” (我作战海区联合打击优势明显).⁷³

STUDENT PROFILES

What follows is profiles of three officers who completed the senior course at the Naval Command College in the Xi Jinping era. These officers were chosen because their enrollment at the college is confirmed and sufficient materials exist to

tell their stories. All three are surface warfare officers (SWOs). Given the heavy surface force composition of the PLAN, SWOs likely would comprise the bulk of the naval leadership positions at the high-tactical and operational levels in any conceivable maritime conflict that China may fight. Therefore, their career trajectories are especially important to understand.

Senior Captain Zhao Xiaogang

Zhao Xiaogang (赵晓刚) attended the Naval Command College's senior course in 2013, graduating in early 2014.⁷⁴ While enrolled, Senior Captain Zhao kept his position as the deputy commander of the 9th Destroyer Flotilla (Sanya, Hainan) and returned to the post after graduation.⁷⁵ This appears to be common practice, as individual students are often associated with their current positions.

Senior Captain Zhao had significant command experience prior to attending the senior course. Upon graduation from the Dalian Ship Academy in 1988, he was assigned to his first ship, the South Sea Fleet Type 053H frigate *Maoming*. Zhao remained on *Maoming* until 1997, when he was transferred to another Type 053H frigate, *Shaoxing*, to serve as executive officer ("deputy captain" in PLAN parlance). He was made captain of a third Type 053H frigate, *Changde*, just three years later, in January 2000, one month before his thirty-fourth birthday. In March 2001, Zhao returned to *Shaoxing* as the commanding officer. One of his first missions was to search for Wang Wei (王伟), the PLAN fighter pilot downed in a collision with a USN EP-3 off Hainan in April 2001.⁷⁶ In 2007, Zhao commanded *Guangzhou*, a Type 052B destroyer that visited Great Britain, France, Spain, and Russia.⁷⁷ He participated in three PLAN Gulf of Aden counterpiracy escort task forces (1st, 6th, and 10th).⁷⁸ In April 2013, while serving as the deputy commander of the 9th Destroyer Flotilla, he led a PLAN ship formation that conducted an eleven-day training evolution into the Philippine Sea—a significant event at that time and his last public action before attending the Naval Command College.⁷⁹

After graduating from the senior course, Senior Captain Zhao returned to his post as deputy commander of the 9th Destroyer Flotilla, a position he had held since 2008.⁸⁰ He was subsequently chosen to serve as the commander of the PLAN task force that participated in RIMPAC 2014, China's first (of two) invitations to the major U.S.-hosted maritime exercise held biennially in Hawaii. As leader of the PLAN contingent, he had frequent interactions with foreign military personnel and international media. PLAN Naval Command College professor Huang Chunyu declared that Zhao's ability to direct the task force's successful participation in RIMPAC—in Huang's words, to "win the praise of Chinese and foreign colleagues alike"—was due in part to training received while attending the senior course at the college.⁸¹ Senior Captain Zhao himself acknowledged that he "benefited greatly" (受益匪浅) from this education there.⁸² When asked the reasons for his success, he credited the growing power

of the Chinese navy and the “precious experience” (宝贵经历) of attending the senior course in Nanjing.⁸³

Senior Captain Zhao completed his naval service with a shore assignment as chief of staff of a South Sea Fleet base.⁸⁴ Despite an apparently outstanding career, he did not promote to flag rank and today is the party secretary of the Zhejiang Province Federation of Literary and Art Circles—a bizarre next chapter to three decades of notable naval service. Aside from representing the federation at cultural events, he sometimes provides lectures on maritime affairs.⁸⁵

Senior Captain Bao Daohua

Senior Captain Bao Daohua (包道华) attended the fall 2016 senior course, graduating in early 2017. Senior Captain Bao played the commander of the theater command maritime operations command post (战区海上指挥所指挥员) in the SEA PLAN-2017 exercise. According to PLAN reporting, Bao was particularly impressed by the skill and proficiency of his Blue opponents, mostly played by members of the college's Blue Force Team.⁸⁶ When he began the course, he was the chief of staff of the 6th Destroyer Flotilla, located in Zhoushan, Zhejiang.

Like Zhao Xiaogang, Bao Daohua came to the course with significant operational experience. Unlike Zhao, who was a South China Sea sailor, Bao spent much of if not all his career in the East Sea Fleet. He gained prominence in 2008 while serving as commanding officer of the Type 051D destroyer *Zunyi*, which belonged to the 6th Destroyer Flotilla. This was his fifth ship command (and fourth class of ship). Bao managed to transform the crew of this obsolete and unreliable ship into the top performers in the flotilla, winning a major “skills competition” (比武大练兵). In his spare time, he wrote several monographs on naval combat, including a treatise entitled “Research on Issues Related to Operational Command of Destroyer and Frigate Formations in a Complex Electromagnetic Environment.” As a capable skipper, he was selected to command one of the new Type 054A frigates then just joining the fleet: *Yiyang* (益阳), commissioned into the 6th Destroyer Flotilla in October 2010. While *Yiyang* was still being built, Bao created training videos on how to use the onboard systems for the benefit of future operators of this new ship class.⁸⁷ In April 2010, Bao was chosen as one of 110 “Outstanding Commanding Officers in the Navy” (海军优秀指挥军官).⁸⁸ Just two months later, he was recognized as one of the PLAN's ten best young officers (海军十杰青年), one of just two SWOs on the list—placing him among the top ship drivers of his generation.⁸⁹

Bao soon rose to hold senior leadership positions ashore. After serving as the captain of *Yiyang* for just two years (2010–12), he was promoted to chief of staff of the 6th Destroyer Flotilla, a post that he held for the five years leading up to enrollment in the senior course in Nanjing. Much of his work focused on

ensuring that the crews of ships belonging to the unit, many of which were newly built frigates and destroyers, met training requirements.⁹⁰ There is no record of Bao participating in a Gulf of Aden escort task force, which is perhaps unusual given his record and seniority.⁹¹

After Senior Captain Bao graduated from the Naval Command College in early 2017, he was promoted to commander of the 3rd Destroyer Flotilla, also in Zhoushan. Vessels from this unit have been on the front line of PRC naval

Gaming is treated as a didactic tool for both the intermediate and senior courses. Students are expected to leverage the advanced facilities available at the college's Naval Combat Laboratory—the PLAN's most advanced facility for tactical- and campaign-level war gaming.

expansion in the East China Sea, which has meant many intense encounters with Japan Maritime Self-Defense Force ships and aircraft.⁹² After assuming leadership of the flotilla, Bao personally served as embarked mission

commander for some of these combat-readiness patrols.⁹³ Moreover, numerous articles record him directly involved in at-sea training of ships in the unit. He has published several essays in PLAN periodicals, all related to surface force training. In January 2021, he won an individual award for outstanding division-grade training officer.⁹⁴ Senior Captain Bao likely remains at this post today, though he almost certainly will be promoted to flag rank.

Senior Captain Jiang Zhonglin

Senior Captain Jiang Zhonglin (蒋忠林) attended the Naval Command College's senior course in the fall of 2020, graduating in early 2021. Jiang was chosen to serve as the Red team campaign commander in the SEA PLAN-2021 graduation exercise—probably in recognition of his experience and seniority. While at the college, Senior Captain Jiang retained his post as the deputy commander of the 2nd Destroyer Flotilla, located in Zhanjiang, Guangdong.

