

USE OF SAIL TRAINING SHIP IN SEAFARERS' PROFESSIONAL EDUCATION

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Among the most vital issues for the shipping industry all over the globe is the improvement of maritime security and prevention accidents at sea. Human factor is considered to be the root cause of most accidents at sea; therefore to prevent accidents through people is one of the best options to ensure marine safety and environmental protection. The “bulk” of these problems comes from organizational errors and promotes a cultural change to develop a “do it right” mindset.

The existence of the training fleet or ship(s) owned by the maritime educational institutions can drastically help in the above mentioned task. One of the most important issues in this case is to correctly organize the cadets' on-board training, to ensure all and every opportunity for each cadet to train and “drill” the required skills and abilities.

Keywords: human factor; improve maritime safety; on-board training; prevent accidents at sea; professional training; sailing ship; skills and abilities; training ship.

Among the most vital issues for the shipping industry all over the globe is the improvement of maritime security and prevention accidents at sea. Human factor is considered to be the root cause of most accidents at sea; therefore to prevent accidents through people is one of the best options to ensure marine safety and environmental protection. The “bulk” of these problems comes from organizational errors and promotes a cultural change to develop a “do it right” mindset.

Insecure navigation is the direct result of the human factor underestimation firstly in the professional training. The practitioners believe that competence in seamanship should be based on knowledge of some rules and principles, as well as on the experience and “due diligence” in fulfillment of own duties and responsibilities.

The issue of the professionally important qualities of a specialist development is one of the problems to be considered when creating an optimal model of the professional education. Besides many others, the problem of a specialist fast adaptation to the conditions of his practical activity within minimum period of time is quite actual. The importance of the mentioned problem for the shipping industry is obvious.

The requirements to the ships' officers and crew are increasing. They operate ship's machinery and equipment, set-up the production process, ensure proper functioning of all ships machines and devices. Implementation of modern technologies, computer software, use of the updated hardware and sophisticated equipment are solely possible when technically aware and qualified personnel operate and make use of all the above mentioned resources.

The educationists of maritime training centers, colleges and universities are concerned with the search of new methods, which will help in teaching a seafarer beforehand to properly behave in various possible operational situations. It means an advance experience acquisition. The latter can be achieved, no doubt, with the students and cadets' practical training during the period of their studies at college, university or training center. Then the most important task is to create some educational model to be implemented during the period of the students and cadets' practical training at sea; the one which will help to develop the required skills and abilities, to prepare future seafarer for his work at sea beforehand.

The existence of the training fleet and/ or ship(s) owned by the maritime educational institutions can drastically help in the above mentioned task.

The whole system of the seafarers' professional education organization in Russia includes both theoretical and practical training, i.e. at sea and ashore. Depending upon the subject matter chosen, i.e. navigation, marine engineering, electrical engineering, commercial fisheries, refrigeration engineering, etc., students and cadets have to have a certain period of training at sea. Then they have an opportunity either to find some place for their practical training themselves, or to be signed-on on board one of the training ships owned by the educational institution of theirs.

In general the city of Vladivostok, being the seaport, has several maritime educational institutions of tertiary education on its territory (the Far Eastern State Technical Fisheries University, the Maritime State University named after G.I. Nevelskoy, the Naval Academy named after Admiral S.O. Makarov); they carry out professional training of specialists for merchant and fisheries fleet of Russia, as well as for the Russian Navy. The educational institutions own the training fleet, among them two sister-ships, i.e. sail training ships the “Pallada” and “Nadezhda”.

The “Pallada” is the sail training ship (STS) owned by the Far Eastern State Technical Fisheries University; she is one of several training ships belonging to the University. The main task of the current paper is to cover the training model implemented on board the sail training ship “Pallada”; at the same time we need to add that practically the same model is used on board her sister-ship the “Nadezhda”.

STS “Pallada” has been designed for practical training of students and cadets from maritime educational institutions of the Russian Far East; but she is currently used as a specialized site for practical training of the maritime students and cadets from the Pacific Rim countries as well.

Thus she is widely used to popularize maritime profession; to explain the peculiarities of fisheries educations in the country; to share practices used in Russia in seafarers’ practical training; to familiarize people with the customs and traditions of the Russian fleet; to promote international cooperation and exchange of cultures and heritage of nations all over the globe; to establish good partnership between countries, maritime communities and institutions.

Besides the necessity to ensure sea-going qualification, in general the practical on-board-sailing-ship training helps students and cadets:

- to familiarize with the ship’s appurtenance, machinery, systems and elements, primary ship’s husbandry;
- to get the idea of the principles of work at sea, occupational safety as well;
- to obtain the general skills of work with her sails, rigging and tackle;
- to get acquainted with the usage of safety and life-saving appliances;
- to get familiarized with aids to navigation, and/ or ship’s machinery, equipment and devices, etc.;

- to develop the skills of practical utilization of the basic knowledge of navigation, hydrometeorology, celestial navigation, etc.;
- to obtain the skills of team-work, to better understand such issues as individual and group responsibility;
- to better understand the importance of co-work, cooperation and collaboration (for example, when setting sails);
- to see the importance of “being a competent maritime English language user”, and others.

