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Educating a Modern Maritime Force

Reforms to Naval Education in China

Brian Lafferty and Molly Henry



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Main Findings

- In the Xi Jinping era, the Chinese military has intensified efforts to improve the training and education of military officers to remedy perceived leadership deficiencies. Shortly after taking office, Xi called on the People's Liberation Army (PLA) to grasp the "central task" (中心任务) of training high-quality military talents.

- To this end, the PLA has introduced a "three-in-one" model for talent development, comprising academic education, unit training, and vocational learning; reorganized and consolidated its academic institutions; and updated statutes and regulations to guide PLA academies in their work.

- The PLAN currently manages eight academic institutions, all subordinate to the PLAN Headquarters: the Naval Command College, Naval University of Engineering, Dalian Naval Academy, Navy Submarine Academy, Naval Aviation University, Naval Medical University, Naval Logistics Academy, and Naval Petty Officer Academy.

- Among the five PLAN academic institutions offering undergraduate education to recent high school graduates—i.e., the Naval University of Engineering, Dalian Naval Academy, Navy Submarine Academy, Naval Aviation University, and Naval Medical University—all except the Naval Aviation University have seen recruitment numbers rise since 2017.

- To implement guidance issued by the Central Military Commission, PLAN academic institutions have 1) offered new coursework leveraging cutting edge technologies, 2) strengthened cooperation with civilian universities, 3) strived to better satisfy the needs of the fleet, 4) prioritized "combat realism" in their educational offerings, 5) fostered more interactions with active-duty units, 6) bolstered educational exchanges with foreign navies and studied international best practices, 7) improved teaching pedagogy, and 8) expanded vocational education programs.

- It is unclear to what extent these initiatives have translated into a better educated and more competent officer corps. The PLAN's operational record is scant, so it is difficult to judge educational effectiveness. However, Chinese sources continue to emphasize enduring weaknesses in education and training, suggesting that progress is uneven at best.

Introduction

Since becoming General Secretary of the Chinese Communist Party in 2012, Xi Jinping has repeatedly emphasized the importance and pressing need to develop "talents" (人才) within the People's Liberation Army (PLA), including the PLA Navy (PLAN), and especially within China's military academic institutions (军队院校, or 军校).[1] Xi and others have stressed the vital role of military academic institutions in developing a more capable PLA and ensuring that its personnel can fight and win a modern war. As a 2020 commentary in the PLA's official newspaper *Liberation Army Daily* stated, "The key to rejuvenating the military lies in talents, and the foundation for rejuvenating the military is education. Education in military academies is the primary means for training talents in our army, and it plays a fundamental, leading, and overall role."[2]

The urgency behind the PLAN's talent development drive is based on Xi's assessment that the strength and modernization pace of the PLA is insufficient to match China's security needs and its ambitions, which call for the PLA to catch up to—and eventually surpass—the United States military as the world's pre-eminent armed force, with key intermediate goals for 2027 and 2035. Echoing earlier generations of Chinese leaders, Xi has stated that the Chinese military suffers from problems like the "Two Inabilities" (两个能力不够), the "Two Big Gaps" (两个差距很大), and the "Five Incapables" (五个不会) that put it at risk of failing to meet requirements.[3] Many of these deficiencies are indictments of the talent levels within the PLA's officer corps.

Accordingly, in a series of new instructions and regulations publicized during his term, Xi has focused on improving the admissions standards, academic content, and teaching quality of the PLA's military academic institutions. As he asserted in a 2016 inspection visit to National Defense University (国防大学), "[T]o achieve the goal of a strong military and build a world-class military,

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[1] Xi Jinping, "Build a Talent-Strong Military in the New Era," in *The Governance of China, Vol. IV*, ed. Xi Jinping (Beijing: Foreign Languages Press, 2022), pp. 444-47. "Talents" (人才) in Chinese parlance refers to a capable individual with high levels of professional knowledge or skill. Talents are often treated as a resource for Chinese development. In the context of military academic institutions, the schools typically refer to their mission as "training talents" (人才培养) for the PLA, and talents are the subject of a supply and demand dynamic (schools supply the talents that the PLA demands).

[2] 评论员 [Commentator], 全面加强新时代军队院校建设的有力举措 ["Powerful Measures to Comprehensively Strengthen the Construction of Military Academies in the New Era"], 解放军报 [*Liberation Army Daily*], 17 June 2020, p. 1, http://www.81.cn/jfjbmap/content/2020-06/17/content_263967.htm.

[3] The meaning of the "Two Inabilities" slogan is that "The Chinese army is not capable enough of waging modern warfare, and officers lack command skills for modern warfare." The meaning of the "Two Big Gaps" slogan is that "[T]he modernization level of the Chinese army is inadequate to safeguard national security, and it lags far behind advanced global peers." The meaning of the "Five Incapables" slogan is that "[S]ome officers cannot judge situations, understand higher authorities' intentions, make operational decisions, deploy troops, nor deal with unexpected situations." See Dennis J. Blasko, "The Chinese Military Speaks to Itself, Revealing Doubts," *War on the Rocks*, 18 February 2019, https://warontherocks.com/2019/02/the-chinese-military-speaks-to-itself-revealing-doubts/; "Xi Brings Strength, Integrity to Chinese Armed Forces," *China Daily*, 31 July 2016, https://www.chinadaily.com.cn/china//2016-07/31/content_26283969.htm; Kenneth W. Allen, Thomas Corbett, Taylor A. Lee, and Ma Xiu, "Personnel of the People's Liberation Army," *U.S.-China Economic and Security Review Commission*, 3 November 2022, pp. 10-12, https://www.uscc.gov/sites/default/files/2022-11/Personnel_Peoples_Liberation_Army.pdf.

the development of our military academic institutions must be greatly strengthened."[4] He urged the PLA to "actively promote reform and innovation in [military] academic institutions and continuously raise the level of their teaching and administration…."[5]

Under this guidance, the PLAN has been reforming its educational system so that it is more capable of training an officer corps that understands the complexities of modern warfare, operating in a joint environment, and thinking creatively and innovatively about tactics and strategy throughout their careers. This report examines how these efforts have taken shape within the PLAN. First it describes recent military-wide reforms to military education and military academic institutions. Second, it identifies the eight PLAN educational institutions charged with educating PLAN personnel and describes their major programs. Third, it highlights the steps that PLAN academic institutions have taken to identify and remedy perceived weaknesses, which include looking abroad for inspiration and ideas. Finally, the report assesses the state of reform in PLAN academic institutions, highlighting how well (or not) they are meeting educational reform goals set by Xi Jinping and PLAN leadership.

PLA Academic Reforms Under Xi Jinping

When it comes to education and talent training, PLAN academic institutions are bound by the same policies and guidelines that cover other PLA academic institutions and face the same broad challenges present across the rest of the PLA educational system. Notably, Chinese commentary about the problems and prospects in the PLA's educational system do not differentiate by services, as if any one service's academic institutions were notably better or worse than the others. That also suggests that there are not service-specific approaches to education that meaningfully differ from the other services, even if there are service-specific emphases in their academic offerings.

The challenge facing PLAN and other PLA academic institutions is that China's military has long faced a perceived shortage of officers who can meet the complex demands of modern warfare. This is an enduring concern, as Chinese leaders as far back as Deng Xiaoping and Jiang Zemin instituted reforms that tried to improve the quality of PLA education.[6] Shortly after taking office, Xi Jinping called on the PLA to grasp the "central task" (中心任务) of training high-quality military talents.[7] PLA political work has stressed that Xi is intent on improving the military's educational system and

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[4] 李宣良 [Li Xuanliang] and 王逸涛 [Wang Yitao], 习近平在视察国防大学时强调 围绕实现强军目标推进军队院校改革创新 为实现中国梦强军梦提供人才和智力支持 ["While Inspecting the National Defense University, Xi Jinping Stressed That We Should Promote the Reform and Innovation of Military Academies Around the Goal of Strengthening the Military and Providing Talent and Intellectual Support for Realizing the Chinese Dream and the Dream of a Strong Military"], 新华社 [*Xinhua News Agency*], 23 March 2016, https://www.gov.cn/guowuyuan/2016-03/23/content_5056975.htm.

[5] Ibid.

[6] Kenneth Allen and Mingzhi Chen, *The People's Liberation Army's 37 Academic Institutions* (Washington, DC: China Aerospace Studies Institute, 2020), pp. 9-11; and 宋毅军 [Song Yijun], 邓小平与军队院校建设 ["Deng Xiaoping and the Construction of Military Academic Institutions"], 人民网 [*People's Daily Online*], 15 December 2014, http://dangshi.people.com.cn/n/2014/1215/c85037-26210659-3.html.

[7] 张旗 [Zhang Qi] and 卜金宝 [Bu Jinbao], 坚持院校优先发展战略 ["Adhere to the Strategy of Prioritizing the Development of Academic Institutions"], 中国军网 [*China Military Online*], 12 March 2016, http://www.81.cn/2016qglh/2016-03/12/content_6956557.htm.

has emphasized that the cultivation of military talents has a "unique weight" (独特的份量) in Xi's theories of military development.[8]

China's Model for PLA Talent Development

Throughout Xi's administration, his primary instrument for strengthening the capabilities of military personnel has been a "three in one" (三位一体) model that threads together military academic education, military unit training, and "vocational learning" (军事职业教育, i.e. ongoing training and education in the careers of active military personnel).[9] Xi committed to the model in the Decision of the Third Plenum of the 18th Party Congress in November 2013, which included a call for the PLA to deepen the reform of military academic institutions.[10] The goal of the "three in one" model is to create a more cohesive military educational system that guides officers and non-commissioned officers (NCOs) through the beginning, middle, and end of their careers. It is designed to ensure that education in military academic institutions is relevant to the practical warfighting tasks that officers will encounter in their post-academic military careers, is "close to the troops" (向部队靠拢), and is focused on "actual combat" (向实战聚焦).[11] In addition, it seeks to improve officers' access to high quality vocational learning materials that can help them maintain their skills and keep abreast of relevant new theories and technologies even after they have graduated.

Within these three elements of the military talent cultivation system, Xi has maintained the primacy of military academic education. In 2016, he stated that military academic institutions should play a "fundamental, supporting, and leading role" in the PLA's talent training system.[12] In 2020, a *Liberation Army Daily* commentary upgraded education in military academic institutions to a "fundamental, guiding, and overall role" (具有基础性、先导性、全局性作用) in officer talent development.[13] With the integration of vocational learning into the PLA's officer development model, military schools now have an educational role that spans well beyond just a student's degree period. As Zhao Tianxiang, commandant of the PLA Army Academy of Artillery and Air Defense (陆军炮兵

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[8] 王传宝 [Wang Chuanbao], 习主席训词: 打造军事人才高地的总动员 ["Chairman Xi's Instructions: Mobilize to Build a Highland of Military Talents"], 光明网 [*Guangming Online*], 20 July 2017, https://theory.gmw.cn/2017-07/20/content_25144888.htm.

[9] In other studies, the "three in one" model has been called the "triad training system". See Allen, Corbett, Lee, and Ma, "Personnel of the People's Liberation Army," p. 12. 中共中央关于全面深化改革若干重大问题的决定 ["The CPC Central Committee's Decision on Several Major Issues Concerning the Comprehensive Deepening of Reform"], 新华社 [*Xinhua News Agency*], 15 November 2013, https://www.gov.cn/jrzg/2013-11/15/content_2528179.htm. "Vocation learning" could be translated as "military career education" based on how some Chinese military dictionaries translate the term 职业. In other reference sources, this is translated as "military professional education." See United States Department of Defense, *2022 Directory of PRC Military Personalities*, 2022, p. 14.

[10] Ibid.

[11] 陆荣军 [Lu Rongjun] and 李玉明 [Li Yuming], 全军院校教育计划会强调: 向实战聚焦向部队靠拢 ["The Planning Meeting for Education at Military Academic Institutions Emphasized: Focus on Actual Combat and Get Close to the Troops"], 国防部 [*Ministry of National Defense*], 5 December 2013, https://www.gov.cn/gzdt/2013-12/05/content_2542235.htm.

[12] Zhang and Bu, "Adhere to the Strategy of Prioritizing the Development of Academic Institutions."

[13] Commentator, "Comprehensively Enhance the Strong Measures for the Development of New Era Military Academic Institutions," p. 1.

防空兵学院) observed in 2019, “In the past, we always thought that the responsibility of our schools ended when the students graduated. Now, the construction of the new ‘three in one’ military talent development system requires our schools to focus on the entire process of educating talents. From platoon leaders to generals, all PLA schools have training tasks.”[14] Under these circumstances, the demands placed on PLAN academic institutions make their success or failure in their missions a key independent variable in developing capable officers and NCOs for the PLAN.

Management of PLAN Academic Institutions

The PLAN’s academic institutions operate under a two-level management system (两级院校管理体制) managed at one level by the Central Military Commission, and by the PLAN at the second level.[15] See Figure 1 (below).