Like the other two officers profiled in this section, Senior Captain Jiang Zhonglin came to Nanjing with extensive operational experience, all aboard ships belonging to the 2nd Destroyer Flotilla. He participated in four different counterpiracy escort task forces. As the executive officer of the Type 051B destroyer *Shenzhen*, he participated in the 2nd Escort Task Force (April–August 2009).⁹⁵ After he returned, he was named the commanding officer of the Type 054A frigate *Chaohu* (later renamed *Hengyang*), which participated in two consecutive escort task force missions, the 4th and 5th (December 2009–September 2010)—the first PLAN ship to do so.⁹⁶ As captain of *Chaohu/Henyang*, Jiang participated in the 13th Escort Task Force (November 2012–May 2013).⁹⁷ In January 2014, Jiang Zhonglin received a major award for his contributions to escort task force operations.⁹⁸

After returning from the Indian Ocean, Jiang was promoted to more-senior positions in the 2nd Destroyer Flotilla. By 2015, then-Captain Jiang had been named the unit's deputy chief of staff. While this is officially a shore post, Captain Jiang was directly involved in at-sea training for ships in his unit.⁹⁹ By 2019, Senior Captain Jiang had been promoted to the deputy commander of the 2nd Destroyer Flotilla. From this position, he served as commander of ship formations conducting major out-of-area training evolutions and played an active role ensuring ships in the flotilla met training requirements.¹⁰⁰ This was the post he held while enrolled in the senior course in Nanjing. He likely remains in this position today.

Assuming that Senior Captains Zhao, Bao, and Jiang are representative of officers enrolled in the senior course, their profiles suggest that students arrive in Nanjing with deep experience in their specific fields, but very little breadth. All three spent their entire careers in surface force units, rising from ensigns to senior captains in the same unit. There is no evidence of assignments to serve on fleet, theater command, or CMC staffs. Thus, while they are no doubt highly competent surface warfare officers, they would have come to the college with a very parochial understanding of naval operations, largely ignorant of other service arms or the requirements of directing campaign-level military operations.

Fifteen years after the end of World War II, the then-retired Chester Nimitz visited the U.S. Naval War College, where he praised the institution for its valuable role in preparing naval officers like him for command in the Pacific. Perhaps with some exaggeration, he declared: "The war with Japan had been re-enacted in the game rooms here by so many people and in so many different ways that nothing that happened during the war was a surprise—absolutely nothing except the Kamikaze tactics toward the end of the war; we had not visualized those."¹⁰¹ That is high praise—and similar to what may well be applied by PLAN admirals to the Naval Command College in the future.

As this article has shown, the college at Nanjing is almost entirely focused on preparing naval officers to serve command positions in the future maritime conflicts that China is most likely to fight. Students participating in the intermediate-level course are dedicated to the study of combined-arms naval command, while officers in the senior course concentrate on naval campaign command. In recent years, course work on strategic-level issues has been introduced to ensure commanders are able to grasp the larger context of their actions, but the core purpose of learning is to cultivate naval officers who can make rapid and smart decisions about how best to employ Chinese naval assets to prevail in conflict at sea.

The PLAN Naval Command College's focus on naval warfare is reflected in its full embrace of educational war gaming.¹⁰² Gaming is treated as a didactic tool for both the intermediate and senior courses. Students are expected to leverage the advanced facilities available at the college's Naval Combat Laboratory—the PLAN's most advanced facility for tactical- and campaign-level war gaming. Moreover, the heart of the college's academic calendar is a seven-to-ten-day capstone war game held each winter. The school's senior leaders are directly involved in the game, a reflection of the importance attached to it. The college assigns members of its Blue Team Center—the PLAN's premier corps of experts on China's future enemies—to join the Blue and Green cells. The scenarios are realistic, and the capabilities, organization, and doctrines of Red, Blue, and Green are intended to reflect real life. The result appears to be a highly valuable educational experience for the participants. In the words of one recent student, Li Haichen (李海臣), the sense of "shock and reflection brought by this exercise will follow me throughout my career."¹⁰³

In sum, the Naval Command College strives to provide midcareer officers with a full appreciation of the conflict scenarios China could face and the military problems with which PLAN officers must grapple to serve as effective wartime commanders at the high-tactical and operational levels of war. Therefore, graduates *should* return to the fleet well versed on the PLAN's best estimates of how the next maritime conflict might start, where it will take place, who will be involved, and what roles PLAN forces will be expected to play.

This preparation, of course, does not guarantee superior command performance in China's next conflict. As the profiles of three recent graduates of the senior course suggest, students come to Nanjing very raw, with deep experience in a particular warfare community, often in a single unit or geographic area, but with little if any meaningful engagement with other warfare communities in the PLAN, let alone joint experience. It is difficult to imagine that a mere five months at the college can transform these students into effective campaign-level commanders. Moreover, despite some efforts by the college to teach students about the cultures, capabilities, and jargon of other services, it fundamentally remains an institution focused on naval education. This focus puts it at odds with the current PLA imperatives to cultivate officers prepared for joint command. Lastly, effective wartime leadership requires a number of other qualities that may not—perhaps cannot—be cultivated at the Naval Command College, owing to factors inherent in China's Leninist system. These involve questions of character, individual empowerment, and independence of thought.¹⁰⁴

Nevertheless, the PLAN's approach to midcareer officer education should prompt some reflection within U.S. PME institutions—above all, within the U.S. Naval War College. Do existing curricula strike the right balance between

strategy and policy studies and the practice of modern naval warfare? Do all graduates depart the College with a solid understanding of the capabilities, doctrines, and organization of the country's most dangerous potential adversary? How much educational war gaming is needed to give naval officers ample opportunity to apply the knowledge they gain in the classroom? Despite the tendency of USN leaders to glorify the achievements of the War College in the 1920s and 1930s, it is the PLAN—not the U.S. Navy—whose midcareer officer education more closely resembles the practices of that era. Has the College simply evolved a better approach, or might there be elements from the past worth resurrecting?