To speak on the ship’s educational model one needs to get familiarized with her organogram. Traditionally the person responsible for the ship, her crew (both permanent and temporary, i.e. cadets and practice managers), as well as all affairs on board is the captain.

There are five departments on board the ship, i.e. Deck, Engine, Training and Education, Radio and Medical. The Deck department includes the deck and catering departments. The persons-in-charge for her departments are the chief officer, chief engineer, chief teach officer, electrical radio navigator and ship’s surgeon respectively.

Chief teach officer is the person-in-charge of the on-board organization of practical training; at the same time the head of each department is a kind of sub-responsible for the education and training of the students and cadets allocated for works in the very department. So there exist interaction between the ship’s training and education department and all other departments of the ship. The ship’s officers and crew take an active role in cadets’ on-site training, i.e. on the bridge, in the engine room, all-round the ship and in the class-room as well.

The ship’s training and education department comprises cadets and students on board, all practice managers; they are considered to be the so called “temporary crew”.

Students and cadets from various colleges, technical schools and universities have their sailing practice on board STS “Pallada”. The ship can simultaneously accommodate up to 131 cadets. There are 11 cabins accommodating 12 students, cadets each.

Each group of cadets signing on is accompanied by practice manager(s). The practice managers are the professors, instructors and lecturers of the students and cadets’ colleges and universities, they deliver lectures, arrange classes and examinations. Practice managers

are responsible to the chief teach officer within the whole period of their stay on board in spite of the fact that they are the representatives of different educational institutions and they are responsible for their cadets/ students, their practical training.

All practice managers keep watch; among their on-watch duties are:

- organization and control over all cadets and students' work, studies, free time, etc. ;

- all disciplinary issues;

- control over the cleaning operations, condition of the cadets and students' accommodations, sanitary rooms, etc.;

- compliance with the students and cadets' daily routine, etc.

The daily routine includes classes, work, keeping watch, as well as leisure, sports, etc.

Among the cadets duties are the following: OOW/ EOW trainees; electrical engineer or refrigeration engineer trainees; on-duty practice manager's assistant; watch seamen/ oiler/ electrician trainees (at the gangway in port); galley workers; cadets' dining-room workers; helmsman (under way); look-out (under way); cleaning staff; personnel of watch (in port).

Once the "Pallada" minimum safe crew is 17 persons, the permanent crew of the ship cannot fulfill all operations on board when she is proceeding under sails or when the repairs are required. Therefore some of the permanent crew duties are to be re-distributed between the cadets and students. All of them help in cleaning and maintaining the ship; depending on their subject area they do it either on the deck or in the engine-room. They do their first steps in their profession on the bridge, at the gangway, in the refrigeration stores of the ship (if applicable), etc. The junior students and cadets get their training as helmsman trainee, oiler trainee, electrician trainee, etc.; then they can get their first certificate at sea (when and if required) as an able seaman or an oiler, for example.

Sailing ship is designed to navigate under sails; therefore there should be someone to set sails up or down. The temporary crew is quite necessary when she proceeds under sails; there are 26 sails on board of total area 2771 square meters and 44 kilometers of ropes; all sails are manually operated. Though the ship has two Diesel engines with

combined power of 838 kW her maximum speed under engines is 11 knots; under sails she can develop up to 18 knots.

The direction of wind might change many times a day, it means the necessity to “brace the yards”. Every time one hears the general alarm signal and words “all hands on deck! Set up sails!”, it means all seamen, boatswains, cadets and students, no matter at work, studies or rest, leave their activity, put on safety harness and rush on deck to their masts, to go up the yards, to set up or down sails, to roll or secure sails, to brace the yards, etc.

These operations take place any time a day, under any weather conditions. Co-work under difficult conditions, collaboration in executing sometimes rather dangerous operations, the importance of team-work are the factors having an impact on future functioning of a seafarer as a member of a team. To overcome the difficulties means to get some new experiences, to get better understanding of their future profession and sometimes to understand whether one has made a correct choice of his professional activity. Sailing ship can become a real depository of such experiences especially as a first sailing practice of a cadet or student.

The process of studies includes familiarization with the ship for each group of cadets and students; it commences with the briefing on safety regulations, occupational safety on board, ship’s rigging and tackling; environmental pollution prevention issues, etc. Then goes the familiarization with the sailing ship construction and appurtenance, rigging and tackling; machinery and devices; principles of ship’s husbandry. The awareness of ship’s emergency organization; alarms, drills and training; life-saving and fire-fighting appliances are included in the programs for senior students and cadets, though all of them are familiar with the general principles, the ones which are compulsory for maritime personnel in general. Mastering skills in manual handling of sails (setting, putting down, rolling, securing, yards bracing, etc.) is the integral component of their practical training following the period of their theoretical studies. All students and cadets have lectures on the ship’s sails, rigging, tackling; they have to pass an examination on

it. Such an examination is taken by the experienced seamen, that is boatswains and officers who will then check their practical skills in operating these sails, tackling, etc.