Figure 1: The PLA Navy’s Two Level Management System for Military Academies[16]

At the first level, the CMC provides unified leadership of educational work in military schools via its subordinate Training and Administration Department (中央军委训练管理部) and the Military Education Bureau (军事教育局) within the Training and Administration Department.[17] These CMC-level organizations are responsible for the overall planning, coordination, and macro-level guidance of the PLA’s academic institutions.

At the second level, the PLAN oversees the day-to-day management of universities under its purview, and it can “refine regulations for the management of academics at subordinate colleges and

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[14] 刘建伟 [Liu Jianwei], 吴旭 [Wu Xu], 李习文 [Li Xiwen], and 章越 [Zhang Yue], 迈向未来的战略集训 [“Strategic Group Training that Marches Towards the Future”], 解放军报 [*Liberation Army Daily*], 17 December 2019, p. 5, http://www.81.cn/jfjbmap/content/2019-12/17/content_250099.htm.

[15] 胡利民 [Hu Limin], 杨超 [Yang Chao], 李继斯 [Li Jisi], 赵咏梅 [Zhao Yongmei], 薛勇 [Xue Yong], 张天良 [Zhang Tianliang], 冯昌庆 [Feng Changqing], and 冯林 [Feng Lin], 军事人才联合教育论 [*On the Joint Education of Military Personnel*] (Beijing: National Defense University Press, 2017), pp. 22-23.

[16] Ibid.

[17] The Military Education Bureau was previously designated as the Academic Institution Bureau (院校局), but has been using its current name since 2023. Ibid., pp. 151-153.

universities based on actual conditions" (还可结合自身实际, 细化院校教育管理实施细则).[18] The administrative structure within the PLAN follows a similar pattern to the structure used within the CMC. A Training Bureau (训练局) within the PLAN's Staff Department (参谋部) has overall oversight of PLAN-specific implementation of the "three-in-one" model, and its subordinate Academic Institution and Education Division (院校教育处) is responsible for oversight of PLAN academic institutions, specifically.[19] This administrative structure ensures that PLAN universities are subject to the same broad regulations and guidelines as the rest of the PLA's academic institutions, but within those constraints the PLAN has the ability to shape conditions at the universities and academies under its control.

All-Army Group Training for Leaders of Military Academic Institutions

In previous generations, major reforms affecting teaching and administration at the PLA's academic institutions had been finalized at a Conference of PLA Military Academic Institutions (全军院校会议).[20] The PLA held sixteen iterations of the conference between 1950 and 2011, but none have been held during Xi's term in office.[21] The closest equivalent to these conferences under Xi was a twelve day All-Army Group Training for Leaders of Military Academic Institutions (全军院校长集训), hereafter the 2019 Group Training, which was held in 2019.[22]

The 2019 Group Training clarified principles and tasks for managing military academic institutions across the PLA, including the PLAN. It has had an obvious influence on the subsequent direction of reforms at PLAN academic institutions and thus is worth describing at length. The 2019 Group Training was hosted by National Defense University, and a group of 156 officials attended, made up of commandants (院校长), heads of academic affairs offices (教务处长), and relevant leaders from the Central Military Commission and the PLA's military services (军兵种).[23] The goal of the training was to clarify the targets, roadmaps, and plans for promoting reform and innovation in PLA academic institutions. Xi spoke at the opening ceremony, and in his speech he articulated a "new-era military education policy" (新时代军事教育方针) for the first time.[24]

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[18] 刘建伟 [Liu Jianwei], 余勇 [Yu Yong], and Wu Xu [吴旭], 开创新时代院校教育和人才培养新局面 ["Initiate a New Phase in New Era University Education and Talent Cultivation"], 解放军报 [*Liberation Army Daily*], 19 June 2020, p. 5, http://www.81.cn/jfjbmap/content/2020-06/19/content_264175.htm.

[19] That is, oversight of the PLA Navy's academic education, military unit training, and vocational learning activities. 李姝睿 [Li Shurui] and 闫培 [Yan Pei], 海军参谋部训练局局长郁忠大校一行到清华调研 ["A Delegation Led by Senior Colonel Yu Zhong, Director of the Training Bureau of the Navy Staff Department, Visited Tsinghua University for Research"], 清华大学 [*Tsinghua University*], 23 May 2018, https://guofang.tsinghua.edu.cn/info/1033/1568.htm; 海军五大院校欢迎高中毕业生加入海军(详细招生计划) ["The Five Major Naval Academies Welcome High School Graduates to Join the Navy (Detailed Recruitment Plan)"], 央视新闻 [*China Central Television (CCTV)*], 9 June 2018, http://m.news.cctv.com/2018/06/09/ARTIWOTcZ409Hbk0MvSeVgEW180609.shtml.

[20] Allen and Chen, *The People's Liberation Army's 37 Academic Institutions*, pp. 9-11.

[21] Ibid.

[22] Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

[23] Ibid.

[24] China's official media has described the "new era military education policy" as a 45-character policy (习主席提出 45 字的新时代军事教育方针). Those 45 characters can be found in other sources: 坚持党对军队的绝对领导，

Descriptions of Xi's speech at the 2019 Group Training illustrate that he stressed familiar themes, such as deepening the reform of military academic institutions, and ensuring that military academic institutions develop politically qualified, high character officers with more specialized military expertise.[25] His speech did not identify any specific quantitative goals for reforms, but he offered a lengthy list of instructions to PLA academic institutions, which indicates there was a broad range of areas in which PLA schools needed improvement.[26] As illustrated later in this report, ongoing reforms at PLAN academic institutions clearly reflect a prioritization of these instructions.

At the institutional level, Xi directed officials to plan and promote the development of PLA academic institutions in accordance with overall military reforms, to solve contradictions and problems in the development of PLA academic institutions, and to strengthen the application and testing of the following: standards for measuring student quality, models for developing students, quality controls for teaching, and innovation in education management and operation.[27]

At the staff level, Xi told the assembled officials to educate and guide teachers to solidify their ideals and beliefs, to strengthen their understanding of theory, to cultivate their character and virtue, and to encourage them to be single-minded in their scholarly pursuits. He also stated that schools must do more to develop (培养) their best teachers (especially their young and middle-aged core teaching staff), must develop star teachers who understand modern warfare (培养一批知晓现代战争的名师), and should invite outstanding mid- and high-level commanding officers to give lectures (走开高中级优秀指挥员到院校讲课的路子) to cadets.[28]

At the academic level, Xi encouraged the assembly to strengthen the development of academic disciplines (要加强学科专业建设), to focus on supporting military requirements in their academic

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为强国兴军服务，立德树人，为战育人，培养德才兼备的高素质、专业化新型军事人才 ["Uphold the Party's absolute leadership over the military, serve the goal of building a strong country with a strong military, and aim to train a new type of military personnel who are competent, professional and possess both integrity and ability"]. See 梅世雄 [Mei Shixiong] and 樊永强 [Fan Yongqiang], 贯彻新时代军事教育方针 培养新型军事人才——习近平主席在全军院校长集训开班式上的重要讲话在全军部队引起热烈反响 ["Implementing the New Era Military Education Policy and Developing New Military Talents——President Xi Jinping's Important Speech at the Opening Ceremony of the Training for Commandants of Military Academic Institutions Has Aroused an Enthusiastic Response from the Entire Military"], 新华社 [*Xinhua News Agency*], 28 November 2019, http://www.xinhuanet.com/politics/2019-11/28/c_1125286543.htm; and 马文英 [Ma Wenying], 每日一词丨新型军事人才 ["Word of the Day | New Type of Military Personnel"], 中国日报网 [*China Daily*], 30 November 2019, https://cn.chinadaily.com.cn/a/201911/30/WS5de1cd21a31099ab995eedab.html; 李银祥 [Li Yinxiang], 奋力推进国防和军队现代化 ["Strive to Promote the Modernization of National Defense and Military"] 解放军理论学习 [*PLA Theoretical Study*], no. 9 (2023), pp. 40-41, 48.

[25] 梅世雄 [Mei Shixiong] and 刘济美 [Liu Jimei], 习近平在全军院校长集训开班式上强调 贯彻新时代军事教育方针深化军事院校改革创新 培养德才兼备的高素质专业化新型军事人才 ["At the Opening Ceremony of the All-Army Group Training for Leaders of Military Academic Institutions, Xi Jinping Stressed 'Implement the New Era Military Education Policy, Deepen the Reform and Innovation of Military Academic Institutions, and Develop Specialized, High Character, and High-Quality New Military Talents"] 新华社 [*Xinhua News Agency*], 27 November 2019, http://www.xinhuanet.com/politics/2019-11/27/c_1125281872.htm.

[26] Ibid.

[27] Ibid.

[28] Ibid.

offerings, to uphold [improving] combat effectiveness as the academic standard (坚持战斗力标准), to make coursework and textbooks the focal points of their teaching, and to strengthen the teaching links between academic institutions and research organizations (加强院校科研同教学的结合).[29]

As part of the 2019 Group Training, participants engaged in three consecutive days of "joint defense sessions" (会审答辩) with education experts (院校教育专家).[30] As shown in Figure 2 (below), the participants faced questions about their management and described the key problems they encountered in their work and how they addressed those issues.[31] The goal was to use the defense session process to guide the PLA's academic leadership in their understanding of reform measures, to employ the collective wisdom of the participants to identify best practices, and to course correct (把正院校建设方向) as needed in the construction of PLA colleges and universities. The PLA's reporting about the defense sessions described the experts' questioning as "relentless" (毫不留情) and "intense" (尖锐), stating metaphorically that the air was thick with the smell of gunpowder.[32]



Figure 2: Joint Defense Session at the All-Army Group Training for Leaders of Military Academic Institutions, 2019[33]

The discussions of best practices and solutions to problems that emerged from these sessions ultimately took up more than half of the total working time during the twelve-day event.[34] While the specifics of these debates were not revealed in PLA media, the coverage stated that they involved leaders from relevant departments within the CMC joining military academy commandants to discuss

[29] Ibid.

[30] PLA reporting did not specify the composition of the expert team, but the lone member of the expert group mentioned in media reports was a professor at the former Strategic Support Force Space Engineering University (now the Military Space Force Space Engineering University). See Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

[31] Ibid.; and 刘建伟 [Li Jianwei] and 张琳 [Zhang Lin], 全军院校长首次接受办学定位会审答辩 ["For the First Time, Commandants from all of the PLA's Academic Institutions Accept Joint Defense Sessions on Running Their Schools"], 解放军报 [*Liberation Army Daily*], 14 December 2019, p. 1, http://www.81.cn/jmywyl/2019-12/14/content_9695799.htm.

[32] Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

[33] Ibid.

[34] Ibid.

problems and solutions related to the development of PLA schools, officers from the PLA's services and theater commands sitting down with PLA academic leaders to discuss how PLA universities could improve their combat-relevant training of students, and experts on the management of prominent foreign military academies offering insights and advice to commandants and other PLA academic administrators.[35] Summarizing the experience, one commandant told PLA media, "The pattern of war is changing, military organizations are changing, science and technology is changing, and education itself is also changing. Countless difficulties are stimulating a response from our commandants. They are dedicating themselves to studying and updating their knowledge, and are taking the initiative to carry out a self-revolution."[36]

Regulations on Military Academic Institutions

On a July 2020 inspection visit to Air Force Aviation University, Xi encouraged leaders of PLA academic institutions to put his guidance on PLA talent development into action. As he stated, "It is necessary to… transform the strategy for 'using talents to strengthen the military' into development plans and practical measures, and implement them in all areas and processes of school administration and governance."[37] Xi's instructions reflected a drive to codify many of the ideas that were discussed and refined at the 2019 Group Training. Accordingly, in 2020 the PLA released a series of statutes that provided authoritative guidelines for the reform drive in academic institutions. In June, the PLA published the "Trial Regulations for Education in Military Academic Institutions " (军队院校教育条例(试行)).[38] In October, it published the "Decision on Advancing the 'Three in One' Model in the Construction of a New Military Talent Training System" (关于加快推进三位一体新型军事人才培养体系建设的决定).[39] In December, it published the "Trial Regulations for Military Vocational Education" (军队军事职业教育条例(试行)).[40]

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[35] Ibid.

[36] Ibid.

[37] 李宣良 [Li Xuanliang] and 张玉清 [Zhang Yuqing], 习近平八一前夕视察空军航空大学时强调 深化改革创新 不断提高办学育人水平 向全体人民解放军指战员武警部队官兵民兵预备役人员致以节日祝贺 ["Xi Jinping Inspected the Air Force Aviation University on the Eve of August 1 Holiday and Stressed the Need to Deepen Reform and Innovation and Continuously Improve the Level of Education and Personnel Management, and He Extended Holiday Greetings to All Officers and Soldiers of the People's Liberation Army, People's Armed Police, Militia, and Reserve Personnel"], 新华社 [*Xinhua News Agency*], 23 July 2020, http://www.xinhuanet.com/politics/leaders/2020-07/23/c_1126277488.htm.