NOTES

1. The Penghu Islands, Kinmen, and Matsu are islands in the Taiwan Strait governed by Taiwan and represent subsets of the broader PRC-Taiwan conflict.
2. The PRC declared its reorientation toward sea power in its 2015 national defense white paper. See State Council of the People's Republic of China, *China's Military Strategy* (State Council Information Office, May 2015), available at english.www.gov.cn/; M. Taylor Fravel, "China's New Military Strategy: 'Winning Informationized Local Wars,'" Jamestown Foundation *China Brief* 15, no. 13 (2 July 2015), available at jamestown.org/; and Nan Li, "The Southern Theater Command and China's Maritime Strategy," Jamestown Foundation *China Brief* 17, no. 8 (9 June 2017), available at jamestown.org/.
3. For a full treatment of the forces likely to be involved in a PRC invasion of Taiwan, see Ian Easton, *The Chinese Invasion Threat: Taiwan's Defense and American Strategy in Asia* (Project 2049 Institute, 2017).
4. See, for example, the China-focused articles in the *National Interest* (online), available at nationalinterest.org.
5. One noteworthy exception is the work of Kenneth W. Allen. See, for instance, Allen's many publications in Jamestown Foundation *China Brief*, available at jamestown.org/. See also Roy D. Kamphausen, ed., *The People of the PLA 2.0* (U.S. Army War College Press, 2021), available at press.armywarcollege.edu/.
6. The contributions of the interwar U.S. Naval War College to the U.S. Navy's ultimate success during the Pacific War are systematically discussed in Norman Friedman, *Winning a Future War: War Gaming and Victory in the Pacific War* (Naval History and Heritage Command, [2017]), pp. 160–69. See also Francis J. McHugh, "Gaming at the Naval War College," U.S. Naval Institute *Proceedings* 90/3/733 (March 1964), available at usni.org/, and Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists* (Naval Institute Press, 1990), pp. 70–76.
7. The Naval Command College does not have a public website. It does have an official WeChat account but does not publish any substantial information about its curriculum. Therefore, this paper relies heavily on fragmentary information largely contained in PLA and PLAN news reports. As a result, some of the information presented may be outdated.
8. 新华社 [Xinhua], 习近平视察军委联合作战指挥中心 ["Xi Jinping Inspects the CMC Joint Operations Command Center"], 中国政府网 [Central People's Government of the People's Republic of China], 8 November 2022, gov.cn/.
9. According to one November 2017 article, personnel from all the services (身着各军兵种作训服) serve as "duty personnel" (值班人员) in the center. Reportedly, the center issues "large volumes of military orders" every day. 习近平在视察军委联合作战指挥中心时强调 强化备战打仗的鲜明导向 全面提高新时代打赢能力 [], 解放军报 [PLA Daily], 4 November 2017, p. 1. The PLAN has pledged to send its "most outstanding personnel" to work in the joint command centers at

- the theater commands and in the CMC. 朱永松 [Zhu Yongsong], 用习主席重要指示统一思想认识全面增强新时代备战打仗能力 [“Use Chairman Xi’s Important Instructions to Unify the Ideological Understanding and Comprehensively Enhance the Ability to Prepare for War in the New Era”], 人民海军 [People’s Navy], 7 November 2017, p. 1.
10. 沈仲平 [Shen Zhongping], 永做对党绝对忠诚的好干部 [“Forever Be Good Officer with Absolute Loyalty to the Party”], 人民海军 [People’s Navy], 23 October 2015, p. 3.
 11. According to the then head of the bureau, Yang Weizhong, the “[PLAN Headquarters] command organization is a component part of the CMC Joint Operations Command Center.” 杨卫忠 [Yang Weizhong], 扎实抓好新体制下海军主建为战工作 [“Do a Solid Job of Naval Construction for Operations under the New System”], 人民海军 [People’s Navy], 17 May 2016, p. 3. The predecessor to the Staff Department Operations Bureau was the PLAN Headquarters Operations Department (海司作战部). The Operations Department had a duty room (值班室), which allowed the headquarters to conduct real-time command of PLAN forces. Presumably, the current Operations Bureau possesses its own duty room for situational awareness and command of some PLAN forces. See 李高健 [Li Gaojian], 护航途中悟发展 [“Thinking about Development While on the Way to Conduct Escort Operations”], 人民海军 [People’s Navy], 22 December 2010, p. 2.
 12. Phillip C. Saunders et al., eds., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms* ([U.S.] National Defense Univ. Press, 2019). See also Phillip C. Saunders and Joel Wuthnow, “China’s Goldwater-Nichols? Assessing PLA Organizational Reforms,” *Joint Force Quarterly*, no. 82 (3rd Quarter 2016), available at ndupress.ndu.edu/.
 13. Zhu, “Use Chairman Xi’s Important Instructions,” p. 1.
 14. Specifically, the theater command joint operations command center “authorizes” (授权) these domain-specific command posts to command forces. 王建军 [Wang Jianjun], 曹站和 [Cao Zhanhe], and 朱宁 [Zhu Ning], 后装保障指挥“变”在哪里 [“How Has Post-Installation Support ‘Changed’?”], 解放军报 [PLA Daily], 21 March 2019, p. 7.
 15. J. Michael Dahm and Alison Zhao, *Bitterness Ends, Sweetness Begins: Organizational Changes to the PLAN Submarine Force since 2015*, China Maritime Report 28 (U.S. Naval War College, 2023), pp. 3–9, available at digital-commons.usnwc.edu/; Roderick Lee and Morgan Clemens, *Organizing to Fight in the Far Seas: The Chinese Navy in an Era of Military Reform*, China Maritime Report 9 (U.S. Naval War College, 2020), pp. 5–6, available at digital-commons.usnwc.edu/; 陆文涛 [Lu Wentao], 蔡晔 [Cai Ye], and 王庆厚 [Wang Qinghou], 为了一名战士的生命 [“For the Life of One Warrior”], 人民海军 [People’s Navy], 22 October 2020, p. 2; 北部战区海军举行援潜救生演练 立体救援, 为潜艇开辟生命通道 [“Northern Theater Command Navy Holds Submarine Rescue Drills, Providing Multidimensional Rescue and Support, Creating a Path of Life for the Submarine”], 解放军报 [PLA Daily], 12 November 2018, p. 2.
 16. 刘亚迅 [Liu Yaxun], 陶军 [Tao Jun], and 代宗锋 [Dai Zongfeng], 备战, 剑指新高地 [“Preparing for War, Sword Pointing to New Heights”], 人民海军 [People’s Navy], 21 October 2017, p. 4. This article calls the new command posts a slightly different name, i.e., “theater command maritime command sub-center” (战区海上指挥分中心). This article is cited in both Lee and Clemens, *Organizing to Fight in the Far Seas*, p. 6, and Dahm and Zhao, *Bitterness Ends, Sweetness Begins*, p. 4.
 17. The bases are described as “basic campaign command organizations” (初级战役指挥机关). Lee and Clemens, *Organizing to Fight in the Far Seas*, p. 7; 申微波 [Shen Weibo] and 刘波波 [Liu Bobo], 加钢淬火, 为胜利积累力量 [“Add Iron and Quench the Fire, Accumulating Strength for Victory”], 人民海军 [People’s Navy], 4 December 2020, p. 2.
 18. As a retired PLAN officer and former vice president of the Naval Command College, Peng Yikun (彭一坤), put it, “Maritime operations and land operations are very different; in the ever-changing and complex environment of the sea, many things must be decided on one’s own.” 刘铮 [Liu Zheng], 投身海军无怨无悔 [“No Regrets about Going into the Navy”], 舰船知识 [Naval & Merchant Ships], no. 6 (June 2014), p. 23.
 19. For a useful description of the Naval Command College, see Kenneth Allen and

