

L E T T E R

FROM

THE SECRETARY OF THE NAVY,

REPORTING,

*In answer to Senate resolution of the 4th instant, the steps taken by him to establish an advanced course of instruction of naval officers at Coasters' Harbor Island, Rhode Island.*

FEBRUARY 12, 1885.—Referred to the Committee on Naval Affairs and ordered to be printed.

NAVY DEPARTMENT,  
Washington, February 11, 1885.

SIR: I have to acknowledge the receipt of a copy of a resolution adopted by the Senate on the 4th day of February, as follows:

*Resolved*, That the Secretary of the Navy is hereby directed to report to the Senate what, if any, steps have been taken to establish an advanced course of instruction of naval officers at Coasters' Harbor Island, Rhode Island, and the reasons which have controlled the action of the Department.

The subject of an advanced course of instruction of naval officers was, May 3, 1884, committed by this Department to a Board consisting of Commodore S. B. Luce, Commander W. T. Sampson, and Lieut. Commander C. F. Goodrich, who on the 13th of June, 1884, made a report recommending the establishment of such a course of instruction in the science and art of military and naval warfare and in international law and history. The method recommended is carefully outlined in the report, a copy of which is annexed to this communication.

As it was deemed advisable that the course of study should be made to supplement the present instruction of naval officers in torpedoes at Newport, R. I., and that the place should be selected where the Department is already in possession of the necessary grounds and buildings, the Board recommended the establishment of the college of instruction at Newport.

In pursuance of the previous determination of the Department, and in accordance with the foregoing report, directions were given that preparation should be made for the course of instruction to be conducted at Coasters' Harbor Island, in Newport, by General Order No. 325, issued October 6, 1884, a copy of which is herewith transmitted.

The reasons which have controlled the action of the Department are to be found in the recognized necessity for an advanced course of military and naval education in the United States. There are now existing three schools for the purpose in the Army and one in the Navy. The latter is at the Torpedo Station at Newport, where a class of officers

is assembled for a few months in each year for instruction in the art of manufacturing and using torpedoes and torpedo explosives. The constant changes in the methods of conducting naval warfare imposed by the introduction of armored ships, swift cruisers; rams, sea-going torpedo-boats, and high-power guns, together with the more rigid methods of treating the various subjects belonging to naval science, render imperative the establishment of a school where our officers may be enabled to keep abreast of the improvements going on in every navy in the world. The Torpedo School only partially fulfills the imperative requirements. The college is intended to complete the curriculum by adding to an extent never heretofore undertaken the study of naval warfare and international law and their cognate branches.

The great surplus of officers in the Navy makes it especially appropriate to require that at all times some of them not needed for actual duty shall be engaged in courses of professional study calculated to improve and qualify them for better service in the future.

In instituting this school of instruction at Coasters' Harbor Island, the Department, acting within the scope of its powers, has simply utilized public grounds and buildings, under its own immediate control, for a wise and beneficial purpose, and has detailed naval officers who can readily be spared to constitute the president and faculty of the college.

Very little expense will be incurred in carrying out the Department's plan, while the benefits to be realized by the Navy and the country will be of great importance. The subject is commended to the notice and favor of Congress.

Very respectfully,

W. E. CHANDLER,  
*Secretary of the Navy.*

The PRESIDENT PRO TEMPORE OF THE SENATE.

REPORT OF BOARD ON A POST-GRADUATE COURSE.

UNITED STATES TRAINING SQUADRON,  
UNITED STATES FLAG-SHIP NEW HAMPSHIRE (First rate),  
*Newport, R. I., June 13, 1884.*

Hon. WILLIAM E. CHANDLER,  
*Secretary of the Navy, Washington, D. C. :*

SIR: The Board appointed by the Department under date of May 3, to "report upon the whole subject of a post-graduate course, or school of application, to be established by the Department for officers of the Navy, giving in detail the reasons for establishing such school, the scope and extent of the proposed course of instruction, and an opinion as to the best location therefor," have the honor to submit the following preliminary report:

If the recommendations contained herein meet with the approval of the Department, the Board is ready to develop the plan in greater detail.