This allows cadets to acquire basic safety education, get an understanding of the principles of safe operation, and practices based on those principles. In addition, the program will provide tailor-made guidance from onboard instructors for individual cadets based on a standard training program that covers the skills required for their specific jobs.

For example, there is a special training chart room which is used to simulate actual situations at sea and work out proper operations of a bridge team. And this chart room is used in training senior students and cadets before they can personally keep watch on the bridge as an officer in charge of a navigation watch.

Training is conducted by the specialists having wide experience of pedagogical activity, and practical work at sea. All training is implemented in conformity with the approved programs and on real equipment under the conditions of ship's sailing. Specific disciplines require specific knowledge. The obvious advantage of such practical training is possibility to get acquainted with the work of the ship, her officers and crew, as well as her machinery "from inside"; to feel oneself as a part of the whole mechanism.

All other disciplines are included in conformity with the curriculum and academic programs of the students and cadets' own colleges and universities, and depending on the specialization of the practice managers accompanying the group of cadets and students.

More than ninety percent of global trade is carried by sea. For the shipping industry facilitating this activity, it is important that a common working language (English) is competently used to ensure the safety of the ship, her crew and the environment. Consequently this presupposes that the graduates of maritime educational institutions are well prepared and that their teachers are qualified to perform the task required by international regulations. Seafarers require rather sound knowledge of English for occupational purposes, such as: navigation, marine

engineering, electrical or refrigeration engineering, commercial fisheries, etc. English for occupational purposes includes professional purposes in navigation, marine engineering, etc. The professional competency of a navigator or marine engineer is inconceivable without knowledge of English for occupational purposes that is Maritime English. Maritime English studied in the class room cannot be compared to the one studied on board the ship under the real working conditions. The students and cadets see the importance of such knowledge; understand the situation where the language is used; get motivated in their further studies of English. Besides they can get a real opportunity to use their English language proficiency (if any) in practice: firstly, when showing the ship to her guests and explaining everything on board; secondly, when preparing ship's arrival, reading telexes and e-mails from the ship's agents; thirdly, listening to VHF communication, etc.

All ships' works are carried out by the cadets under the supervision of boatswains, able seamen, oilers and other ship's permanent personnel either on deck, or in the engine room, or in the refrigerated stores, or galley and laundry room depending on the current ship's needs and requirements.

To optimize the organizational structure of working groups, all cadets are divided into three sub-groups according to the number of masts on board (fore, main and mizzen masts), each sub-group is responsible to the boatswains of the mast. The latter are responsible to chief boatswain for the mast itself, as well as all sails, tackle and rigging of it.

At the same time there exist another subdivision principle; all students and cadets are divided into two groups: working and studying ones. Every day half of the students and cadets either work or study; if one is in working group, he works under the supervision of the boatswain this day. If he is in the group which studies, then the cadet is in the class room. This system helps to arrange both educational and practical activity of all students and cadets on board within the whole period of their stay on board.

After the end of a working day students and cadets have their free time when they can take part in various activities and events.

Among the events taking place on board are: sports competitions, concerts (guitar music, folk and modern music, dancing, etc.), various

cultural events, i.e. tropical carnival, seasonal holidays and events, special event- the so called “Neptune’s day” for those crossing the equator for the first time, and many others. Preparation of newsstands, slide-shows, wall newspaper etc.

One of the most important missions of the sailing training ship is to help to establish the international cooperation, to exchange cultures and heritage of nations; to establish good partnership between countries, maritime communities and institutions. Among her recent voyages are the her round-the-globe voyage of 2007-08, the 2011-th “Russian America” voyage when the ship has carried out some search of the tsunami debris, the 2013-th “African Odyssey” when the ship participated in the BRICS summit as a site for ecological issues discussion. Her participation in the mentioned events besides others helps to explain the students and cadets on board the importance of nature and environment protection, of being ecologically-friendly, etc.

The “Pallada”’s participation in numerous international events, races, regattas, forums and conventions is also an excellent opportunity to show future specialists their role in this issue. They take part in all these events as active participants; as “a good will” messengers of their countries; they see the importance of English language (the fact which helps to improve the learners motivation in language studies) as a tool of communication both at sea and ashore, both in business and in every day communication. Joint practical training of the cadets and students from different countries is the best option for this purpose. She has made several voyages having on board students from Singapore Maritime Academy, for example.

The University administration has developed special training programs for the students and cadets from the Pacific Rim countries and the ship is ready to accommodate new groups of foreign students and cadets on board to put into practice the existing partnerships agreements between maritime educational institutions.

The professional training of seafarers becomes more important from year to year as the IMO requirements and regulations turn to be more stringent every year considering the importance of ensuring safe working medium for seafarers, environmental safety, and improvement of seafarers’ education.

Theory is just a theory without practice; a real seaman is a “practitioner” with a good knowledge of theoretical subjects; the use of a sailing ship as a site for practical training is only one good example of the training experiences put into practice in the Far Eastern State Technical University.

The University is ready to share its experiences both in theory and in practice therefore we are happy to invite the students and cadets of all maritime educational institutions of the Pacific Rim countries to participate in our joint training programs.

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