- Mingzhi Chen, *The People's Liberation Army's 37 Academic Institutions* (China Aerospace Studies Institute, [2020]), pp. 111–14.
20. Senior captain does not have a perfect analogue in USN ranks and is more similar to the nonflag rank of commodore used in some navies.
 21. *PLAN Handbook of Officers and Enlisted* (Haichao Press, 2012), p. 144. As Allen and Clemens noted in their 2014 study, they could not find any evidence that senior PLAN officers have actually attended both the intermediate and senior courses at the Naval Command College. I could not find any evidence either, though this does not mean it does not exist. See Kenneth Allen and Morgan Clemens, *The Recruitment, Education, and Training of PLA Navy Personnel* (Naval War College Press, 2014), p. 13.
 22. Allen and Chen, *The People's Liberation Army's 37 Academic Institutions*, pp. 111–12. The two command programs provide *peixun* (培训) to students. This term is a combination of *peiyang* (“cultivation,” 培养) and *xunlian* (“training,” 训练). The PLA translates *peixun* as “development and training.” Allen and Clemens translate it as “PME.” Regardless of the translation, the term implies a training focus rather than an educational focus. See 中国人民解放军军语 [*PLA Dictionary of Military Terms*] (Academy of Military Science Press, September 2011), p. 323, and Allen and Clemens, *The Recruitment, Education, and Training of PLA Navy Personnel*, p. 3.
 23. From 2006 to 2012, the college trained six thousand officers from other services as part of this rotational training program. See 王中彦 [Wang Zhongyan] and 沈抒 [Shen Shu], 永不停歇赶考路 [“Never Rest on the Path of Exams”], 人民海军 [*People's Navy*], 28 May 2012, p. 4.
 24. *PLAN Handbook of Officers and Enlisted*, p. 144.
 25. The PLAN considers combined-arms warfare to be the highest level (最高层次) of naval tactics. See 张永义 [Zhang Yongyi], ed., 海军军事训练学 [*The Science of Naval Training*] (Military Science Press, 2006), p. 249.
 26. 王建超 [Wang Jianchao] and 柏杨 [Bo Yang], 当好改革大潮“排头兵” [“Being the ‘Leader’ of the Tide of Reform”], 人民海军 [*People's Navy*], 10 March 2017, p. 3. Other courses that are (or have been) offered include Introduction to Strategy; Theory and Application of Naval Strategy; Maritime Security Environment; Naval Strategies of Foreign Countries and Taiwan; International Law and Maritime Military Operations; The International Strategic Situation and China's Peripheral Security; and Naval Diplomacy. See 刘文平 [Liu Wenping] and 柏杨 [Bo Yang], 作战指挥员的战略素养从何而来? [“Where Does the Strategic Cultivation of Operational Commanders Come From?”], 人民海军 [*People's Navy*], 20 March 2017, p. 3.
 27. College professor Huang Chunyu cited the study of the communist classics (Marx, Lenin, Mao, etc.) and the speeches and writings of Xi Jinping as vital for strengthening strategic thinking (战略素养) in naval officers. It is unclear where the study of these texts fits into the curriculum. Liu and Bo, “Where Does the Strategic Cultivation of Operational Commanders Come From?” p. 3.
 28. One article cites the intermediate course (combined-arms command) student Liu Yuqun (刘育群), who said the instructional method of the “flipped classroom” or “inverted classroom” created lots of stress on students because they had to master the materials before class so that the class time could be focused on discussion and activities. 李龙辉 [Li Longhui], 沈抒 [Shen Shu], and 柏杨 [Bo Yang], “翻转课堂”上, 学员唱主角 [“In the ‘Flipped Classroom,’ Students Play the Main Role”], 人民海军 [*People's Navy*], 19 September 2014, p. 3.
 29. 沈抒 [Shen Shu] and 秦若云 [Qin Ruoyun], 创新中高级指挥员培训新模式 [“Innovating a New Model for Training Intermediate and Senior Level Commander”], 人民海军 [*People's Navy*], 2 March 2011, p. 3.
 30. 沈抒 [Shen Shu], 跟随时代步伐 紧贴实战要求 [“Keep Pace with the Age, Adhere Strictly to the Requirements of Real Combat”], 人民海军 [*People's Navy*], 19 March 2018, p. 3.
 31. See 董俊林 [Dong Junlin], 徐学文 [Xu Xuewen], and 傅达林 [Bo Dalin], 发展效能的转型升级——怎么看全面加强军事治理 [“Transformation and Upgrade of Development Effectiveness—How to View Comprehensive Strengthening of Military Governance”], 解放军报 [*PLA Daily*], 24 November 2023, p. 7; 钱宗阳 [Qian Zongyang], 强军之道, 要在得人 [“The Path to a Powerful

- Military Means Being Able to Win People Over”, 解放军报 [PLA Daily], 11 October 2022, p. 5; and 我军构建院校部队合力育人新格局 高中级指挥员执教军校成常态 [“Our Army Builds a New Pattern to Combine Efforts to Educate Personnel: It Has Become Common Practice for Middle and Senior Commanders to Teach at PME Schools”], 解放军报 [PLA Daily], 18 July 2022, p. 1.
32. One program involved the college and the Strategic Support Force Aviation Engineering University. 海军指挥学院与兄弟院校探索教学协作机制 线上联合施教 线下派人跟训 [“Naval Command College and Sister Schools Explore Mechanisms for Coordinated Teaching, Jointly Teaching Online and Sending Personnel to Learn from Each Other”], 解放军报 [PLA Daily], 21 July 2023, p. 5.
 33. 柏杨 [Bo Yang], 黄力鹏 [Huang Lipeng], and 邱淑群 [Qiu Shuqun], 为战育人, 心中烽火永不熄 [“Education for War, the Fire in the Heart Will Never Go Out”], 人民海军 [People’s Navy], 13 May 2022, p. 1. As of 2016, the students used a wargaming system called “Naval Campaign and Tactics Wargaming System” (海军战役战术兵棋系统). See 闫力 [Yan Li] and 柏杨 [Bo Yang], 虚拟世界对接未来战争 [“Virtual World Is Connecting with the Future Battlefield”], 人民海军 [People’s Navy], 30 September 2016, p. 3.
 34. 全军首家海战实验室里的战事: 狭路相逢智者胜 [“Battle in the Military’s First Naval Warfare Laboratory: When the Road Is Narrow the Wise Man Wins”], 解放军报 [PLA Daily], 4 February 2010, chinanews.com.cn/.
 35. Bo, Huang, and Qiu, “Education for War,” p. 1; 柏杨 [Bo Yang] and 沈抒 [Shen Shu], 海军指挥学院: 着力培育新型联合作战人才 [“Naval Command College: Striving to Cultivate New-Type Joint Operations Personnel”], 人民海军 [People’s Navy], 11 September 2017, p. 3.
 36. In May 2012, the first time the Naval Command College sent students to embed in a fleet exercise, it involved thirteen students from the intermediate course. One of the professors, Guo Shihong (国世宏), was an exercise organizer. 胡威标 [Hu Weibiao] et al., 大融合, 点亮强军之光 [“Great Fusion, Lighting Up the Light of a Strong Military”], 人民海军 [People’s Navy], 12 December 2014, p. 3.
 37. Bo and Shen, “Naval Command College,” p. 3; 沈抒 [Shen Shu] and 秦若云 [Qin Ruoyun], 指挥学院“嵌入式”教学活动侧记 [], 人民海军 [People’s Navy], 17 June 2011, p. 2. For the quote about getting closer to the fleet, see 万建雄 [Wan Jianxiong], 王建超 [Wang Jianchao], and 柏杨 [Bo Yang], 聚力打造大洋“人才旗舰” [“Focus Efforts to Build a ‘Talent Flagship’ for the Great Ocean”], 人民海军 [People’s Navy], 24 August 2015, p. 3.
 38. In the summer of 2015, the North Sea Fleet organized a command opposition-force drill. Thirteen students from the intermediate course participated throughout drill development, organization, and execution. From 2012 to 2015, more than two hundred students were “embedded” (嵌入) in major fleet training and exercise events. The first time the college ever embedded intermediate students in a major fleet exercise was in May 2012, as mentioned; the partner was the North Sea Fleet. See Wan, Wang, and Bo, “Focus Efforts to Build a ‘Talent Flagship,’” p. 3.
 39. *PLAN Handbook of Officers and Enlisted*, pp. 144, 154.
 40. Deputy commanders of destroyer flotillas often serve as commanders of ship formations conducting at-sea training or real-world operations. See, for example, 王志鹏 [Wang Zhipeng] and 梁庆松 [Liang Qingsong], 真打实抗, 如何打赢“键盘上的战争”? [“Real Fighting, How to Win a ‘War Fought with Keyboards?’”], 人民海军 [People’s Navy], 12 May 2015, p. 2.
 41. *PLAN Handbook of Officers and Enlisted*, p. 144.
 42. Li, Shen, and Bo, “In the ‘Flipped Classroom,’” p. 3; Bo and Shen, “Naval Command College,” p. 3.
 43. Zhang, *Science of Naval Training*, p. 249.
 44. Shen and Qin, “Innovating a New Model,” p. 3. In March 2010, intermediate and senior students, along with some instructors, did a research project on the Diaoyu Island issue (“XX岛问题”). They used gaming and simulation in their research. See 史兴春 [Shi Xingchun] and 秦若云 [Qin Ruoyun], 兵锋直指未来海战场 [“Aiming for the Future Maritime Battlefield”], 人民海军 [People’s Navy], 12 November 2010, p. 3.
 45. Bo and Shen, “Naval Command College,” p. 3.
 46. *PLAN Handbook of Officers and Enlisted*, p. 144.