FIRST.—THE REASONS FOR ESTABLISHING SUCH A SCHOOL.

The variety and extent of knowledge now required of a naval officer demands a longer period than was formerly considered necessary to cover a complete course of technical education. Of this knowledge certain branches are acquired and assimilated with greater ease by minds more matured than those of the average undergraduates of the Naval Academy.

It is found that numbers of young officers, after a little experience at sea, take up, of their own accord, those studies for which they have developed a taste; it may be ordnance, astronomy, electricity, steam, history, international law, or the languages.

There are others who, possessed of undoubted ability, do not exert themselves in the direction of self-improvement, for want of proper facilities, or, perhaps, of an incentive—men who could take a high stand in almost any branch were the opportunity offered or the motive power applied.

For years past the Bureau of Ordnance has recognized the existence in the service of a large amount of talent that could be utilized for its own special purposes, and it has always encouraged officers to qualify themselves in that particular line. It now finds its reward in a body of capable and efficient assistants.

The present admirable post-graduate course at the torpedo-station is due solely to the enlightened policy of that Bureau.

In the establishment of the proposed school the Navy Department would be doing for all professional branches what the Bureau of Ordnance has been long doing to supply its own particular needs. It would, moreover, consolidate the instruction in each into a well organized and homogeneous system.

The Board is of the opinion that a cogent reason for such a school is that there may be a place where our officers will not only be encouraged, but *required*, to study their profession proper—war—in a far more thorough manner than has ever heretofore been attempted, and to bring to the investigation of the various problems of modern naval warfare the scientific methods adopted in other professions.

Although the science of war cannot be mastered through the agency of books alone, yet a complete study of the operations of war, both on land and at sea, by which the principles of the science have been illustrated practically, is absolutely essential to the proper education of the officer whose life is dedicated to the profession of arms.

Campaigns that have depended for success upon the co-operation of a fleet; campaigns that have been frustrated through the interposition of a fleet; the transfer, by water, of a numerous army to distant points and their landing on an enemy's coast under the guns of a fleet; the various results of engagements between ships and shore batteries; naval expeditions which have ended in disaster that could have been foretold through an intelligent study of the problem beforehand; and the great naval battles of history, even from the earliest times, which illustrate and enforce many of the most important and immutable principles of war, should be carefully examined and rendered familiar to the naval student. For it is upon his professional skill in the larger operations of combining and utilizing, to the best advantage, the floating force of the country, as well as in the more restricted one of an isolated command, that our people must rely for the protection of their interests and the guarding of their extensive coasts and coasting trade from the depredations of an enemy.

The almost total absence of an adequate naval force adds to the burden of responsibility imposed upon our naval officers, and imperatively demands of them extraordinary exertion in the acquisition of professional knowledge in order to make such amends, as they best may, for the extreme paucity of the means furnished them. Here, then, is not simply a "reason," but an absolute necessity for the establishment of such a school as the order contemplates.

In regard to that valuable practical experience which can be gained only by service afloat, the American naval officer is at a great disadvantage. It is well known that the Channel Squadron of Great Britain and the Squadron of Evolutions of France, made up of line-of-battle ships of the most recent types, have long been the great naval war schools of their respective countries, while the naval officers of all maritime nations, great and small, including Chili, China, and Japan, enjoy the opportunities denied to our officers of duty on board of modern fighting ships. This very serious defect in our naval organization can only be partially remedied, if at all, by the proposed war school.

The bare statement that our naval officers not only do not study war as a science, but have no adequate school of practice, seems in these days of broad and liberal culture so extraordinary that it is alone, in the judgment of the Board, sufficient reason for the early founding of the institution which the Department now has under consideration.