[38] 刘济美 [Liu Jimei], 中央军委主席习近平签署命令 发布新修订的《军队院校教育条例（试行）》 ["Chairman of the Central Military Commission Xi Jinping Signed an Order to Issue the Newly Revised 'Trial Regulations for Education in Military Academic Institutions'"], 新华社 [*Xinhua News Agency*], 16 June 2020, https://www.gov.cn/xinwen/2020-06/16/content_5519784.htm.

[39] 丁杨 [Ding Yang], 中央军委印发《关于加快推进三位一体新型军事人才培养体系建设的决定》 ["The Central Military Commission Issues the 'Decision on Advancing the Three-in-One Model in the Construction of a New Military Talent Training System'"], 新华社 [*Xinhua News Agency*], 19 October 2020, http://www.mod.gov.cn/gfbw/qwfb/4872891.html.

[40] 刘济美 [Liu Jimei] and 吴旭 [Wu Xu], 中央军委主席习近平签署命令 发布《军队军事职业教育条例（试行）》 ["Chairman of the Central Military Commission Xi Jinping Signed an Order to Issue the 'Trial Regulations for Military Vocational Education'"], 新华社 [*Xinhua News Agency*], 21 December 2020, https://www.gov.cn/xinwen/2020-12/21/content_5571843.htm.

It is very likely that the PLAN subsequently issued its own rules and regulations (细则) to govern the implementation of these military-wide statutes, but only the "Implementation Rules for the Trial PLA Navy Vocational Regulations" (海军军事职业教育实施细则(试行))—the PLAN-specific version of the "Trial Regulations for Military Vocational Education"—was publicly identified.[41] Likewise, we would expect each PLA academic institution to issue their own institution-specific documents clarifying how these various official directives would be implemented, but these could not be found.

PLA Navy Academic Institutions

The PLAN currently manages eight academic institutions, all subordinate to the PLAN Headquarters. See Table 1 (below). The table identifies each institution's name, organizational grade, location of its main campus, and whether or not the institution admits civilian high school graduates.[42] The table also identifies the acronyms this report will use for each school.

Table 1: PLAN Academic Institutions, June 2025[43]

#	English Name	Chinese Name (院校名称)	Grade (等级)	Location of Main Campus (主校区所在)	Admits Civilian HS Grads?
1	Naval Command College (NCC)	海军指挥学院	Corps Deputy Leader (副军级)	Nanjing (南京)	No
2	Naval University of Engineering (NUE)	海军工程大学	Corps Deputy Leader (副军级)	Wuhan (武汉)	Yes
3	Dalian Naval Academy (DNA)	海军大连舰艇学院	Corps Deputy Leader (副军级)	Dalian (大连)	Yes
4	Navy Submarine Academy (NSA)	海军潜艇学院	Corps Deputy Leader (副军级)	Qingdao (青岛)	Yes

[41] 赵磊 [Zhao Lei], 海军印发《海军军事职业教育实施细则（试行）》 ["The PLA Navy Issued the 'Implementation Rules for the Trial PLA Navy Vocational Regulations'"], 中国日报网 [*China Daily*], 13 May 2022, https://cn.chinadaily.com.cn/a/202205/13/WS627de213a3101c3ee7ad522e.html. The authors thank John Chen and Tiffany Tat for sharing the source.

[42] These institutions are worth noting because information about them is more readily available compared to other PLA academic institutions.

[43] 共 43 所! 国防部公布调整改革后军队院校名称 ["A Total of 43! The Military of National Defense Announces Names of Military Academies after Reform"], 中国军网 [*China Military Online*], 29 June 2017, http://www.mod.gov.cn/jzhzt/2017-06/29/content_4784053.htm; 2017 年军校改革方案细则 (附调整合并院校名单) ["Details of the 2017 Military Academy Reform Plan (With a List of Adjusted and Merged Schools)"] 军校学历认证服务网 [*Military Academy Degree Certification Service Network*], 11 October 2018, https://www.xjzccx.com/jsyx/content_1060.html; 人民前线 [People's Frontline], 27 所军校招生！快来看 ["27 Military Academies are Recruiting! Quickly Come and See"], 7 June 2023, https://mp.weixin.qq.com/s?__biz=Mzg5NjUxODg4MQ==&mid=2247895866&idx=1&sn=27d71832fa48e9ccbb8fdb6f605fd265; and lhy00001, 中国军队院校等级变迁 ["Grade changes in China's Military Academic Institutions"], 知乎 [*Zhihu*], 27 April 2022, https://zhuanlan.zhihu.com/p/506298203.

5	Naval Aviation University (NAU)	海军航空大学	Corps Deputy Leader (副军级)	Yantai (烟台)	Yes
6	Naval Medical University (NMU)	海军军医大学 (第二军医大学)	Corps Deputy Leader (副军级)	Shanghai (上海)	Yes
7	Naval Logistics Academy	海军勤务学院	Corps Deputy Leader (副军级)	Tianjin (天津)	No
8	Naval Petty Officer Academy	海军士官学校	Division Leader (正师级)	Bengbu (蚌埠)	No

Throughout its history, the PLA has undergone regular restructuring and adjustment in the number of academic institutions it oversees, placing PLA academic institutions in a regular cycle of organizational change.[44] Although the most recent restructuring took place in May 2025, the roster of PLAN universities has been unchanged since 2017, when three former PLAN schools were disbanded and replaced by new or reorganized institutions.[45] PLAN academic institutions are now relatively distinct in terms of the students they are trying to develop and the specialized knowledge they wish to impart. As an unnamed commandant remarked at the 2019 Group Training, PLA academic institutions had previously tended towards developing "large and comprehensive" (大而全) academic offerings, and they tried to outdo each other in terms of the number of majors they offered to students. In contrast, the post-reorganization academic institutions were set up to be "only children" (独生子) based on specialization, and were expected to accentuate and enhance their unique academic focus and identity, rather than pursuing "large and comprehensive" programs.[46]

Each of the PLAN's eight academic institutions is briefly described below:

1. **Naval Command College** (NCC / 海军指挥学院) is the highest-level academic institution administered by the PLAN. It educates mid-ranking commanding and staff officers (中级指挥参谋军官) from the PLAN and other PLA branches, primarily offering a five- or ten-month

[44] 王金霞 [Wang Jinxia] and 张容华 [Zhang Ronghua], 中国人民解放军院校历次体制编制调整概述及理论分析 ["Summary and Theoretical Analysis of the Adjustments of CPLA College System"], 军事历史 [*Military History*], no. 2 (2016), p. 64, hprc.org.cn/gsyj/gfs/gftz/201611/P020180416385514367639.pdf.

[45] 王粲 [Wang Can], 中央军委决定调整组建 3 所军队院校 ["A Central Military Commission Decision Has Established Three Military Academies"], 国防部 [*Ministry of National Defense*], 15 May 2025, http://www.mod.gov.cn/gfbw/qwfb/16386202.html. The 2016 PLA reorganization, launched by the 1 January 2016 "Central Military Commission Opinion on Deepening the Reform of National Defense and the Armed Forces" (中央军委关于深化国防和军队改革的意见), resulted in widespread consolidation of the PLA's academic institutions. The total number of PLA and People's Armed Police academic institutions dropped from 71 to 44 by the end of 2017. 小圣杂谈原创 ["Original Little Emperor's Chatter"], 军改中，海军撤销了 3 所军校、新增 3 所军校，下辖军校仍为 8 所不变 ["As Part of the PLA's Reorganization, the PLA Navy Disbanded Three Military Schools and Added Three New Schools, and Still Has Eight Military Schools Under its Administration], 百度 [*Baidu*], 21 January 2025, https://baijiahao.baidu.com/s?id=1821817195055551325.

[46] Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

command course certificate (证书) program. It also admits master's and doctoral students, and mid- and high-ranking foreign naval officers.[47]

2. **The Naval University of Engineering** (NUE / 海军工程大学) is one of the PLA's five comprehensive universities (综合性大学), specializing primarily in engineering disciplines, although it also offers degrees in military studies. [48] Known as the "cradle of naval officers" (海军军官的摇篮), NUE educates nearly one-third of the PLAN's undergraduates and nearly half of its graduate students.[49] It offers degrees and programs from the undergraduate to the post-doctoral levels.[50]

3. **The Dalian Naval Academy** (DNA / 海军大连舰艇学院) is focused on surface warfare. It offers undergraduate degrees for command officer cadets (生长指挥军官) and technical officer cadets (生长技术军官), training (培训) for active duty junior officers assigned to surface vessels, supplementary training (辅助培训) for active duty officers engaged in political work on surface vessels or in the PLAN, graduate education, training in new equipment (新装备培训), and classes for foreign military students.[51] According to state media, more than 80 percent of PLAN surface vessel commanders are graduates of the academy.[52]

4. **The PLA Navy Submarine Academy** (NSA / 海军潜艇学院) focuses primarily on training PLAN junior level (初级) command and technical officers for roles related to submarine warfare, undersea warfare, aerial anti-submarine operations, and salvage and rescue.[53] NSA also offers

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[47] 海军指挥学院 2022 年面向社会公开招考文职人员简章 ["Summary of Naval Command College 2022 Civilian Personnel Recruitment Open to the Public"], 华南师范大学 [*South China Normal University*], 13 December 2022, http://yjsy.scnu.edu.cn/a/20211213/7088.html.

[48] 海工大教务处 [Naval University of Engineering Educational Administration Office], 权威发布 | 海军工程大学 2025 年招生计划正式公布 ["Authorized for Release | Naval University of Engineering Formally Publishes its 2025 Enrollment Plan"], 微信公众平台 [*Weixin Official Accounts Platform*], 11 June 2025, https://mp.weixin.qq.com/s/c0qrWnjxh-s3jrBQ_b8z-g.

[49] Ibid.

[50] 学校简介 ["Introduction to the School"], 海军工程大学招生信息网 [*Naval University of Engineering Student Recruitment Information Net*], 20 May 2022, https://web.archive.org/web/20241205164843/https://www.nue.edu.cn/index/page/detail/id/1/pid/5/cid/6.html.

[51] 2025 海军大连舰艇学院招生计划 ["2025 Dalian Naval Academy Enrollment Plan"], 大学生必备网 [College Student's Essential Online], 16 June 2025, https://www.dxsbb.com/news/136585.html; and 中国人民解放军海军大连舰艇学院 ["Chinese People's Liberation Army Navy Dalian Naval Academy"], 中国军网 [*China Military Online*], 9 June 2017, http://www.81.cn/jwzl/2017-06/09/content_7748194.htm.

[52] "Chinese People's Liberation Army Navy Dalian Naval Academy."

[53] 海军潜艇学院简介 ["Introduction to Navy Submarine Academy"], 解放海军潜艇学院 [*PLA Navy Submarine Academy*], https://www.qtxy.mil.cn/xyjj/2020-05-12/2.html; and 中国潜院 [PLA Navy Submarine Academy], 未来海上指挥官的摇篮 | 海军潜艇学院等你入列！ ["The Cradle of Future Maritime Commanders | The PLA Navy Submarine Academy is Waiting for You to Join!"], 微信公众平台 [*Weixin Official Accounts Platform*], 11 June 2025, https://mp.weixin.qq.com/s/8yN3Wz1GQIj47POq0AZ-CA.

degrees at all levels including undergraduate and graduate degrees, postdoctoral study, and rotational training for active-duty officers (现职军官培轮训).[54]

5. **Naval Aviation University** (NAU / 海军航空大学) is the PLAN's school of aviation. It was created in 2017 from the merging of two former military academies—Naval Flight College (海军航空兵学院) and Naval Aeronautical and Astronautical College (海军航空工程学院), both established in 1950. NAU offers undergraduate, master's, and doctoral degrees and post-graduate training, and trains junior command officers and specialized technical personnel (各级各类专业技术人才) in naval aviation and coastal defense.[55] The school describes itself to prospective applicants as a training base for naval aviation and coastal defense, a base for tactical innovation (战法创新基地), a base for scientific research and experiments, an operational support base (作战支援基地), and a center for foreign exchanges.[56] It also claims to be the PLAN's largest training institution, with the largest staff and the widest geographic distribution.[57]

6. **Naval Medical University** (NMU / 海军军医大学), also referred to as Second Military Medical University (第二军医大学), was initially founded in 1949. In 2017, control of the university was transferred to the PLAN from the General Logistics Department (总后勤部). The university states that in its history, it has trained over 85 percent of the PLAN's medical officers (卫生干部) and 85 percent of military pharmacy personnel (军事药学人才).[58] The university recruits high school graduates, including non-military local students (无军籍地方生) and military pre-commissioned officer students (军籍生长军官学员). The non-military students do not enlist after graduation, though they may apply for civilian positions within the PLA (军队文职人员). Pre-commissioned students must enter the military upon entering the university and continue to work in the military after graduation.[59] Some degree programs and specializations are only open

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[54] "Introduction to Navy Submarine Academy."

[55] Allen and Chen, *The PLA's 37 Academic Institutions,* pp. 130-131; "海军航空大学"微信公众号 [Naval Aviation University WeChat Account], 海军航空大学 2023 年研究生招生简章 ["Naval Aviation University 2023 Graduate Student Recruitment Introduction"], 中国军网 [*China Military Online*], 19 October 2022, http://www.81.cn/jx_208569/10193404.html.

