COMPETITIVENESS OF THE FUTURE SPECIALIST AS A CONDITION FOR QUALITY PROFESSIONAL TRAINING IN A MARINE EDUCATIONAL INSTITUTION

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In this article, the author raised the issue of future ship engineers’ quality training concerning the modern labor market. It requires a highly qualified and competent specialist capable of successfully competing in the professional field. The importance of the specialist’s competitiveness as an integrative, dynamic, and multi-level quality of the future graduate is considered. The importance of introducing the best international practices (adapting educational, diversifying the forms and methods of providing educational services) into the modern education system is indicated. The importance of proper professional training for future ship engineers and the need for continuous education is substantiated. It is emphasized that future graduates should have the appropriate skills and experience to stand out among other candidates. They should be confident in their abilities, think critically and creatively and work in a team. The results of the survey of applicants before and after practice were analyzed. It is noted that future ship engineers must have a high level of Maritime English to communicate and interact effectively with different crew members of diverse cultures and nationalities. The importance of practical training, necessary for consolidating knowledge and skills, as well as applying the acquired experience in a practical maritime environment, is substantiated. The importance of psychological preparation, resilience, and the ability to cope with difficulties is indicated. The article proves the necessity of creating a practically oriented environment in the professional training of future specialists, which will contribute to professional growth and ensure the comprehensive students’ development, their mastery of knowledge and skills necessary for effective professional activity.

Keywords: competitiveness, future specialists, ship engineers, professional competence, personal qualities, innovative methods of training, practical training.

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У даній статті автором порушено питання якісної підготовки майбутніх судномеханіків щодо сучасного ринку праці, який потребує висококваліфікованого та компетентного фахівця здатного успішно конкурувати у професійній галузі. Розглянуто важливість конкурентоспроможності фахівця як інтегративну, динамічну та багаторівневу якість майбутнього випускника. Вказана на важливість впровадження кращих міжнародних практик у сучасну систему освіти та адаптацію навчальних програм до змін у глобальному морському середовищі, урізноманітнення форм та методів надання освітніх послуг. Обґрунтовано важливість належної професійної підготовки майбутніх судномеханіків, а також необхідності постійно навчатися. Підкреслено, що суднові механіки повинні мати відповідні навички та досвід, щоб виділятися серед інших кандидатів. Важливою є впровадження кращих інноваційних і інтелектуальних ресурсів, а також впровадження кращих навчальних програм у сучасну систему освіти.

Ключові слова: конкурентоспроможність, майбутні фахівці, суднові механіки, професійна компетентність, особистісні.

Introduction of the issue. In today’s world, where maritime trade and transport make up a significant share of the global economy (more than 60% of cargo turnover among all modes of transport), ship engineers play an important role in ensuring the continuous functioning of ships. Their professional skills, knowledge and competences are necessary to ensure the efficient operation and safety of marine vessels. With the development of the international labor market, professional education establishments are forced to look for ways to improve the quality of training, particularly the formation of competitive future specialists. The question of forming the competitiveness of graduates is becoming more and more relevant. The state demands to prepare a graduate who will not only meet the requirements of the present but will also be oriented to the challenges of the future [12]. The system of professional pedagogic education must postannova problemy. U sushachnomu sviti, de morska torghivlya i transport skladayut znachnu chastku globalnoyi ekonomiki (ponad 60% vantazhobubu sered uisikh visikh vidiv transportu), sudnovi mekaniki vidigryvaet vahivu rol y zabespechenyi bezperebijnosti funktsionuvannya suden. Ihni profesiyni naviciki, znannya i kompetentsiyu y neobxidnymi dlia zabespechenyi efektyvnoyi eksploatacii i bezpeki morskih transportnyh zasobiv. Iz rovitym mizhunarodnogom rinku praci profesionni nacvalni zakladi zumishen shukati shakhkhi pidiwiSenenyia yakosti pidgotovky, zokrema formuvannya konkurentsospromoghnyh myabutnyh fahivtsv. Pitania formuvannya konkurenospromoznosti vypusknikiv dedali stae aktualnym. Derrhava vymaga pilgotuvati vypusnika, yakyi byde ne tili vikhovovati vymogam svydodnya, aley orientuvatsia na vikliki myabutnogo [12]. Sistema profesiinoi pedagogichnoi osviti povitina
correspond to the modern social order, and therefore involves constant changes.