But there are other weighty reasons.

Naval officers are often called upon on foreign stations to exercise diplomatic functions, and are, not unfrequently, required to settle or act upon questions involving nice points of international law. They should, therefore, be carefully prepared for this responsibility by an intimate knowledge of the enlightened neutrality policy which this country has had the honor of introducing and maintaining from its foundation, and of the principles of equity that have ever characterized, as well as of the instruments which control the intercourse of the United States with foreign powers.

Thorough instruction in international law may therefore be regarded as an essential feature in the higher education of the naval officer. This can best be supplied by a post-graduate course.

The study of war and law especially should be undertaken by minds more matured than can be found among the average undergraduates, and by deferring it to the time when the officer is about to assume the greater responsibilities of higher rank

the full weight of these subjects is better appreciated and their acquisition far more likely to engage his best energies.

A more extended course in mechanics, gun construction, &c., is necessitated by the very great advances that are being constantly made in ordnance; while recent hydrographic work, the exact determination of latitudes and longitudes, in the many cases where this still remains to be effected, the addition of iron ships to the Navy, involving the necessity of precise evolution of their magnetic constants, &c., show how imperative is the demand for higher instruction in surveying, nautical astronomy, and practical physics.

In giving prominence to the subjects of war and law, as studies to which the greatest importance should be attached, and to the acquisition of which the highest efforts, stimulated in what manner soever the Department may judge wisest, should be applied, the Board is by no means insensible to the great value to the country of work that may be accomplished by the Navy in time of peace; work, too, such as may be strictly in the line of professional improvement, and such as, by training the faculties and extending the mental horizon, still further prepares the officer for the more varied demands made, in time of war, upon his intelligence and attainments. As the domain of human knowledge becomes more and more enlarged, the field of professional requirements expands to such an extent that it must be pastured out, as it were. Thus the tendency in the Navy, as in all other professions, is towards the formation of *specialties*. It is to the specialist that we are indebted, mainly, for the vast accessions which have been made of late years to the common stock of knowledge. But it is for the very reason that the victories won in peace and the great variety and attraction of the studies open to the naval officer may, and sometimes do, lead him away from his true pursuit, that we urge the early opening of a school where war, the one subject *par excellence* of the naval profession, may be taught as thoroughly as it can be taught outside of the stern school of the field of battle.

Failing to produce specialists in this one branch, we fail utterly in our whole system of naval education, for all others are but subordinate or accessory.

In the earnest prosecution of what is but a means to an end, the officer is too apt to lose sight of the ultimate object of all. Thus, electricity in its application to torpedoes, chemistry in its application to explosives, metallurgy in relation to ordnance, and steam as a motive power, are only means to the end for which a navy may be said to exist—*success in war*. The establishment of the proposed school, by opening to officers the higher branches, will serve to correct any misapprehension on this point and dissipate the haze, which, to a greater or less extent, obscures the perception in regard to the true aim of naval education and the duties of naval officers.

The war school will, moreover, furnish an admirable opportunity for healthy, intellectual development and gratify the laudable desire, so general among our officers, for increased knowledge. While preventing erratic flights into fields of research unrelated to his calling, some of which might unfit him for its stern duties, the school will tend to hold the young officer to those lines of professional thought so eminently calculated to qualify him for his highest and most responsible duties.

That the study of war may well engage all the faculties of the brightest minds and be worthy of a special school is shown by the fact that in the world's history few have been found to whom can be assigned the proud title of master of the art.

#### SECOND.—OUTLINE OF THE PROPOSED COURSE.

It is assumed that six months will be needed for the work of the war school.

The course may, with propriety, be made to supplement the present instruction in torpedoes at Newport. The two together would cover a period of less than a year.