47. As of 2010, the capstone graduation exercises had been conducted “for over 20 years” (20多年来). That means they were first introduced in the late 1980s. See 徐卫兵 [Xu Weibing], 教学贴近海战 培养顶用人才 [“Teaching Stays Close to Naval Warfare to Cultivate Top Personnel”], 人民海军 [People's Navy], 12 November 2010, p. 3. Most sources claim that the capstone exercise is held once per year (一年一度). See, for example, 陈小波 [Chen Xiaobo], 沈抒 [Shen Shu], and 柏杨 [Bo Yang], 冯伟强: 为练蛟龙兴风浪 [“Feng Weiqiang: Creating a Storm to Train Sea Dragons”], 人民海军 [People's Navy], 10 July 2015, p. 3. However, some sources do indicate a capstone exercise is also held in the summer. See, for instance, 沈抒 [Shen Shu] and 秦若云 [Qin Ruoyun], “象牙塔”走出新型军事人才 [“The ‘Ivory Tower’ Begets New-Type Military Personnel”], 人民海军 [People's Navy], 11 August 2011, p. 2. One article described the capstone exercise as happening twice per year (一年两度). See 史兴春 [Shi Xingchun], 沈抒 [Shen Shu], and 秦若云 [Qin Ruoyun], 把“马中赤兔”送还“人中吕布” [“Returning ‘Mazhong Chitu’ to ‘Renzhong Lubu’”], 人民海军 [People's Navy], 6 July 2010, p. 1. Another says that a graduation capstone exercise is held every semester (每学期组织一次的毕业学员联合演习). See 沈抒 [Shen Shu] and 柏杨 [Bo Yang], 虚拟战场燃起实战烽火 [“The Virtual Battlefield Ignites the Flame of Real Combat”], 人民海军 [People's Navy], 3 August 2015, p. 3.
48. PLA Dictionary of Military Terms defines a “war game” (兵棋推演) as “a drill involving alternate decision-making and command confrontation that is conducted for an envisioned military operation on a simulated battlefield environment with two or more opposing sides using game pieces [bingqi], [acting] according to certain rules. [War games are] divided into manual games and computer war games.” See PLA Dictionary of Military Terms, p. 311. For an excellent discussion of PLA wargaming terminology, see Elsa B. Kania and Ian Burns McCaslin, *Learning Warfare from the Laboratory: China's Progression in Wargaming and Opposing Force Training* (Institute for the Study of War, 2021), pp. 13–14. The capstone exercise meets Francis McHugh's classic definition of a war game—i.e., “a simulation, in accordance with predetermined rules, data, and procedures, of selected aspects of a conflict situation.” See Francis J. McHugh, *Fundamentals of War Gaming*, 3rd ed. (U.S. Naval War College, March 1966), pp. 1–3. It also fits Peter Perla's definition: “a warfare model or simulation whose operation does not involve the activities of actual military forces, and whose sequence of events affects and is, in turn, affected by the decisions made by players representing the opposing sides.” Perla, *The Art of Wargaming*, p. 164. This is the definition favored by the U.S. Naval War College's War Gaming Department. See Shawn Burns, ed., *War Gamers' Handbook: A Guide for Professional War Gamers* (U.S. Naval War College, [2015]), p. 4.
49. In the 2016 capstone exercise, there were two overall game directors, college president Gao Feng (高峰) and the college political commissar, Tong Haibin (佟海滨). See 王建超 [Wang Jianchao], 沈抒 [Shen Shu], and 柏杨 [Bo Yang], 长剑出鞘露锋芒 [“The Long Sword Is Unsheathed and Its Edge Is Revealed”], 人民海军 [People's Navy], 20 January 2016, p. 3. In the 2017 capstone exercise, the college president, Rear Admiral Gao, served as the exercise's “overall director” (演习总导演). Reportedly, “the college's entire Party Standing Committee participated throughout the process of overall planning, plan formulation, and organization and implementation phases.” See 王建超 [Wang Jianchao] and 柏杨 [Bo Yang], “红军”是这样炼硬的 [“The ‘Red Army’ Is Trained Just like This”], 人民海军 [People's Navy], 23 January 2017, p. 2. In the 2018 capstone exercise, the Naval Command College president reportedly “participated in overall planning, formulation of the exercise plan, and organization and implementation phases.” See 沈抒 [Shen Shu] and 柏杨 [Bo Yang], 在硝烟中领取战场“通行证” [“Obtaining Their Battlefield ‘Pass’ in the Smoke of Gunfire”], 人民海军 [People's Navy], 25 January 2018, p. 3. In the 2021 capstone graduation exercise, college president Han Xiaohu (韩小虎) served as the “overall director” (演习总导演). See 兰坚 [Lan Jian], 王振田 [Wang Zhentian], and 邱淑群 [Qiu Shuqun], 虚拟战场, 锻造能谋善战的打仗人才 [“Virtual Battlefield, Creating Personnel That Can Strategize for and Fight Wars”], 人民海军 [People's Navy], 10 March 2021, p. 3.
50. 沈抒 [Shen Shu] and 秦若云 [Qin Ruoyun], 考场变“战场” [“The Exam Room Turns into