[56] 海军航空大学 [Naval Aviation University], 海空召唤 青春启航 | 海军航空大学 2025 年招生简章新鲜出炉！["The Sea and Air Beckons Youths Take Flight | Naval Aviation University's Recruitment Brochure is Newly Released!"], 微信公众平台 [*Weixin Official Accounts Platform*], 12 June 2025, https://mp.weixin.qq.com/s/KRw9mXCP_bQnelpZdPixQw.

[57] Ibid.

[58] 学校简介 ["Introduction to the School"], 海军军医大学 [*Naval Medical University*], 22 April 2019, https://web.archive.org/web/20231215223800/http://www.smmu.edu.cn/2019/0422/c423a4396/page.htm; Allen and Chen, *The PLA's 37 Academic Institutions,* p. 140.

[59] 专业简介 ["Introduction to the Majors"], 海军军医大学 [*Naval Medical University*], 27 May 2019, https://web.archive.org/web/20230607095118/http://www.smmu.edu.cn/2019/0527/c423a4453/page.htm.

to military or civilian students.[60] The university also offers master's degree, doctoral degree, and post-doctoral programs.[61]

7. **Naval Logistics Academy** (海军勤务学院) is the PLAN's main institution for training in naval logistics. From its founding in 1952, it has focused on naval logistics, though it has operated in different locations under various names throughout its history. Since 1980, it has been located in Tianjin. In 2004, it was made subordinate to Naval Engineering University to provide junior-level trade education (初级任职教). In 2012, it was promoted in grade and named the Service Academy (勤务学院) while still administered by NEU. In the 2017 reforms, it was promoted in grade to corps deputy leader (副军级) and made independent as the Naval Logistics Academy.[62] The academy offers two- and three-year post-secondary degrees and four-year bachelor's degree programs.[63] As of 2001, the academy also offers master's degrees. Only current military officers with at least three years of experience may apply.[64] The academy also offers a doctoral degree program, but specific information about this was not found.[65]

8. **The Naval Petty Officer Academy** (海军士官学校) is the PLAN's main training institution for naval non-commissioned officers (NCOs). Prior to 2017 reforms, it was known as the Naval Bengbu NCO Academy (海军蚌埠士官学院). Unlike the other PLAN academies, it is at the division leader grade (正师级).[66]

Within the PLAN's school system, five of its academic institutions—Naval University of Engineering, Dalian Naval Academy, Navy Submarine Academy, Naval Aviation University, and Naval Medical University—admit recent high school graduates.[67] These schools set annual recruitment targets, which provide a sense of their relative size. As Table 2 (below) indicates, recruitment numbers have risen between 2017 and 2025 in all but the Naval Aviation University.

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[60] Ibid; and 2024 年海军军医大学招收青年生长军官（有军籍）学员计划 ["2024 Naval Medical University Plan for Recruitment of Young Pre-Commissioned Officer (With Military Registration) Students"], 海军军医大学 [*Naval Medical University*], 13 June 2024, https://web.archive.org/web/20240914160518/http://www.smmu.edu.cn/2024/0613/c425a4886/page.htm.

[61] "Introduction to the School," *Naval Medical University*.

[62] Allen and Chen, *The PLA's 37 Academic Institutions,* p. 141.

[63] Ibid., p. 143.

[64] "海军勤务学院"微信公众号 [Naval Logistics Academy Public WeChat Account], 海军勤务学院 2023 年硕士研究生招生简章 ["Naval Logistics Academy 2023 Master's Student Recruitment Introduction"], *China Military Online* [中国军网], 14 October 2022, http://www.81.cn/jx_208569/10192259.html.

[65] Allen and Chen, *The PLA's 37 Academic Institutions,* p. 143; 海军勤务学院 [Naval Logistics Academy], 掌上高考 [*Gaokao.cn*], accessed 17 March 2025, https://www.gaokao.cn/school/3544/introDetails.

[66] Allen and Chen, *The PLA's 37 Academic Institutions,* p. 145.

[67] See, for example, 招生指南! 海军潜艇学院, 等你入列! ["Admissions Guide! The Navy Submarine Academy is Waiting for You to Join!"], 微信公众平台 [*Weixin Official Accounts Platform*], 13 June 2024, https://mp.weixin.qq.com/s/R8VJHpIw9lQPps9goQxiLA.

Table 2: Recruitment Numbers at PLAN Academic Institutions

School	Chinese Name	2017 HS Graduate Recruitment Goal	HS Graduate Recruitment Goal (Year)
Naval University of Engineering (NUE)	海军工程大学	420[68]	787 (2024)[69] 754 (2025)[70]
Dalian Naval Academy (DNA)	海军大连舰艇学院	364[71]	522 (2023)[72] 552 (2025)[73]
Navy Submarine Academy (NSA)	海军潜艇学院	112[74]	167 (2024)[75] 165 (2025)[76]
Naval Aviation University (NAU)	海军航空大学	312[77]	224 (2023)[78] 259 (2025)[79]
Naval Medical University (Second Military Medical University) (NMU)	海军军医大学 (第二军医大学)	313[80]	373 (2024)[81] 710 (2025)[82]

[68] Allen and Chen, *The PLA's 37 Academic Institutions,* p. 120.

[69] 海军工程大学 [Naval University of Engineering], 海军工程大学 2024 年招生简章 ["Naval University of Engineering 2024 Student Recruitment Introduction"], 高考直通车 [*Gaokao Express Train*],17 June 2024, https://app.gaokaozhitongche.com/newsguide/h/WXywROPG.

[70] Naval University of Engineering Educational Administration Office, "Authorized for Release | Naval University of Engineering Formally Publishes its 2025 Enrollment Plan."

[71] 中国人民解放军海军大连舰艇学院 ["Chinese People's Liberation Army Navy Dalian Naval Academy"], 中国军网 [*China Military Online*], 9 June 2017, http://www.81.cn/jwzl/2017-06/09/content_7748194_6.htm.

[72] Kenneth Allen and Jie Gao, "PLA Officer Cadet Recruitment: Part 1," *China Brief* vol. 23, no. 21 (November 2023), https://jamestown.org/program/pla-officer-cadet-recruitment-part-1/.

[73] 大连舰院 [Dalian Naval Academy], 海军大连舰艇学院 2025 年招收普通高中毕业生计划正式发布！ ["The Dalian Naval Academy's 2025 Recruitment Plan for High School Graduates Has Been Officially Released!"], 微信公众平台 [*Weixin Official Accounts Platform*], 11 June 2025, https://mp.weixin.qq.com/s/Qa2Hdb61cMTnudI0KcrRLg.

[74] Allen and Chen, *The PLA's 37 Academic Institutions,* p. 129.

[75] "Admissions Guide! The Navy Submarine Academy is Waiting for You to Join!"

[76] 2025 年招生指南 ["2025 Admissions Guide"], 海军潜艇学院 [*PLA Navy Submarine Academy*], 18 March 2025, https://dongfang.sharedbook.cn/books/lwom/mobile/index.html#p=1; 2025 海军潜艇学院招生计划 ["2025 PLA Navy Submarine Academy Enrollment Plan"], 大学生必备网 [*College Student's Essential Online*], 16 June 2025, https://www.dxsbb.com/news/99646.html.

[77] Allen and Chen, *The PLA's 37 Academic Institutions,* p. 133

[78] Allen and Gao, "PLA Officer Cadet Recruitment: Part 1."

[79] Naval Aviation University, "The Sea and Air Beckons Youths Take Flight | Naval Aviation University's Recruitment Brochure is Newly Released!"

[80] Allen and Chen, *The PLA's 37 Academic Institutions,* p. 140

[81] "2024 Naval Medical University Plan for Recruitment of Young Pre-Commissioned Officer (With Military Registration) Students."

[82] 2025 海军军医大学招生计划 ["2025 Naval Medical University Recruitment Plan"], 大学生必备网 [*College Student's Essential Online*], 16 June 2025, https://www.dxsbb.com/news/136618.html.

Reforms in PLAN Academic Institutions

The clarity provided by PLA leadership over the direction and character of educational work at PLA academic institutions—as discussed earlier in this report—has sparked a broad range of reform initiatives in PLAN schools. They include reorganizing academic departments and majors to better reflect the PLAN's needs, improving the quality of teaching personnel, conducting more effective evaluations, maintaining stronger communication with active PLAN units, and emphasizing that students develop practical skills through more hands-on instruction, simulations, and extracurricular education. The following sections will highlight some of these key initiatives.

New Coursework in Frontier Technologies

Rapid naval modernization has required reforms to the curricula of PLAN educational institutions. As one anonymous "leader" (领导) at the Naval University of Engineering stated in a 2021 *Liberation Army Daily* article, "With the accelerated transformation of the PLAN's development, new types of combat forces are entering service (新质作战力量相继入列), and military academy graduates must have knowledge and skills at the 'cutting-edge of informatization' if they are to meet the needs of future naval warfare."[83] The 2019 Group Training highlighted that this was an ongoing challenge for the PLA. Active duty units complained that graduating students from PLA academic institutions were arriving without understanding how to use current equipment.[84] They were being trained on outdated equipment that lagged behind what was used by operational units, and in some cases were mastering equipment that had already been entirely phased out of the PLA.[85] Moreover, military academic institutions were often focused on teaching about current technologies instead of looking ahead to the frontiers of technological development.[86] They have also kept theory and technology learning separate, hampering efforts to develop new advanced combat concepts.[87] The guidelines and best practices that emerged from the training session called on PLA academic institutions to place more emphasis on cultivating a knowledge base for future wars, such as through the development of cutting edge interdisciplinary disciplines (前沿交叉学科).[88]

The need to educate greater numbers of more specialized technological talent has been reflected in particular at Naval Engineering University. The school is an important source of technological training for PLAN officers. For instance, as of 2020, its School of Electronic Engineering (电子工程学院) reportedly trained over 70 percent of the PLAN's personnel specializing in information-related

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[83] 康洪晶 [Kang Hongjing] and 熊峰 [Xiong Feng], 海军工程大学组织新设专业学员到部队实习 精准对接未来海战场 ["Naval University of Engineering Organizes Internships with Troops for Students of New Specializations, Aiming Precisely at the Future Naval Battlefield"], 解放军报 [*Liberation Army Daily*], 21 April 2021, http://www.81.cn/jx_208569/10026076.html.

[84] 吴旭 [Wu Xu], 让学员一毕业就能上战场—学习贯彻全军院校长集训精神系列谈 ["Let Students go to the Battlefield as Soon as They Graduate—A Series of Talks on Learning and Implementing the Spirit of the All-Army Academic Institutions' Commandant Training"] 解放军报 [*Liberation Army Daily*], 23 December 2019, p. 6.

[85] Ibid.

[86] Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

[87] 司光亚 [Si Guangya], 理技融合型军事人才培养理念、模式及机制研究 ["Cultivation of Military Talents with Integration of Theoretical and Technological Literacy: Cultivation Concept, Mode and Mechanism"], 高等教育研究学报 [*Journal of Higher Education Research*], 46, no. 3 (September 2023), p. 27.

[88] Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

studies (信息类专业人才). At the time, the school was the fastest-growing program at NUE with its most numerous and youngest faculty, and it is unlikely this has changed.[89] Enrollment numbers show that NUE's overall enrollment has rapidly increased: the target number for undergraduates increased 87 percent from 2017 to 2024.[90] The university also established 11 new undergraduate majors to meet new technological training needs after the 2017 reforms.[91] The new majors are primarily focused on technologies like military "big data" engineering, "command information systems," and unmanned equipment.[92] The new majors were developed by multiple schools and departments within NUE (多个院系), and their instructors include university faculty, military experts on active duty, local industrial department (地方工业部门) staff, and civilian university professors. Some students studying these majors complete internships in military posts prior to graduating. NUE has also selected five majors to develop curricula in artificial intelligence, leading to the development of nine courses (课程) in AI foundations, revisions to textbooks and course material, and the creation of AI-related laboratories, off-campus internship bases (校外实训基地), and clubs.[93]

Cooperation with Civilian Universities

One of Xi Jinping's instructions at the 2019 Group Training was to "make good use of external high-quality educational expertise and resources (用好用足外部优质教育力量和资源)."[94] Accordingly, the PLAN has expanded cooperation with civilian universities in advancing scientific research, educating cadets during or prior to their enrollment in naval institutions, and introducing new ideas and best practices for their school's administration.

PLAN academic institutions increasingly operate joint programs and laboratories with civilian universities, often organized under the National Key Laboratory system or with the support of local government. These programs are especially relevant to the study of advanced technology, where

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[89] 院系速览 ["Department Summary"], 海军工程大学招生信息网 [*Naval University of Engineering Student Recruitment Information Online*], archived 14 September 2020, http://nue.edu.cn/index.aspx?lanmuid=63&sublanmuid=697.