It is proposed to divide the teaching at the war school under two heads:

A. The Science and Art of War.

B. Law and History.

The course in "war" should include the following subjects:

1. Strategy and tactics.
2. Military campaigns.
3. Joint or opposed military and naval operations, treated from the *military* standpoint.
4. Disposition and handling of seamen landed for military service.
5. Elements of fortifications and intrenchments.
6. Naval strategy and tactics.
7. Naval campaigns.
8. Joint or opposed military and naval operations, treated from the *naval* standpoint.

As the principles underlying all hostile movements are at bottom the same, whatever be the nature of the field of action, the board is of opinion that an intimate knowledge of military operations is essential to the naval strategist, and it suggests

that the first five of the above-mentioned subjects would be best taught by one learned in military science.

The course in law and history ought to embrace—

1. International law.
2. Treaties of the United States.
3. Rules of evidence.
4. General naval history.
5. Modern political history.

The first subject is of the utmost importance in its bearing upon the action taken by our naval commanders abroad. In the judgment of the Board the most eminent authority of the day should be engaged to undertake the elucidation of its principles; and, also, to bring out clearly the nature and extent of our treaty obligations.

The third subject, on account of its relation to sound administration of justice and court-martial law, ought to be expounded by a distinguished member of the legal profession.

#### PRACTICAL EXERCISES.

The North Atlantic Squadron affords the nearest approach to be found to a proper course in naval tactics. It should be assembled once a year, and during a stated period, go through a series of fleet evolutions, gunnery practice with the latest types of ordnance, the landing of seamen for military operations, boat expeditions, torpedo attack and defense, &c., having the class on board for instruction.

It is to be hoped that at no distant day these exercises may be supplemented by practice with torpedo boats of exceptionally high speed.

In order to carry out the recommendations contained in the introductory portion of this report it will eventually become necessary to provide additional courses, which shall fit officers, so desiring, for the peculiar work exacted by the increased complexity of certain branches of the profession.

The following table contains the studies, &c., which we think should be completed by those who wish to qualify as specialists in ordnance, torpedoes, and hydrography.

In time it is probable that other courses may be found necessary.

#### 1. Theory.

*Ordnance*—Higher mathematics, physics, mechanics, chemistry, mechanical drawing.

*Torpedoes*.—Higher mathematics, physics, mechanics, chemistry, mechanical drawing.

*Hydrography*.—Higher mathematics, physics, nautical astronomy.

#### 2. Practice.

*Ordnance* (at Washington naval arsenal and experimental battery).—Machinery, metal-working, ordnance, gun-construction, inspection of guns, fuses, small-arms, &c.

*Torpedoes* (at torpedo station).—Electricity in its various professional applications, explosives, torpedoes.

*Hydrography*.—Sketching, surveying, cartography, use of portable and fixed astronomical instruments.

The Board confines itself to pointing out the lines along which it is probable that these specialties will find their study—development; but it is not prepared to urge the immediate establishment of these courses as essential to the organization of the war school, which, as already shown, is a pressing necessity.

No one should be permitted to engage in these courses who cannot pass a satisfactory examination in those matters, now so well taught at the Naval Academy, and which are to be resumed in the post-graduate course. It is proposed to take the student exactly where Annapolis left him and carry him still further along the path of science under the care of eminent specialists in each branch and to afford him the advantage of the best apparatus and appliances available.

In the absence of material rewards and as an inducement to officers to undertake the serious labor involved in acquiring these specialties, the Board suggests that those who finish the instruction with credit should receive certificates of proficiency, and that a significant letter or other mark should be placed opposite their names in the Navy Register. In this connection, the Board ventures to express a hope that every officer's useful attainments, such as foreign languages, sketching, photography, draughting, surveying, painting, naval architecture, &c., may form a part of his record at the Navy Department, that his fitness for any special work may be known and utilized.

The Board is of the opinion that the facilities of the war school should be denied to officers below the grade of lieutenant, in order that a proper amount of preliminary sea service may be secured.