- a ‘Battlefield’”), 人民海军 [*People's Navy*], 31 January 2011, p. 3.
51. Lan, Wang, and Qiu, “Virtual Battlefield,” p. 3. For Ji’s title, see 计世勋 [Ji Shixun] and 陈正义 [Chen Zhengyi], 海上作战指挥理论 [Research on the Theory of Maritime Operational Command] (Electronic Industry Press, 2021).
 52. Shi, Shen, and Qin, “Returning ‘Mazhong Chitu’ to ‘Renzhong Lubu,’” p. 1; Shen and Qin, “The Exam Room Turns into a ‘Battlefield,’” p. 3.
 53. For a useful discussion about how the PLA conceptualizes opposition-force exercises, see *PLA Terms and Concepts: Training, Exercises, & Education, In Their Own Words* (China Aerospace Studies Institute, [2021]), available at airuniversity.af.edu/.
 54. For instance, during 2011–15 a then–South Sea Fleet training base sent personnel to observe the capstone exercise, where they learned the mechanics of how it was run, including “direction and coordination” (导演和调理, or 导调 for short), data collection (数据采集), and exercise review and evaluation (复盘评估). See 吴永华 [Wu Yonghua], 构建部队院校联教联训体系 [“Creating a Fleet and PME Joint Teaching and Training System”], 人民海军 [*People's Navy*], 3 February 2015, p. 2.
 55. Bo, Huang, and Qiu, “Education for War,” p. 1.
 56. The Naval Command College has hosted joint games, including in July 2013 a joint command opposition-force exercise (指挥对抗联合演习), involving PLAN, PLAGE, and PLAAF forces and experts from the PLAAF Command College. This was the first time that the Naval Command College trained officers from other services (首次承训兄弟军种部队). See Wan, Wang, and Bo, “Focus Efforts to Build a ‘Talent Flagship,’” p. 3. The July 2013 joint command opposition-force exercise was called JOINT—2013 SOUTH CHINA SEA A (“联合—2013南海A”). One hundred ninety people participated. Students from the college also participated. Hu et al., “Great Fusion,” p. 3.
 57. For the quote describing it as a “mysterious building,” see Bo, Huang, and Qiu, “Education for War,” p. 1. A grainy photo of the Naval Combat Laboratory appears in 顾辉 [Gu Hui] et al., 海军名校 [*Brand-Name Naval Schools*] (Haichao Press, 2013), p. 209.
 - It also appears in the background of photos published in a May 2012 and a December 2014 issue of *People's Navy*. See Wang and Shen, “Never Rest on the Path of Exams,” p. 4, and Hu et al., “Great Fusion,” p. 3.
 58. 沈抒 [Shen Shu] and 王元元 [Wang Yuan-yuan], 考场? 战场! [“Exam Room? Battlefield!”], 人民海军 [*People's Navy*], 10 February 2014, p. 4.
 59. Some sources suggest that the Blue cells are entirely filled with members of the college faculty. See 沈抒 [Shen Shu] and 柏杨 [Bo Yang], 根植沃土育良将 [“Rooted in Fertile Soil Creating Good Admirals”], 人民海军 [*People's Navy*], 20 April 2015, p. 3. But other sources suggest that members of the Blue Team Center are interspersed in the Blue and Green cells. In the 2014 capstone exercise, for example, instructors from the Blue Team Center were placed into the Blue and Green cells. The Blue commander was a student. See *ibid.* In the 2018 game, thirteen experts from the Blue Team Center formed a third-party cell to intervene in the Red-Blue conflict. Shen and Bo, “Obtaining Their Battlefield ‘Pass,’” p. 3. Members of the Blue Team Center were used in the Direction Department for the 2017 capstone game, and they were integrated into the Blue and Green command posts, serving as deputy commander and deputy chief of staff in these cells. See Wang and Bo, “The ‘Red Army,’” p. 2.
 60. Shen and Bo, “The Virtual Battlefield Ignites the Flame,” p. 3. As of mid-2013, the Blue Team Center had thirty-one “specialist consultants” (专家顾问). See 沈抒 [Shen Shu], 这支蓝军似群狼 [“This Blue Team Is like a Pack of Wolves”], 人民海军 [*People's Navy*], 21 June 2013, p. 3.
 61. 王伟宏 [Wang Weihong], 蓝军: 战斗力生成的“磨刀石” [“Blue Army: A ‘Whetstone’ for Combat Power Generation”], 人民海军 [*People's Navy*], 14 April 2017, p. 3.
 62. The Naval Command College was the first PME institution to create a simulation system for the ICP, called the “naval operational command simulation training system” (海军作战指挥模拟训练系统). Shen and Bo, “Rooted in Fertile Soil,” p. 3; 沈抒 [Shen Shu] and 柏杨 [Bo Yang], 设计排练未来海战 [“Designing and Rehearsing Future Naval Battles”], 人民海军 [*People's Navy*], 22 September 2015, p. 1; 王建超 [Wang Jianchao], 沈抒 [Shen