[90] Naval University of Engineering, "Naval University of Engineering 2024 Student Recruitment Introduction"; Allen and Chen, *The PLA's 37 Academic Institutions,* p. 120

[91] Kang and Xiong, "Naval University of Engineering Organizes Internships with Troops for Students of New Specializations, Aiming Precisely at the Future Naval Battlefield."

[92] The article and a comparison of 2024 majors with known engineering majors from 2017 recruitment suggests that the new majors are [Combat] Operations Research and Mission Planning ([作战]运筹与任务规划), Target Engineering (目标工程), Fire Command and Control Engineering (火力指挥与控制工程), [Military] Big Data Engineering ([军事]大数据工程), Command Information System Engineering (指挥信息系统工程), Radar Engineering (雷达工程), Missile Engineering (导弹工程), Unmanned Equipment Engineering (无人装备工程), Measurement and Control (测控工程), Electromagnetic Emission Engineering (电磁发射工程), Equipment Economic Management (装备经济管理). Naval University of Engineering, "Naval University of Engineering 2024 Student Recruitment Introduction"; Kang and Xiong, "Naval University of Engineering Organizes Internships with Troops for Students of New Specializations, Aiming Precisely at the Future Naval Battlefield"; Allen and Chen, *The PLA's 37 Academic Institutions,* pp. 119-20.

[93] Kang and Xiong, "Naval University of Engineering Organizes Internships with Troops for Students of New Specializations, Aiming Precisely at the Future Naval Battlefield."

[94] 解阳 [Xie Yang] and 周建新 [Zhou Jianxin], 发挥军队院校教育主渠道作用提升联合参谋人才专业化培训水平 ["Give Full Play to the Role of Military Academies as the Main Channel of Education to Improve the Level of Professional Training of Joint Staff Personnel"], 政工学刊 [*Political Work*], no. 9 (2020), pp. 42-43.

cooperation with civilian universities gives students and faculty access to more cutting-edge research and facilities. For example, the Navy Submarine Academy holds cooperative programs with over twenty universities and research institutions. These include various joint laboratories, "innovation bases" (创新基地), and "practical teaching bases" (教学实践基地).[95] The academy is also affiliated with the Qingdao Pilot National Laboratory for Marine Science and Technology (青岛海洋科学与技术试点国家实验室), an entire ecosystem of specialized laboratories founded in 2015 as a collaboration between national ministries, universities, and state-affiliated academic research institutes.[96] Researchers and teaching faculty affiliated with both the NSA and laboratory have received funding to research technologies with military applications.[97] As the PLAN continues to develop military-civil fusion programs and emphasize the development of technologically sophisticated research and talent, it is likely that PLAN academies will continue to expand and develop collaboration with civilian universities. Some PLAN and civilian universities have established exchanges or joint degree programs. For instance, NUE conducts joint study programs with schools including Tsinghua University, Wuhan University, Shanghai Jiao Tong University, and Northwestern Polytechnical University.[98] Starting in 2023, NUE, Dalian Naval Academy, and the PLA Navy Submarine Academy have run a program where students in majors such as ship engineering take three years of undergraduate study at Shanghai Jiao Tong University before a final year of study at their "home" institution.[99] In a separate initiative, in 2024, NUE recruited students for a doctoral program offered as a partnership between Huazhong University of Science and Technology (HUST, 华中科技大学) and an unspecified National Key Laboratory at NUE. According to the arrangement, students first take classes at HUST and then conduct research and write theses at NUE, graduating with a civilian HUST degree.[100] NUE describes its cooperative programs as a way to train elite talent and draw upon national resources for specialized technical research and innovation.[101] Naval Aviation University also runs a "dual-enrollment program" (双学籍) where

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[95] "Introduction to Navy Submarine Academy."

[96] Ibid.; 实验室概况 ["Summary of the Laboratory"], 青岛海洋科学与技术试点国家实验室 [*Qingdao Pilot National Laboratory for Marine Science and Technology*], 31 March 2022, http://www.qnlm.ac/page?a=1&b=1&p=detail.

[97] 王超 [Wang Chao], 孙芹东 [Sun Qindong], 张林 [Zhang Lin], 王文龙 [Wang Wenlong], 张小川 [Zhang Xiaochuan], 水下声学滑翔机海上目标探测试验与性能评估 ["Underwater Acoustic Glider Target Detection Experiments and Performance Evaluation in the South China Sea"], 信号处理 [*Journal of Signal Processing*], 36, no. 12 (June 2020), pp. 2043-2051.

[98] Naval University of Engineering, "Naval University of Engineering 2024 Student Recruitment Introduction."

[99] @全体考生，请接收海军院校和上海交通大学联合培养的邀请 ["@All Candidates: Please Accept the Invitation for Joint Training from the Naval Academies and Shanghai Jiao Tong University"], 北京日报 [*Beijing Daily*], 百度 [Baidu], 28 June 2024, https://baijiahao.baidu.com/s?id=1803059245573318642.

[100] 华中科技大学-海军工程大学 (某国家级重点实验室) 2024 年联合培养博士研究生专项计划招生简章 ["Huazhong University of Science and Technology-Naval Engineering University (A National-Level Key Laboratory) 2024 Student Recruitment Plan for Doctoral Graduate Student Joint Program"], 海军工程大学 [*Naval Engineering University*] and 华中科技大学 [*Huazhong University of Science and Technology*], http://static.hhkaobo.com/upload/editor/150e316f-55fa-44ea-8a94-f7428c9578d5.pdf.

[101] 华中科技大学-海军工程大学 (某国家级重点实验室) 2024 年联合培养博士研究生专项计划招生简章 ["Huazhong University of Science and Technology-Naval Engineering University (A National-Level Key Laboratory) 2024 Student Recruitment Plan for Doctoral Graduate Student Joint Program"], 海军工程大学 [*Naval Engineering University*] and 华中科技大学 [*Huazhong University of Science and Technology*], http://static.hhkaobo.com/upload/editor/150e316f-55fa-44ea-8a94-f7428c9578d5.pdf.

aspiring aviation cadets (飞行学员) conduct undergraduate study at both Naval Aviation University and Tsinghua University, Peking University, or Beijing University of Aeronautics and Astronautics, all elite civilian academic institutions.[102] These programs indicate the PLAN's interest in using civilian universities as a resource to not only cooperate on advanced research, but also to recruit and train personnel with elite educational qualifications.

Cooperation with civilian institutions both helps PLAN academies train students and provides opportunities for PLAN academies to learn from civilian institutions' faculty and models of education as they seek to reform their own curricula and offer higher-quality instruction. To support more innovative research, NUE has encouraged more interdepartmental cooperation and hosted lectures by outside experts, in line with trends in Chinese civilian universities. The school has encouraged its cadets to participate in scientific research programs, enter both civilian and military academic contests, and otherwise pursue both military and civilian practical training and academic exchange. As part of these reforms, students are also now allowed more freedom in choosing classes and research projects outside their designated specialty.[103] A *Liberation Army Daily* article praised the university for "breaking the barriers of academic majors" (打破学科专业壁垒) that had previously constrained internal cooperation and external partnerships.[104]

Reflecting the importance of keeping pace with academic innovation in the technology fields in which the university specializes, NUE organizes about sixty academic contests and activities per year, including both military and civilian and domestic and international participants, while also sending teams to participate in domestic and international civilian and military academic contests.[105] Students from the Navy Submarine Academy also participate in civilian academic contests, such as a 2024 international contest for underwater robots organized by several Chinese marine research organizations where participants designed a small remotely-operated underwater robot.[106]

PLAN educational institutions are also learning from the experiences of civilian universities to implement partnerships with industry, especially technology companies. In January 2025, Shenzhen University's College of Continuing Education and Naval Aviation University's Instructor Development Center (海军航空大学教师发展中心) hosted a joint training course for teachers on "industry-academic fusion" (产教融合). Through expert lectures and site visits to various technology centers in Shenzhen, attendees learned about talent training partnerships between academia and

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[102] Allen and Gao, "PLA Officer Cadet Recruitment: Part 2."

[103] 熊峰 [Xiong Feng] and 侯融 [Hou Rong], 海军工程大学瞄准前沿增设新域新质学科专业 ["Naval Engineering University Aims for the Cutting Edge and Add New Fields, New Quality, and New Subjects and Majors"], 解放军报 [*Liberation Army Daily*], 30 March 2025, http://www.mod.gov.cn/gfbw/wzll/hj/16377743.html.

[104] 熊峰 [Xiong Feng] and 侯融 [Hou Rong], 海军工程大学打破学科专业壁垒创新科研工作模式 ["Naval Engineering University Breaks Barriers of Academic Majors [for] an Innovative Working Model of Scientific Research"], 解放军报 [*Liberation Army Daily*], 29 August 2024, https://web.archive.org/web/20241016075732/http://www.mod.gov.cn/gfbw/gfjy_index/jsyxgfs/16334128.html.

[105] Naval University of Engineering, "Naval University of Engineering 2024 Student Recruitment Introduction."

[106] 黄波 [Huang Bo] and 潘爽 [Pan Shuang], 海洋水下机器人的 Fighting!我院学员在 2024 国际大赛中斩获冠军！ ["Fighting of Marine Underwater Robots! Our Academy Students Won the Championship in a 2024 International Competition!"], 中国潜院 [*China Sub Academy*], WeChat, 2 August 2024, https://mp.weixin.qq.com/s/YCJBIW0luQ0Pn-AyaStqrA.

industry, new models for technological talent development, innovation in curricula based on industry-education partnerships, and experiences attending conferences.[107]

Improving Communication with PLAN Units and Preparing for the Battlefield

Requiring that PLA academic institutions become more attuned to the practical operational requirements of modern warfare has been a key aspect of Xi's reforms in military academic institutions. His instructions have included calls to "educate people for war" (为战育人) and "teach what is needed for war" (打仗需要什么就教什么).[108] For instance, during an inspection visit to National Defense University (NDU) in March 2016, Xi declared that NDU's education must be "oriented towards the battlefield" (面向战场) and "oriented towards the troops" (面向部队).[109] During a 2020 inspection visit to Air Force Aviation University, Xi stressed that "the closer the cohesion is between the classroom and the battlefield, the more suitable the training for [military] talents will be" (课堂同战场衔接越紧密，培养的人才越对路子).[110] Accordingly, the PLA has urged its academic institutions to "create links between classrooms and battlefields" (打通从课堂到战场的链路).[111]

PLA reporting on the 2019 Group Training indicated that at the time, the leadership of PLA academic institutions did not have a clear understanding of how to apply Xi's directives in this area. During the Group Training's "joint defense sessions," one commandant noted previous misunderstandings on how to handle the apparent conflict between the development of top-tier academic disciplines and a heightened focus on preparing students for the battlefield. The commandant noted that although "everyone" understood that preparing students for the battlefield was necessary for a strong army, they felt "a bit worried" about potential impacts to their schools' academic development (大家心里仍有点患得患失).[112] In response, commandants were reminded that military education did not consist of pure academic research in an "ivory tower" (军事教育不是"象牙塔"里的纯学术研究). In fact, they first had to focus on serving the needs of war, and ensure that their schools' work had

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[107] 海军航空大学产教融合专题教学研修班 ["Naval Aviation University's Specialized Industry-Education Fusion Education Training Class"], 深圳大学继续教育学院 [Shenzhen University College of Continuing Education], 3 January 2025, https://cce.szu.edu.cn/info/1044/3785.htm.

[108] 评论员 [Commentator], 全面贯彻新时代军事教育方针 ["Comprehensively Implement the New Era Military Education Policy"], 解放军报 [*Liberation Army Daily*], 28 November 2019, http://www.mod.gov.cn/gfbw/jmsd/4855781.html.

[109] Li and Wang, "While Inspecting the National Defense University, Xi Jinping Stressed That We Should Promote the Reform and Innovation of Military Academies Around the Goal of Strengthening the Military and Providing Talent and Intellectual Support for Realizing the Chinese Dream and the Dream of a Strong Military."

[110] Li and Zhang, "Xi Jinping Inspected the Air Force Aviation University on the Eve of August 1 Holiday and Stressed the Need to Deepen Reform and Innovation and Continuously Improve the Level of Education and Personnel Management, and He Extended Holiday Greetings to All Officers and Soldiers of the People's Liberation Army, People's Armed Police, Militia, and Reserve Personnel."

[111] 周雷 [Zhou Lei], 张鹏 [Zhang Peng], 王保华 [Wang Baohua], and 张会如 [Zhang Huiru], 科技认知、跨域理解、精准决策: 面向未来战场培养生长军官新质能力 ["High-Tech Based Cognition, Cross-Domain Understanding and Precise Decision-Making Abilities: Cultivation of Cadets' New Quality Capabilities for Future Warfare"], 军事高等教育研究 [*Journal of Military Higher Education Research*], 48, no. 1 (March 2025), p. 9.