## INSTRUCTION OF NAVAL OFFICERS.

If these special courses are established, it may be well to allow any officers who desire it, and whose services the Department can spare for the time being, to attend the instruction in one or more of the subjects taught.

Instruction in modern languages, as well as in water colors and photography, is desirable, and would bring its own reward on the one hand in foreign service and on the other in military and naval reconnaissances. The Board believes these subjects may in time be added as optionals with advantage.

## THIRD.—LOCATION.

In considering the location of the proposed war school, the Board has felt that this important question must be mainly decided by the facilities for the required instruction presented by the various places which have suggested themselves, such as Washington, Annapolis, New York, Newport, and Boston.

It has been thought important that the place should be selected where the Department is already in possession of the necessary grounds and buildings. This first condition appears to be satisfied by both Newport and Boston. At the former place, Coasters' Harbor Island would furnish a suitable location. At Boston it is assumed that the necessary accommodation could be had at the navy-yard.

When the more important matter of the facilities furnished by these two cities is considered, each is found to have its claims, though they are quite different in character. Newport possesses a site at which the school could be permanently established and where there is little probability that its welfare would clash with any other interest of the service. The torpedo station is already at this place, and it would be possible to so extend its facilities that the instruction in physical science might be given—although this would entail a considerable outlay for buildings, apparatus, &c., as well as a yearly expenditure for instructors. As practical exercises afloat ought to constitute a part of the course at the war school, Newport offers exceptional advantages.

Boston, on the other hand, possesses the facilities of a great university and technical schools, including eminent professors and excellent libraries. If these can be made available in providing the necessary instruction in science, it is thought that the scheme may be put into operation at once, and at small expense. The character of the instruction aimed at in the proposed school is of the highest order, and would demand the services of the ablest instructors in each department. It is for this vital reason that the Board is of the opinion that to secure such instructors, all other considerations should be deemed subordinate.

In the case of the two main branches, the science of war and international law, the instructors should come to the school; while, in the courses in science, the pupils must go to the instructors, wherever such, together with the necessary laboratories, are to be found. The number of officers to take such science courses would probably not exceed five annually.

The Board, therefore, recommends that the war school be established at Newport, and that those officers who take these special courses in science avail themselves of the great institutions of learning at Boston.

In looking forward to the complete organization of the school, the Board are of the opinion that the recommendation here made is not only practicable, but would produce better results than any other plan.

Very respectfully submitted.

S. B. LUCE,  
*Commodore, U. S. Navy, President of the Board.*  
W. T. SAMPSON,  
*Commander, U. S. Navy, Member.*  
C. F. GOODRICH,  
*Lieutenant-Commander, U. S. Navy, Member.*

## ESTABLISHMENT OF NAVAL WAR COLLEGE.

GENERAL ORDER }  
No. 325. }

NAVY DEPARTMENT,  
Washington, October 6, 1884.

A college is hereby established for an advanced course of professional study for naval officers, to be known as the Naval War College. It will be under the general supervision of the Bureau of Navigation. The principal building on Coasters' Harbor Island, Newport, R. I., will be assigned to its use, and is hereby transferred, with the surrounding

structures and the grounds immediately adjacent, to the custody and control of the Bureau of Navigation for that purpose.

The college will be under the immediate charge of an officer of the Navy, not below the grade of commander, to be known as the president of the Naval War College. He will be assisted in the performance of his duties by a faculty.

A course of instruction, embracing the higher branches of professional study, will be arranged by a board, consisting of all the members of the faculty, and including the president, who will be the presiding officer of the board. The board will have regular meetings at least once a month, and at such other times as the president may direct, for the transaction of business. The proceedings of the board will be recorded in a journal.

The course of instruction will be open to all officers above the grade of naval cadet.

Commodore S. B. Luce has been assigned to duty as president of the college.

WILLIAM E. CHANDLER,  
*Secretary of the Navy.*

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Copy of:  
original act  
incorporating  
Naval War College