- Shu], and 柏杨 [Bo Yang], 教打仗的底气从哪来? ["Where Does the Confidence to Fight Come From?"], 人民海军 [People's Navy], 27 November 2015, p. 3. The college used the ICP simulation system in the December 2009 capstone graduation exercise. See Shi and Qin, "Aiming for the Future Maritime Battlefield," p. 3.
63. Shen and Wang, "Exam Room? Battlefield!," p. 4; Wang and Bo, "The 'Red Army,'" p. 2; Shen and Bo, "Obtaining Their Battlefield 'Pass,'" p. 3; Lan, Wang, and Qiu, "Virtual Battlefield," p. 3.
 64. Wang, Shen, and Bo, "The Long Sword Is Unsheathed," p. 3. The game organizers called these joint maritime operations command posts "joint operational command departments for the maritime direction" (海上方向联合作战指挥部). They are equivalent to the maritime operations subcenters discussed above.
 65. The game participants noted that the new command-and-control arrangements were superior to those used in the past, because the organizational structure was "flat" (扁平) instead of "tree shaped" (树状). That is, the theater command could exercise local control of forces instead of individual forces having to operate within their respective chains of command. As a result, "the command hierarchy was highly streamlined, with operational command working with high efficiency" (指挥层次高度精减, 作战指挥实现高效运转). Ibid.
 66. See Lan, Wang, and Qiu, "Virtual Battlefield," p. 3. More than one hundred outside experts (including from the PLAGF, PLAN, and PLAAF) participated in the 2018 capstone exercise. See Shen and Bo, "Obtaining Their Battlefield 'Pass,'" p. 3. More than one hundred outside experts (including from the PLAGF, PLAN, PLAAF, and PLARF) participated in the 2017 capstone exercise. See Wang and Bo, "The 'Red Army,'" p. 2. For the 2016 capstone exercise, more than one hundred outside experts from other services, including the China Coast Guard, participated in the game. See Wang, Shen, and Bo, "The Long Sword Is Unsheathed," p. 3.
 67. Shen and Wang, "Exam Room? Battlefield!," p. 4.
 68. Wang, Shen, and Bo, "The Long Sword Is Unsheathed," p. 3. For a detailed description of the 2014 China-Vietnam oil-rig standoff, see Michael Green et al., *Countering Coercion in Maritime Asia: The Theory and Practice of Gray Zone Deterrence* (Center for Strategic and International Studies, 2017), pp. 202–23.
 69. The station was supposed to "monitor and provide early warning for extreme weather" (用于海洋灾难性气候监测和预警). See Wang and Bo, "The 'Red Army,'" p. 2.
 70. The mayor of Sansha City, Xiao Jie, revealed these plans in a March 2017 interview. The PRC Ministry of Foreign Affairs denied any such plans. If they existed, the PRC has not moved forward with them. See 海南三沙市委书记: 推进黄岩岛环境监测站建设 ["Hainan Sansha City Party Secretary: Advance the Construction of an Environmental Monitoring Station on Scarborough Shoal"], 新浪 [Sina], 14 March 2017, archived at web.archive.org/web/20170318195635/http://news.sina.com.cn/; 中国新闻网 [China News Online], 外交部: 涉及黄岩岛建环境监测站的有关报道有误 ["Ministry of Foreign Affairs: Reports That an Environmental Monitoring Station Will Be Built on Scarborough Shoal Are Erroneous"], Sohu.com, 22 March 2017, news.sohu.com/.
 71. In descriptions of the game, Taiwan is not mentioned by name. But the circumstances of the conflict clearly indicate a Taiwan scenario. Moreover, the exercise scenario is described as follows: "Blue blatantly interfered in Red's internal affairs, so a 'war' was on the verge of breaking out" (蓝方悍然干涉红方内政, "战事"一触即发). Lan, Wang, and Qiu, "Virtual Battlefield," p. 3.
 72. See Ryan D. Martinson, "Counter-intervention in an Age of Naval Reform," in *Modernising the People's Liberation Army: Aspiring to Be a Global Military Power*, ed. James Char (Routledge, June 2024).
 73. Lan, Wang, and Qiu, "Virtual Battlefield," p. 3.
 74. 柏杨 [Bo Yang], 汪丽: 理论播火女先锋 ["Wang Li: Pioneer of Spreading Theory"], 人民海军 [People's Navy], 24 May 2017, p. 3.
 75. 四总部表彰的执行护航任务先进单位和先进个人 ["Four General Departments Recognize Advanced Units and Individuals Involved in Counterpiracy Escort Tasks"], 人民海军 [People's Navy], 6 January 2013, p. 2.

76. 刘建新 [Liu Jianxin] and 陈万军 [Chen Wanjun], 人是最可宝贵的——搜寻我跳伞飞行员王伟纪实 [“People Are the Most Precious—a Record of Efforts to Locate Pilot Wang Wei”], 光明日报 [Guangming Daily], 14 April 2001, gmw.cn/; 龙游县人武部 [Longyou County People's Armed Forces Department], 龙游好男儿 军营作栋梁 [“A Good Man from Longyou, Pillar of the Military Camp”], 今日龙游 [Longyou Today], 30 July 2013, p. 3, jrly.zjol.com.cn/.
77. Longyou County People's Armed Forces Department, “A Good Man from Longyou,” p. 3; 中国海军编队抵达法国土伦 两国舰队将联合军演 [“Chinese Ship Formation Arrives in Toulon: The Two Navies Will Conduct a Joint Exercise”], 中国新闻网 [China News Online], 22 September 2007, chinanews.com.cn/.
78. 王栋 [Wang Dong] and 侯融 [Hou Rong], 伴君远航, 潮起潮落共潮哥 [“Accompanying You on Your Long Voyage, Sharing the Ebb and Flow of the Tide”], 人民海军 [People's Navy], 11 January 2014, p. 3; 远海扬军威——海军第十批护航编队执行任务纪实 [], 国防部网站 [Website of Ministry of Defense], 28 April 2012, gov.cn/.
79. 肖永 曾行贱 南海舰队远海训练编队返回三亚 [], 人民海军 [People's Navy], 23 April 2013, p. 1.
80. Longyou County People's Armed Forces Department, “A Good Man from Longyou,” p. 3.
81. Liu and Bo, “Where Does the Strategic Cultivation of Operational Commanders Come From?” p. 3.
82. Wan, Wang, and Bo, “Focus Efforts to Build a ‘Talent Flagship,’” p. 3.
83. Hu et al., “Great Fusion,” p. 3.
84. As of August 2015, Senior Captain Zhao was the chief of staff of an unnamed PLAN base. See Wan, Wang, and Bo, “Focus Efforts to Build a ‘Talent Flagship,’” p. 3. A 26 February 2016 article described Zhao as the chief of staff of an unnamed South Sea Fleet department (海军南海舰队某部参谋长); this likely was his last post. 冯升 [Feng Sheng] and 杨祖荣 [Yang Zurong], 创新图强再起航——我海军亚丁湾、索马里海域护航新闻观察之五 [“Innovation and Seeking Power Are Setting Sail Again—Part Five of Observations on News about Our Navy's Escort Operations in the Gulf of Aden and Somali Waters”], 解放军报 [PLA Daily], 26 February 2016, p. 8.
85. 省文联书记处书记、海军大校赵晓刚来校作爱国主义主题教育宣讲 [“Navy Senior Captain Zhao Xiaogang, Secretary of the Provincial Federation of Literary and Art Circles, Visits the University to Provide a Lecture on the Subject of Patriotism”], 浙江农林大学 [Zhejiang University of Agriculture and Forestry], 29 May 2021, zafu.edu.cn/.
86. Wang and Bo, “The ‘Red Army,’” p. 2.
87. 李永飞 [Li Yongfei], 侯瑞 [Hou Rui], and 代勇 [Dai Yong], 铸剑闯大洋: 记第八届“海军十杰青年”、“益阳”舰舰长包道华 [“Forging the Sword and Dashing around the Great Ocean: Recognizing Bao Daohua, Winner in the Eighth Iteration of ‘One of Ten Outstanding Young People in the Navy’ and the Captain of ‘Yiyang’”], 人民海军 [People's Navy], 21 December 2010, p. 3; 益阳: 一城一舰“舰”证鱼水情 [“Yiyang: One City and One Ship That ‘Prove’ Closeness between the People and the Military”], 湖南省退役军人事务厅 [Hunan Province Department of Veterans Affairs], 15 March 2023, tjyrswt.hunan.gov.cn/.
88. 光荣榜 [“Honor Roll”], 人民海军 [People's Navy], 5 April 2010, p. 2.
89. All ten winners of this award were born in the 1970s. Bao Daohua was born in November 1971. See 第八届“海军十杰青年”候选人简要事宜 [“A Brief Profile of the Candidates for Eighth ‘Top Ten Young People in the Navy’”], 人民海军 [People's Navy], 30 April 2010, p. 2.
90. 史奎吉 [Shi Kuiji] and 孟云飞 [Meng Yunfei], 每次训练都是一场硬仗 [“Every Time We Do Training Is a Tough Battle”], 人民海军 [People's Navy], 22 April 2015, p. 2. One January 2014 article described Bao Daohua as a “trainer captain” (i.e., an experienced captain qualified to train other captains or prospective captains). Therefore, it is possible that he held some other post in the unit before becoming chief of staff. See 林健 [Lin Jian] and 侯瑞 [Hou Rui], 拔剑即练“封喉功” [“Draw the Sword to Practice the ‘Throat-Sealing Skill’”], 人民海军 [People's Navy], 22 January 2014, p. 2.
91. Yiyang participated in the 12th Escort Task Force (ETF) (July 2012–January 2013) right after Bao was relieved. The ship's commanding officer for the mission was Xu Chengguang