[112] Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

battlefield relevance.[113] Following this guidance, PLA academic institutions have made increased efforts to institutionalize a teaching and research model that directly brings training and operational lessons learned by PLA units into the classrooms, and in return sends innovative research and learning from classrooms to the troops (战训经验进课堂, 教研成果到部队).[114]

After the Naval Petty Officer Academy received reports about students' difficulties adjusting to post-graduation assignments, the school established a research group that met with "grassroots" PLAN personnel to discuss their needs and the problems with the school's approach to specialized training and education.[115] Finding that many graduates needed multiple instances of on-the-job training (多次岗位带教) after joining their posts before they could perform their new role independently (独立上岗), the academy implemented a series of reforms, which included redesigning courses to more specifically target job requirements, upgrading and transforming skill training laboratories, improving teaching and training equipment, and developing virtual training software that simulated real world equipment and tasks.[116]

PLAN academies have also developed programs to encourage collaboration between active PLAN units and their own faculty to ensure the relevance of their training and research. For example, one NUE professor and an Eastern Theater Command officer set up an exchange program where the professor served a "counselor" (辅导员) role on a ship and the officer was appointed an honorary student team leader. The university's researchers and "outstanding command staff" (优秀指挥员) from the ship held academic exchanges and lecture events together, eventually formally establishing a program for joint training of students and personnel.[117] The Naval Aviation Academy has recently instituted regular visits by its researchers to PLAN vessels, planes, and installations to meet with front line troops and "clear away the difficulties and blocks restraining the development of combat capability" (梳理制约战斗力建设的难点堵点), implying previous problems with the practical utility and application of the school's research. The school began regularly organizing specialized

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[113] Ibid.

[114] 方姝阳 [Fang Shuyang] and 陈曦 [Chen Xi], 国防科技大学某学院构建"部队—课堂—部队"教研链路 ["A College Within the National University of Defense Technology Builds a "Troops-Classroom-Troops" Research and Teaching Link"] 解放军报 [*Liberation Army Daily*], 26 February 2024, p. 1, http://www.mod.gov.cn/gfbw/gfjy_index/jsyxgfs/16288841.html.

[115] 龚国茂 [Gong Guomao], 胡云艳 [Hu Yunyan], and 倪帅 [Ni Shuai], 海军士官学校探索优化预选军士培养模式 ["Naval Petty Officer Academy Seeks to Optimize Pre-Selected NCO Student Training Model"] 中国军网 [*China Military Online*], 20 February 2025, https://military.people.com.cn/n1/2025/0220/c1011-40422294.html; 向黎鸣 [Xiang Liming], 倪帅 [Ni Shuai], and 涂拥军 [Tu Yongjun], 瞄准实战强能力，海军士官学校有的放矢抓好人才培育 ["Aiming at Strengthening Real Combat Capabilities, Naval Petty Officer Academy Has a Targeted Approach to Cultivating Talents"], 解放军报 [*Liberation Army Daily]*, 28 February 2024, p. 3, http://www.81.cn/szb_223187/szbxq/index.html?paperName=jfjb&paperDate=2024-02-28&paperNumber=03&articleid=926053.

[116] Gong, Hu, and Ni, "Naval Petty Officer Academy Seeks to Optimize Pre-Selected NCO Student Training Model"; Xiang, Ni, and Tu, "Aiming at Strengthening Real Combat Capabilities, Naval Petty Officer Academy Has a Targeted Approach to Cultivating Talents," p. 3.

[117] 张琳 [Zhang Lin], 吴旭 [Wu Xu], and 苏啸 [Su Xiao], 特别策划丨为战育人：来自军校的"年度答卷" ["Special Plans—Educate People for Combat: The 'Annual Exam Results' From the Military Academies"] 解放军报 [*Liberation Army Daily*], 26 December 2023, p. 5, http://www.81.cn/zt/2023nzt/qmsrxxgcxjpqjsx/qjsj_245351/16278065.html.

conferences to set the direction of research plans focused on improving combat capabilities. It has also guided research staff to communicate closely with front line personnel to understand how their research is being applied in practice and adjust their work accordingly. The school describes this as an "investigate-implement-follow-up" (调研—落实—追踪) plan.[118]

Focusing Educational Work on Actual Combat

Recent PLAN academic sources emphasize the urgent need to make education and training more practical, incorporating modern technology and a focus on "actual combat" (实战) rather than outdated curricula and an excessive focus on theory. A 2021 article by authors from NUE described widespread problems in PLAN academies' previous model of graduate student training, saying that "in aspects such as courses' educational tenets, content, model, support, and management… combat realism in education (实战化教学) was insufficiently systematic and deep," creating graduate students not suited for the needs of informatized war. The article noted that at the same time that students conducted advanced research through military-civil fusion educational programs, it was important not to lose sight of the needs of the units that would employ them. It called for more practical models of education, especially for students who had an advanced grasp of theory but weaker practical skills.[119] To resolve similar issues, the Naval Logistics Academy adopted a "two classrooms, three levels" (双课堂三层次) education model, referring to a model that seeks to blend classroom and extracurricular learning on the levels of "foundations, application, and innovation." This involves a greater focus on practical experience and independent learning, such as watching equipment demonstrations rather than studying circuit diagrams, learning skills through club activities, and participation in academic contests. These reforms reportedly helped students identify and address weaknesses in their skill development and learn to independently solve practical problems.[120] The academy also revised curricula and textbooks, increasing their focus on modern technology and modern theories that would be necessary in future warfare.[121] Similarly, the Naval Petty Officer Academy has adopted a more targeted "topical training model" (科目化训练模式) focused on operational skills (操作技能).[122] Dalian Naval Academy recently introduced an "optimized talent training model" (优化人才培养模式) focused on improving students' abilities to fulfill their military duties, reorganizing many of its classes' designs and introducing more practical

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[118] 齐呈荣 [Qi Chengrong] and 孟庆浩 [Meng Qinghao], 海军航空大学紧盯战场开展课题攻关 ["Naval Aviation University Focuses on the Battlefield to Launch an Assault on Problems"], 解放军报 [*Liberation Army Daily*], 3 April 2025, http://www.mod.gov.cn/gfbw/gfjy_index/jsyxgfs/16378693.html.

[119] 刘树勇 [Liu Shuyong], 柴凯 [Chai Kai] , 苏攀 [Su Pan], and 杨庆超 [Yang Qingchao], 关于提高海军院校研究生培养质量思考 ["Considerations on Improving Quality of Graduate Student Educational Cultivation in Naval Colleges"], 教育进展 [*Advances in Education*], 11, no. 4 (2021), https://www.hanspub.org/journal/paperinformation?paperid=43669.

[120] 李芮 [Li Rui], 海军勤务学院: "双课堂三层次"助力军士学员实现自我价值 ["Naval Logistics Academy: 'Two Classrooms, Three Levels' Help Soldier Students Achieve Self-Esteem"], 解放军报 [*Liberation Army Daily*], 7 May 2024, http://www.mod.gov.cn/gfbw/gfjy_index/jsyxgfs/16306478.html.

[121] 如何提高海上综合保障能力——海军勤务学院聚焦为战育人推动主题教育走深走实 ["How to Comprehensively Increase Ability to Guarantee [Operations] at Sea: Naval Logistics Academy Focuses on Deepening and Implementing Topical Education of Educating People for War"], 中青在网 [*China Youth Online*], 7 December 2023, https://zqb.cyol.com/html/2023-12/07/nw.D110000zgqnb_20231207_2-08.htm.

[122] Xiang, Ni, and Tu, "Aiming at Strengthening Real Combat Capabilities, Naval Petty Officer Academy Has a Targeted Approach to Cultivating Talents," p. 3.

coursework to help develop skills like navigation.[123] PLAN academies also offer more elective and extracurricular classes and activities to support practical skills, such as academic contests or sailing clubs. A 2023 article in the journal *PLA Life* (解放军生活) stated that Dalian Naval Academy offers an elective class in ship damage control, which physically simulates emergency situations.[124] The dean of one NUE program stated in *Liberation Army Daily,* "The development of new areas and new qualities of combat power (作战力量) has set higher requirements for students' psychological quality, innovative thinking, capability to adapt, and sense of teamwork."[125] New teaching approaches therefore seek to develop students' practical abilities and psychological resilience by creating opportunities to practice their skills in challenging real-world or realistic scenarios.

A focus on practical operational learning includes a greater reliance on wargaming and advanced simulations. The Naval Command College's facilities include a Naval Campaign and Tactics Center Laboratory (海军战役战术中心实验室), alternately called the Naval Combat Laboratory (海战实验室中心), operational since at least 2004.[126] That center includes training simulation systems that attempt to simulate naval campaigns.[127] The laboratory is the PLAN's most advanced tactical- and campaign-level wargaming facility, and it plays an important role in the Naval Command College curriculum, especially an annual capstone exercise that simulates potential future PLAN conflicts.[128] Naval Command College has included more wargaming as part of its new "problem-driven educational methods" (问题驱动式教学方法) intended to help students apply their theoretical knowledge and develop more independent research and problem-solving skills.[129] A 2024 article in *Liberation Army Daily* also described the use of simulation-based training at Dalian Naval Academy. It stated that in a Simulation Training Room (模拟训练室), cadets using VR headsets had to make rapid situational judgements in a simulation where they encountered an enemy target in nearby waters and had to prepare for combat. One student described the encounter as an opportunity to practice using his theoretical education in a realistic combat situation. The simulation system also collects data on individual and aggregate student performance, which instructors can use to adjust

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[123] 张琳 [Zhang Lin] and 李琳 [Li Lin], 我军院校探索推开作战指挥教学新模式 ["Our Military's Schools Explore and Advance a New Model of Combat Command Education"], 解放军报 [*Liberation Army Daily]*, 4 November 2024, https://baijiahao.baidu.com/s?id=1814743320082489327.

[124] "CMSI Translations #14: Manual for Developing Ship Captains," *China Maritime Studies Institute,* 6 February 2025, p. 2, https://digital-commons.usnwc.edu/cmsi-translations/14/.

[125] Xiong and Hou, "Naval Engineering University Aims for the Cutting Edge and Add New Fields, New Quality, and New Subjects and Majors."

[126] Ryan D. Martinson, "War Without Surprises: Education for Command in the People's Liberation Army Navy," *Naval War College Review*, 77, no. 3 (2024), pp. 7, 20; 吴丹 [Wu Dan], 海军指挥学院课堂对接战场打造信息化军事人才 ["Naval Command College Classrooms Connect to the Battlefield to Build Informatized Military Talent"], 16 November 2004, [光明日报], *Guangming Daily,* https://web.archive.org/web/20190930012332/http://mil.news.sina.com.cn/2004-11-16/1554243537.html.

[127] 海军指挥学院 ["Naval Command College"], 掌上高考 [*Kaoyan.cn*], 1 July 2022, https://www.kaoyan.cn/news/220766.

[128] Martinson, "War Without Surprises: Education for Command in the People's Liberation Army Navy," pp. 7, 29.

[129] 葛圣军 [Ge Shengjun], 海军指挥学院运用问题驱动式教学方法 引导学员开展自主研究 ["Naval Command College Applies a Problem-Driven Educational Method, Leading Cadets to Start Independent Research"], 解放军报 [*Liberation Army Daily*], 12 December 2024, p. 2, http://www.81.cn/yw_208727/16357685.html.

instruction and training. According to the article, DNA seeks a mutually beneficial balance between theoretical education and practical training, with simulations playing a key role.[130]

In 2024, NAU and the PLAN Staff Department Vocational Education Center (海参军事职业教育中心) organized a "military modelling" simulation contest focused on the effectiveness of equipment, which was attended by several hundred individuals from various PLAN academies.[131] These activities not only train students in practical skills, but help them to develop more confidence in applying their skills and making decisions in stressful situations. For example, one English language teacher at the Naval Logistics Academy had students practice public speaking in scenarios such as a Model United Nations debate or an encounter with an enemy ship to help them practice calmly communicating in an unpredictable and tense environment.[132]

Interaction with Active Duty Units

PLAN academic institutions have also placed more emphasis on opening channels for students to meet and learn from active duty personnel, participating in training drills and practical education. The PLAN is also developing programs to bring senior commanders into the classrooms to teach about operational concerns like troop management, combat command, and planning.

Naval Medical University has sent students to observe realistic training exercises and assist with any medical issues related to training drills. Students are paired with active duty "brother units" (兄弟单位) to assist in real healthcare situations and learn from experienced medics.[133] These allow students to work alongside active duty personnel and familiarize themselves with the technology in current PLAN use.

Beyond long-standing programs for sending students to the "front line," PLA academies have more recently enacted faculty-focused programs to send more active duty officers to their classrooms. The 2019 Group Training revealed that military commanders rarely gave lectures or interacted with the PLA's academic institutions, highlighting the disconnect between academic and military preparation of students.[134] As one *Liberation Army Daily* commentary on the 2019 Group Training stated, "At present, the number of teachers in our military academies who have participated in wars and understand modern warfare is still very limited. Some teachers still pursue 'how the previous wars were fought' (以前的仗是怎么打的)…. They use old thinking to face new things, which is not desirable. Only by fully taking the path of talent exchange and introducing a large number of

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[130] 张渝宁 [Zhang Yuning] and 赵逸帆 [Zhao Yifan], 海军大连舰艇学院运用科技手段改善教研条件 ["The Dalian Naval Academy Uses Technological Tools to Improve Teaching and Research Conditions"], 解放军报 [*Liberation Army Daily],* 11 June 2024, http://www.mod.gov.cn/gfbw/gfjy_index/jsyxgfs/16315043.html.

[131] 陈傲 [Chen Ao], 付用军 [Fu Yongjun], 杨振中 [Yang Zhenzhong], 杨鹏飞 [Yang Pengfei], 庄丽 [Zhuang Li], 彭佳鑫 [Peng Jiaxin], 王琪皓 [Wang Qihao], 杨孙啸 [Yang Sunxiao], and 程俊豪 [Cheng Junhao], 大学承办！首届海军军事建模竞赛圆满结束！ ["The University Hosted! The First Ever Naval Military Modelling Contest Fully Concludes!"], 海军航空大学 [*Naval Aviation University*] WeChat, 30 June 2024, https://mp.weixin.qq.com/s?__biz=MzUzNjU4NDYxMg==&mid=2247628722&idx=1&sn=132acbbc80fd4f10fe6d2093248e396b.

[132] Li, "Naval Logistics Academy: 'Two Classrooms, Three Levels' Help Soldier Students Achieve Self-Esteem."

[133] Zhang, Wu, and Su, "Special Plans—Educate People for Combat: The 'Annual Exam Results' From the Military Academies," p. 5.

[134] Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

outstanding commanders from the front line of combat troops as instructors (大量引进作战部队一线优秀指挥员担任教员) can we train military academy students who understand both theory and actual combat."[135]

The PLA has subsequently normalized the practice of assigning commanders at the corps grade and above (军级以上) and chief officers of division and brigade-level combat forces to "take the podium" to teach students in military academies about operational concerns.[136] PLA media has stated that this practice has become institutionalized to the extent that these lectures have gone beyond simple "lectures of introduction" (讲座介绍) and are becoming more akin to "embedded teaching" (嵌入教学).[137]

International Exchanges

Throughout its history, the PLAN has looked to foreign military academies for guidance on how to organize and administer its educational system.[138] The 2019 Group Training did not ignore this component of reform, as participants advocated for studying the administration of foreign military schools (学习…外军办学情况), and PLAN leadership has continued to learn from foreign naval academies.[139] In 2022, the PLAN and Naval Command College organized an online forum with representatives and military attachés from 27 countries on the subject of reform, development, and international cooperation at naval academic institutions. The forum considered these institutions' role in the context of the "overall layout of national and military talent cultivation" and technological change.[140] The second meeting of the forum, held in 2024, sought to encourage international discussion on the development of naval institutions and cooperation on talent training, resource sharing, exchange programs, and educational cooperation.[141]

In addition, researchers at PLA and PLAN educational institutions have studied U.S. military educational institutions for inspiration in their work on teaching and administrative reform. This research, with some examples from 2024 described below, often notes the technological and pedagogical advancement within the U.S. military academies. For example, an article by researchers from the Navy Submarine Academy compared the mathematics curriculum at their academy and U.S. military academies, highlighting the U.S. academies' greater focus on practical application and use of

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[135] Wu , "Let Students go to the Battlefield as Soon as They Graduate—A Series of Talks on Learning and Implementing the Spirit of the All-Army Academic Institutions' Commandant Training," p. 6.

[136] 刘建伟 [Liu Jianwei] and 吴旭 [Wu Xu], 高中级指挥员执教军校成常态 ["It Has Become the Norm for High- and Middle-Level Commanders to Teach in Military Academies"], 解放军报 [*Liberation Army Daily*], 18 July 2022, p. 1.

[137] Ibid.

[138] 杜博 [Du Bo], 70 年来的人民海军外交: 历程、经验和展望 ["Naval Diplomacy in the Past 70 Years: History, Experience and Prospects"], 边界与海洋研究 [*Journal of Boundary and Ocean Studies*], 4, no. 6 (November 2019), p. 62.

[139] Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

[140] Huang Lipeng and Qian Xiaohu, "Forum of heads of int'l naval academies kicks off," *China Military Online*, 18 December 2022, http://eng.mod.gov.cn/xb/News_213114/TopStories/4928644.html.

[141] "Defense Ministry Spokesperson's Remarks on Recent Media Queries Concerning the Military," *PRC Ministry of National Defense,* 17 November 2024, http://eng.mod.gov.cn/xb/News_213114/NewsRelease/16352481.html.

more advanced technology and software.[142] An article by researchers at the National University of Defense Technology's (NUDT) Training and Administration Department (教育训练部) stated that amidst the challenges of major structural reforms, the PLA's educational institutions cannot solely rely on China's own experience, but should draw upon foreign case studies to understand principles of military education. That article used the U.S. Naval Academy's Office of Institutional Research, Planning, and Analysis as a case study on the value of an office for institutional research, noting the benefits of the office's high administrative status and influence, academic independence, full-time staff, and data-driven approach to strategic planning. It contrasted this office with PLA educational institutions' approach to institutional research, which it characterized as "still rather lacking in structural support" (一定程度上还存在缺乏机构依托), with "unclear" responsibilities, an insufficiently "evidence-based" mindset, and outdated, isolated data systems.[143] Finally, at a 2023 summit focused on managing PLAN vocational military learning (海军军事职业教育管理), experts from the PLAN, other PLA branches, and top civilian universities covered topics that included discussions of professional military education (PME) at U.S. military institutions.[144]

While generally holding that U.S. military academies offer lessons and experiences that the PLA should emulate and/or adapt for its own academic institutions, PLA researchers also note problems with U.S. military academies as errors the PLA should avoid. A 2024 article from researchers at NUDT's Training and Administration Department discussed strengths, weaknesses, and reforms over time in the U.S. Navy's system for first assignment training of surface warfare officers. It concluded that despite weaknesses in this system, such as insufficient academy training, excessive reliance on technology, and failure to appreciate the difficulties of on-the-job training, "the American military's courage to seek innovations merits approval" and should be emulated by the PLA amid reforms to its military educational institutions and PME.[145]

PLAN academic institutions have also been active participants in military diplomacy and foreign training, both sending and hosting international students. With the possible exception of the Naval Logistics Academy and Naval Petty Officer Academy, for which information was not found, all the PLAN's academies accept international students.[146] Since 2000, the Naval Command College has

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[142] 闫盼盼 [Yan Panpan] and 赵建昕 [Zhao Jianxin], 中美生长军官数学素养培育比较研究——以海军潜艇学院与美国军官学校为例 ["Comparative Research on the U.S. and China's Mathematical Training for Officers: Using Navy Submarine Academy and the US Officers' Academies as an Example"], 大学教育 [*University Education*], no. 9 (May 2024), pp. 135-140.

[143] 郑可 [Zheng Ke] and 彭安臣 [Peng Anchen], 美国海军军官学校院校研究运行机制探析 ["The Operational Mechanism of US Naval Academy's Institutional Research"], 军事高等教育研究 [*Journal of Military Higher Education Research*], 47, no. 1 (March 2024), p. 52-56.

[144] 赵亮 [Zhao Liang], 罗朝柱 [Luo Chaozhu], 陈云飞 [Chen Yufei], and 张宝星 [Zhang Baoxing], 海军这场集训，多个军种来人传授经验 ["For This Navy Training, People From Many Forces Come to Share Their Experience"], 人民海军 [*Liberation Army Daily*], 25 October 2023, http://finance.sina.com.cn/wm/2023-10-25/doc-imzsisih7073164.shtml.

[145] 范玉芳 [Fan Yufang], 透视美国海军水面作战军官的首次任职教育 ["First Assignment Training of the U.S. Navy Surface Warfare Officers"], 军事高等教育研究, [*Journal of Military Higher Education Research*], 47, no. 3 (September 2024), pp. 58-63.

[146] Allen and Chen, *The PLA's 37 Academic Institutions*, pp. 114, 120, 125, 129, 134, 140, 144, 147; 海军航空大学 [Naval Aviation University], 海空召唤 青春启航 | 海军航空大学 2025 年招生简章新鲜出炉！["The Sea and Air

also accepted foreign mid- and high-ranking officers as international students.[147] Dalian Naval Academy is particularly active in international exchanges and accepts international students.[148] The academy has regularly allowed international students to attend its shipboard training programs and used long training voyages as opportunities to meet with foreign military academic counterparts or even organize joint training exercises at sea.[149] The academy has a department of Foreign Training (外训系), and its students can take elective classes in etiquette for foreign diplomacy.[150] The academy also includes international students and students from other PLAN institutions in international training and diplomacy programs: a May 2024 training voyage to Cambodia included foreign students hosted by Dalian Naval Academy and students from the Navy Submarine Academy. The five foreign students were divided among and trained alongside the domestic student groups.[151] Participating students also use these voyages as an opportunity to participate in public diplomacy. For example, on the May 2024 training voyage to Cambodia, NSA cadets met with the local Chinese and Cambodian community and held public demonstrations of traditional Chinese culture.[152]

Improving Teaching Quality

During the 2019 Group Training, teachers and student representatives argued that "formalism" (形式主义)—i.e., acting for the sake of appearances and procedure rather than practical impact—was still an issue in PLA academic institutions.[153] Recent PLA-wide initiatives have therefore focused on educator quality, especially by establishing formal rules and systems to evaluate faculty performance. The PLA's 2020 "Trial Regulations for Education in Military Academic Institutions" (军队院校教育

Beckons Youths Take Flight | Naval Aviation University's Recruitment Brochure is Newly Released!"], 微信公众平台 [*Weixin Official Accounts Platform*], 12 June 2025, https://mp.weixin.qq.com/s/KRw9mXCP_bQnelpZdPixQw.

[147] "Summary of Naval Command College 2022 Civilian Personnel Recruitment Open to the Public"; Allen and Chen, *The PLA's 37 Academic Institutions,* p. 112.

[148] Allen and Chen, *The PLA's 37 Academic Institutions,* p. 125; "Chinese People's Liberation Army Navy Dalian Naval Academy."

[149] Allen and Chen, *The PLA's 37 Academic Institutions,* p. 122.

[150] The term "Foreign Training" refers to both the training of PLA personnel (military experts affiliated with the now-defunct General Departments and PLA commanders, political workers, and specialized technicians) abroad and the hosting of foreign military personnel in China for training. See 解放军外训 60 年 ["60 Years of the PLA's Foreign Training"], 新华社-瞭望东方周刊 [Xinhua-*Oriental Outlook*], 27 July 2012, https://style.sina.com.cn/news/p/2012-07-27/0947101531.shtml. 中国人民解放军海军大连舰艇学院 ["Chinese People's Liberation Army Dalian Naval Academy"], 上海国际海洋技术交易平台 [*Shanghai International Ocean Technology Trading Platform*], 15 June 2021, https://siottp.shou.edu.cn/2021/0611/c16554a289926/page.htm; "CMSI Translations #14: Manual for Developing Ship Captains."

[151] Song Zixun and Zhou Zhou, "Chinese naval taskforce sets sail for ocean-going cadet training," *China Military Online,* 12 May 2024, http://eng.chinamil.com.cn/CHINA_209163/TopStories_209189/16307862.html.

[152] 徐梦函 [Xu Menghan], 王云翔 [Wang Yunxiang], 周卓军 [Zhou Zhuojun], 雷杪骐 [Lei Miaoqi], 乔晨曦 [Qiao Chenxi], 毛志远 [Mao Zhiyuan], 樊冠廷 [Fan Guanting], and 崔帅 [Cui Shuai], 凯旋！潜艇学院远海实习访问任务圆满结束！ ["Triumphant Return! The Submarine Academy's Distant Sea Practical Study Visit Mission was Successfully Completed!"], 中国潜院 [*China Sub Academy*], WeChat, 20 June 2024, https://web.archive.org/web/20240623090656/https://mp.weixin.qq.com/s/Zk1Hb0iH85vcHTZVYooBww.

[153] 扶婧颖 [Fu Jingying] and 李源 [Li Yuan], 什么是形式主义、官僚主义？你真的了解吗？ ["What Are Formalism and Bureaucracy? Do You Really Understand?"], 人民网 [*People's Daily*], 7 May 2020, http://fanfu.people.com.cn/n1/2020/0507/c64371-31700033.html; Liu, Wu, Li, and Zhang, "Strategic Group Training that Marches Towards the Future," p. 5.