- (许晨光). See 程必杰 [Cheng Bijie] and 侯瑞 [Hou Rui], 中国海军第十二批护航编队举行誓师动员大会 [“The Chinese Navy Twelfth ETF Holds a Swearing-In Mobilization Meeting”], 益阳在线 [Yiyang Online], 2 July 2012, iyzx.com/.
92. Two ships from the flotilla, *Wenzhou* and *Maanshan*, were conducting at-sea training in 2012 when they were suddenly ordered to proceed to a sensitive new location (东海某海域) in the East China Sea, probably near the disputed Senkaku Islands, to conduct a combat-readiness patrol. This reportedly established a new precedent for where ships from the flotilla routinely operated. 刘亚迅 [Liu Yaxun] and 王志鹏 [Wang Zhipeng], 东海舰队某驱逐舰支队以任务为牵引提升备战打仗能力 [“A Destroyer Flotilla from the East Sea Fleet Uses the Mission as a Guide to Bolster Readiness and War-Fighting Capabilities”], 解放军报 [PLA Daily], 8 July 2018, mod.gov.cn/.
 93. For example, in October 2017 Senior Captain Bao served as the mission commander (任务指挥员) (i.e., a leader senior to the ship captain) for the Type 054A frigate *Xuzhou* as it conducted a combat-readiness patrol in a sensitive area in the East China Sea. 宋良福 [Song Liangfu] and 王志鹏 [Wang Zhipeng], 学习十九大报告 掀起练兵热潮 [“Studying the Nineteenth Party Congress Work Report Triggers a Wave of Military Training”], 人民海军 [People's Navy], 23 October 2017, p. 2.
 94. 光荣榜 [“Honor Roll”], 人民海军 [People's Navy], 28 January 2021, p. 2.
 95. 海军护航编队倡议亚丁湾海域过往船只保护环境 [“Naval Escort Task Force Advocates for Environmental Protection from Passing Ships in the Gulf of Aden”], 解放军报 [PLA Daily], 6 June 2009, p. 4.
 96. *Chaohu* departed China on 10 December 2009 to join the 4th ETF. When the 4th ETF completed its mission, *Chaohu* remained on deployment with the 5th ETF. Altogether, *Chaohu* deployed for 276 days. 曹海华 [Cao Haihua], 王乐 [Wang Le], and 刘楠 [Liu Nan], 亮剑亚丁湾的“明星”战舰 [“The ‘Star’ Ship That Flashes Its Sword in the Gulf of Aden”], 人民海军 [People's Navy], 17 December 2010, p. 3.
 97. 肖德伦 [Xiao Delun], 管磊 [Guan Lei], and 寥宇飞 [Liao Yufei], 中国海军亚丁湾护航四周年: 被护商船越来越信任 [“Fourth Anniversary of Chinese Naval Escorts in the Gulf of Aden: Gaining More and More Trust from Commercial Ships under Escort”], 中国新闻网 [China News Online], 21 December 2012, chinanews.com.cn/.
 98. “Four General Departments Recognize Advanced Units and Individuals,” p. 3.
 99. 追梦大洋·走进人民海军 (四) [“Seeking Dreams on the Great Sea, Getting to Know the People's Navy (Part 4)”], 军事报道 [Military Report], aired 25 April 2015, on CCTV-7, available at tv.cctv.com/.
 100. 李维 [Li Wei] and 周演成 [Zhou Yancheng], “训练班车”, 战场直通车 [“‘Training Shuttle,’ Battlefield Express”], 当代海军 [Navy Today], no. 4 (April 2020), p. 51; 李维 [Li Wei] and 郑灿鸿 [Zheng Canhong], 风雨骤起, 战舰夜海突击 [“The Story Rises Suddenly: The Warship Strikes at Night”], 当代海军 [Navy Today], no. 6 (June 2019), p. 53; 三大战区海军演兵忙 部分主战水面舰艇开火 [“Navies of Three Great Theater Commands Busy with Training and Some Main Surface Combatants Fire Their Weapons”], 国防军事早报 [National Defense Morning Report], aired 3 July 2020, on CCTV-7, available at tv.cctv.com/.
 101. McHugh, “Gaming at the Naval War College.”
 102. PLAN leaders regard war gaming as “an effective way to gain operational experience in peacetime and an important means to improve commanders’ command strategizing [谋略] and skills.” 孙盛伟 [Sun Shengwei] and 柏杨 [Bo Yang], 依托兵棋推演 培育战争大脑 [“Rely on War Gaming, Develop Thinking for War”], 人民海军 [People's Navy], 30 July 2016, p. 1.
 103. In the game, Li played a Red “ship formation commander” (红方海上编队指挥员). Lan, Wang, and Qiu, “Virtual Battlefield,” p. 3.
 104. In recent years, the Chinese military has been very vocal about its belief that PLA commanders are not prepared to lead troops in modern high-end conflict. They suffer from a range of deficiencies, best captured by the phrase the “Five Incapables.” Specifically, a significant portion of PLA commanders “cannot judge situations, understand higher authorities’ intentions, make operational decisions, deploy troops, nor deal with unexpected situations.” This criticism applies to all

services, including the PLAN. The translation of the “Five Incapables” comes from Dennis J. Blasko, “The Chinese Military Speaks to Itself, Revealing Doubts,” *War on the Rocks*, 18 February 2019, warontherocks.com/. For a description of what each of the “Five Incapables” entails, see 王雪平 [Wang Xueping], 着力破解指挥员“五个不会”问题 [“Strive to Resolve the ‘Five Incapables’ Issue”], 解放军报 [PLA Daily], 18 June 2019, qstheory.cn/. In 2018 or 2019, the Naval Command College organized four training classes for nearly a hundred PLAN admirals, specifically to deal with the “Five Incapables.” 侯融 [Hou Rong],

孙国强 [Sun Guoqiang], and 陈国全 [Chen Guoquan], 破除惯性, 解决“问题背后的问题” [“Break through the Inertia and Solve the ‘Problem behind the Problem’”], 解放军报 [PLA Daily], 16 April 2019, p. 5; 紧盯打胜仗练兵先练将 海军百余名指挥员开展网上练兵提升作战筹划指挥能力 [“Focus on Winning Battles, When Training Sailor First Train the Admirals, One Hundred-Plus Commanding Officers Conduct Online Training to Improve Operational Planning and Command Capabilities”], 解放军报 [PLA Daily], 30 June 2018, p. 1.