条例(试行)) included an instruction that "Military academic institutions should implement a teaching and learning evaluation system (评教评学制度), organize students to provide teacher evaluations, and in a targeted manner improve teaching and raise [teaching] quality."[154]

These practices are being applied to PLAN academic institutions, albeit with mixed success. One 2024 article in the journal *Military Higher Education Research* (军事高等教育研究) by faculty at the Navy Submarine Academy stated that military academies had only relatively recently begun to routinely evaluate the quality of instruction (教学评价工作常态化).[155] The authors said these evaluations had become increasingly standardized and effective, yet "education quality management work" (教学质量管理工作) remained insufficient to keep pace with new reforms and the need for advanced and specialized talent. The article noted problems on the department level within academies (系部级) like inaccurate evaluations, slow feedback, or lax monitoring. It claimed academic programs within military academies tended to passively follow directives from above rather than take an active role in reform, curriculum development, and problem solving.[156]

In response to Xi's 2019 directive to improve the professional development of military educators, especially young faculty, "core" staff, and "star" teachers, PLAN academies have organized educator training with leading Chinese universities.[157] In December 2023, for example, Peking University and the Naval Command College (NCC) held a five-day "enhanced training class on military education innovation and strategic thinking" (军事教育创新与战略思维提升培训班) for NCC instructors and selected students to study and discuss "cutting-edge technology, strategic thinking, and the art of leadership" (前沿科技、战略思维、领导艺术)" with experts and professors from Peking University and other institutions. The NCC Party Secretary stated at the event that in recent years, the college has been reforming its model of training commanders, and was doing more to jointly educate its talent with civilian educational institutions. He expressed hopes that the universities would continue to expand research collaboration in areas like "developing high-level talent in strategic management and talents in joint force command, national security, maritime studies, and educational strategy."[158] In May 2024, twenty-seven "outstanding young instructors" (优秀的青年教师) selected from NUE attended a three-week training course at Xiamen University, where they met with and

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[154] 赵丹 [Zhao Dan], and 马松超 [Ma Songchao], 骆雷飞 [Luo Leifei], and 邵广纪 [Shao Guangji], 基于 OBE 理念的学生评教方案设计与实践 ["The Design and Practice of Student's [Sic] Class-Teaching Evaluation Program Based on OBE Concept"], 高等教育研究学报 [*Journal of Higher Education Research*], 45, no. 3 (September 2022), pp. 80-81.

[155] 李丹妮 [Li Danni], 彭方成 [Peng Fangcheng], and 陈全萌 [Chen Quanmeng],军校系部级教学质量管理工作优化创新研究 ["Research on Optimizing and Innovating in Military Academies' Department-Level Educational Quality Management Work"], 军事高等教育工作 [*Journal of Military Higher Education Research*], 47, no. 1 (March 2024), pp. 75-79.

[156] Ibid., pp. 76-77.

[157] Mei and Liu, "At the Opening Ceremony of the All-Army Group Training for Leaders of Military Academic Institutions, Xi Jinping Stressed 'Implement the New Era Military Education Policy, Deepen the Reform and Innovation of Military Academic Institutions, and Develop Specialized, High Character, and High-Quality New Military Talents."

[158] 北京大学-中国人民解放军海军指挥学院军事教育创新与战略思维提升培训班开班 ["Peking University-Naval Command College Holds Enhanced Training Class on Military Education Innovation and Strategic Thinking"], 北京大学继续教育学院 [*Peking University School of Continuing Education*], 12 September 2023, https://news.pku.edu.cn/xwzh/485456a9f45841ad828e218aca522bc6.htm.

learned from the university's educational experts about their teaching experiences and the newest theories and methods in education and talent cultivation.[159] Additionally, Xiamen University's National Educator Development Demonstration Center (国家级教师发展示范中心) has provided training to faculty from the Naval Aviation University and Naval Command College.[160] A 2025 article in *Liberation Army Daily* noted that as part of NUE's reforms which introduced new majors, the university has also instituted programs for instructors to learn from civilian educators and study at renowned civilian universities, establishing plans to hire and develop elite talent.[161]

Education for Active Duty Personnel

PLAN academic institutions provide ongoing vocational education programs and professional education to active duty personnel. While the PLAN academic institutions have always provided these programs, their faculty members study methods to evaluate and continually improve programs, sometimes at dedicated research centers like the NMU Vocational Education Center (海军军医大学职业教育中心), which receives national and university grants to study specific topics in military education.[162] The PLAN Staff Department also operates a Vocational Education Center (海参军事职业教育中心) in Beijing which conducts research on the quality of naval vocational education.[163]

The PLAN has attempted to improve and reform vocational education to meet PLAN goals and resolve problems with the content, methods, and availability of current vocational education. However, one 2024 article by researchers from the PLAN Staff Department Vocational Education Center offered a pessimistic summary of the state of PLAN vocational education.[164] The authors stated that at present, the "lack of systematic planning and practical measures to leverage officers and soldiers' internal motivation for learning has seriously restricted the quality and effectiveness of vocational education." They identified several main "contradictions and problems," such as a lack of motivation and "self-development plans" (自身发展规划不清晰) among sailors; an underdeveloped curriculum that does not meet the practical needs and interests of students who "cannot find the classes they want to take, or do not want the classes that they can take" (想选的课程找不到，能选的课程不想选); inadequate systematic incentives such as the lack of a unified system for validating

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[159] 海军工程大学优师计划第 3 期教员能力提升研修班顺利开班 ["Naval Engineering University Excellent Teachers' Plan's Third Session Training Course to Raise Educator Abilities Held Smoothly"], 厦门大学教育研究院 [Xiamen University Institute of Education], 16 May 2024, https://ihe.xmu.edu.cn/info/1241/30461.htm.

[160] 引领・保障・服务:国家级教师发展示范中心建设的十年实践 ["Leadership, Support, Service: Ten Years of the National Educator Development Demonstration Center"], 厦门大学教师发展中心 [Xiamen University Center for Teaching and Learning Development], 31 March 2023, https://ctld.xmu.edu.cn/info/1006/2913.htm.

[161] Xiong and Hou, "Naval Engineering University Aims for the Cutting Edge and Add New Fields, New Quality, and New Subjects and Majors."

[162] 鲁娟 [Lu Juan], 任凤云 [Ren Fengyun], and 何天霖 [He Tianlin], 军事职业教育中学员线上学习动机水平调查 ["Survey on the Motivation Level of the Learners in [Online] Military Continuing Education"], 教育教学论坛 [*Education and Teaching Forum*], no. 2 (Jan. 2024), p.125.

[163] 张玲 [Zhang Ling], 颉永祥 [Jie Yongxiang], and 向展飞 [Xiang Zhanfei], 军事职业教育学习动力激励机制探析 ["Study on Learning Motivation Mechanism of Military Professional Education"], 教育进展 [*Advances in Education*], 14, no. 5 (2024), pp. 1303-1308.

[164] Ibid.

course credit or overly rigid and general incentives for study; and a lack of dedicated guidance, administrative personnel, or even physical infrastructure to access and navigate coursework.[165]

Vocational education classes do not necessarily take place on PLAN academy campuses, and some PLAN sources suggest they are now largely offered online. PLAN academics conclude that online classes have both benefits and drawbacks compared to traditional classroom education. For example, a 2022 article by researchers from NUE and an affiliated laboratory stated that massive open online courses (MOOCs, 慕课) had already become so widespread in the PLA that some personnel falsely equated vocational education with MOOCs, and naval academies were "blindly" pursuing MOOC quantity over quality.[166] Specifically, such classes tended to include too much general theory and not nearly enough specialized content to meet student needs.[167]

A 2024 article by NMU researchers noted that while online vocational education is much more flexible and convenient, providing access to greater resources and study opportunities, there are issues such as a lack of face-to-face time with instructors and peers, a lack of supervision, and a reliance on student self-motivation.[168] The article also noted an excessive focus on theory over practice in course content, stating that online classes included too much general, common knowledge (通俗性科普性知识) and not much specialized or cutting-edge information.[169] The article was generally optimistic about online students' levels of motivation and engagement, citing a survey they conducted in 2021 which found online students' (self-reported) levels of motivation were comparable to students physically attending PLAN academies.[170] They concluded students generally believed online vocational education helped "raise their professional cultivation and ability to carry out the duties of their post" (升职业素养和岗位履职能力).[171]

The aforementioned 2024 article by PLAN Staff Department Vocational Education Center staff took a more negative view of the shift to online courses, stating that not only do some sailors lack the technological tools to access online vocational education—according to *People's Navy*, offline learning terminals for accessing online courses at sea were only first installed in some PLAN ships in 2020—online classes contributed to problems with an overly self-directed vocational education system.[172] They argued that the PLAN's virtual coursework left many students isolated from peers

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[165] Ibid., pp. 1305-1306.

[166] 田万平[Tian Wanping], 梅泽元 [Mei Zeyuan], and 彭京徽 [Peng Jinghui], 军事职业教育体系下海军职业教育创新研究 ["New Research on Innovative Naval Professional Education in the Military Professional Education System"], 军事高等教育研究 [*Military Higher Education Research*], 45, no. 2 (2022), p. 39.

[167] Ibid., p. 39.

[168] Lu, Ren, and He, "Survey on the Motivation Level of the Learners in [Online] Military Continuing Education," pp. 126-128.

[169], Ibid., p. 127.

[170] Ibid., pp. 126-127.

[171] 鲁娟 [Lu Juan], 何天霖 [He Tianlin], 游晓华 [You Xiaohua], 海军官兵对军事职业教育在线课程的看法调查 ["A Survey of Naval Officers' and Soldiers' Views on Online Courses in Military Continuing Education"] 教育进展 [*Advances in Education*], 12, no. 11 (Nov. 2022), https://www.hanspub.org/journal/paperinformation?paperID=58590.

[172] 彭鹏 [Peng Peng], 军事职业教育首次走向远海大洋 ["Professional Military Education Takes to the Far Seas for the First Time"], 人民海军 [*People's Navy*], 8 September 2020, p. 1.

and teachers, and that while course platforms included opportunities for discussion and asking questions, such functions were underused.[173]

Additionally, though online courses offer many opportunities for collecting and analyzing data on student performance, a 2024 article by researchers affiliated with a National University of Defense Technology vocational education technology research center stated that this data was not being collected and put to good use. The researchers claimed the current system suffered from problems like incomplete administrative design, disparate technical standards, barriers to interdepartmental coordination, and a lack of comprehensive support services. The article concluded that strategic decisions about military vocational education were only just beginning to transition from being based on experience to being based on data.[174]

Conclusion

In his effort to build a strong and revitalized PLA, Xi Jinping has highlighted the critical role played by PLA academic institutions. They are the crucible for preparing a new generation of PLA officers capable of leading a more technologically advanced and innovative PLA, and the success or failure of academies in this mission will significantly impact the future trajectory of the PLA. Accordingly, under Xi the PLA has invested time and effort into strengthening PLA academic institutions. It has introduced a "three-in-one" model for talent development, reorganized and consolidated its academic institutions, and updated statutes and regulations to guide PLA academies in their work. It also convened a twelve-day Group Training for commandants and other leaders in PLA educational work to set the course for new reforms, which has had a lasting impact on the direction of reform work.

PLAN academic institutions have complied with PLA leadership's directives in a broad range of areas. They have conducted major administrative reforms to pursue specialization, reformed their curricula to focus more on modern technology and practical learning opportunities, conducted more systematic evaluations of whether their graduates are prepared to meet PLAN needs, partnered with active troops and civilian universities, and experimented with new educational technologies like simulations and online courses.

To what extent these efforts are truly helping to prepare the current classes of PLAN officers for success in modern combat is less certain. Discussions of PLA academic work do not identify any known metrics for measuring success. Progress is instead described in more qualitative ways, like whether or not graduates are prepared to handle new roles and new equipment in their units. Moreover, while PLA academic institutions can learn from the best practices of China's civilian universities, their mission is fundamentally different. They are tasked with developing the next generation of military leaders, and there are no proven models in China for them to follow. Ultimately, the measure of success for PLA academy graduates is how they command in the heat of battle, how effectively they work with others, and how creatively they employ tactics. Given the

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[173] Zhang, Jie, and Xiang, "Study on Learning Motivation Mechanism of Military Professional Education," pp. 1305-1306.

[174] 匡罗贝 [Kuang Luobei], 蒋泽 [Jiang Ze], 钟艳华 [Zhong Yanhua], and 刘政 [Liu Zheng], 军事职业教育数据治理体系研究 ["A Preliminary Study on Data Governance System for Military Professional Education"], 军事高等教育研究 [*Military Higher Education Research*], 47, no. 4 (2024), pp. 18-22.

PLAN's dearth of real combat experience, the true quality of a military education at a PLAN academy is still largely unknowable.

Much of the Chinese news and analysis concerning PLAN academic institutions—like the rest of the PLA's academic institutions—suggests that the institutionalization of reforms has not yet reached a satisfactory level. Discussions of PLAN academic work are still focused on highlighting anecdotal successes, signs of progress, and new initiatives that have only recently begun, while continuing to stress the importance and necessity of reforms. They spend more time offering suggestions about what schools should be doing instead of publicizing institutionalized best practices. This suggests that reforms have not reached a stage where they are the norm and the educational system is simply trying to build on its successes. Rather, the PLAN is still trying to highlight and fix fundamental deficiencies throughout its academic system, and a cultural shift in how students are educated still seems far off. The next major wave of reforms in PLAN academic institutions, whenever it comes, will highlight whether the PLAN is still trying to fix legacy problems left over from its current initiatives, or if it has made enough progress that reforms can move on to other areas.

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