The competitiveness of future seafarers is an important topic of Ukrainian shipping, and it can open new opportunities in international cooperation with various foreign institutions of higher education (HEIs). However, this process requires the continuous development of both higher education institutions and self-improvement of students. Maritime educational institutions must adapt their curricula to changes in the global maritime environment, diversify the forms and methods of providing educational services, when the educational process is intertwined with the development of new technologies and innovations [4]. Marine specialists, in turn, should master the knowledge and skills that are necessary for the work in new conditions. They must be aware of the latest trends in the maritime industry and be ready for new tasks and responsibilities.

In the process of employment, a graduate of the institution faces certain difficulties, because most employers are interested in a specialist with sufficient professional experience. To be competitive in the labor market, graduates should master socially oriented skills, including understanding culture and society, goal setting, planning, business communication, and making decisions.

Current state of the issue. Content the notion of "competitiveness" indicates that there is no single generally accepted interpretation in the scientific literature and covers various aspects. For example, O. Zlobina considers the process of successful professional formation of a competitive personality as the realization of one’s potential opportunities and horizons of personal and professional growth. A key aspect of professional development is the ability and need to make decisions on the one hand and feel responsibility for everything that happens on the other [13].

The competitiveness of the individual as a dynamic open system that develops based on a personal program of self-
determination and self-development is considered by E. Khairullin. This allows a graduate of a higher educational institution to effectively adapt to the world of work.

F. Tuktarov interprets individual competitiveness as a complex multilevel potential (social, biological, psychological, cultural) of rivalry. He emphasizes the philosophical aspect of individual competitiveness, that is, the mutual influence of the individual and society, the conditions for the development of individual competitiveness and their specificity in a society subject to globalization.

Scientist L. Sergeeva defines competitiveness as a complex operational characteristic of a competing subject (object), which is expressed in the ability to meet the needs of the labor market and withstand competition, to oppose competitors [9]. V. Tikhonovych, O. Fil defines competitiveness as an important component of an individual who will build his behavior, try to win in competition with others, achieve the set goal, and occupy the most significant place in society [2]. Therefore, to withstand the competition, the future specialist must be confident in his abilities, think inventively and creatively, and be able to work in a team.

The ability for successful competitive interaction means that the student could succeed in the conditions of competition in the professional sphere [6]. This is achieved due to the presence of the necessary knowledge, abilities, skills and personal individual qualities. According to the definition of A. Alekseeva and S. Kushniruk, the competitiveness of a specialist is defined as the readiness to participate in the competition and is based on professional-personal, individual-personal, and spiritual-moral resources [1; 5].

N. Nychkalo notes that the competitiveness of a graduate of a higher educational institution should be considered, first, as a pedagogical category in close connection with a person, the development of his creative potential, his education and training, his
labor activity, continuous education throughout his life [7].

According to M. Vary, a competitive personality is a personality that can quickly and painlessly adapt to constant changes in social conditions, scientific and technological progress, and new types of activities and forms of communication [11]. The competitiveness of an individual, as defined by L. Galagan, is his ability to successfully compete, which is determined by the psychological features of the individual, characterized by relativity, dynamism, individuality, and active self-development [3].

Having analyzed the research of scientists, we can conclude that the competitiveness of an individual is a set of his formed qualities and properties, which determines his success in professional and social activities.

**Aim of research** is to justify the pedagogical expediency of practical training of future specialists of a maritime educational institution as the basic foundation of their competitiveness.

**Research methods.** The following theoretical methods were used in the study: systematic analysis of pedagogical and methodical literature aimed at revealing the concept of "competitiveness", analysis of the current state of training in maritime educational institutions, determination of personal and professional components of competence of a competitive specialist of a maritime educational institution. Empirical methods – surveying the students in the aim of identifying the state of the quality of specialist training and analyzing the personal and professional components of competence necessary for a competitive specialist at a maritime educational institution.

**Results and discussion.** Modern sea vessels can carry cargo of any type and serve for foreign economic relations. The growth of the merchant fleet means the expansion of the international labor market, which requires specialists and professionals not only of high professional competence, but also such personal qualities as responsibility, mobility, розглядати, передусім, як педагогічну категорію в тісному зв’язку з людиною, розвитком її творчого потенціалу, її вихованням і навчанням, її трудовою діяльністю, неперервною освітою впродовж життя [7].

На думку М. Варій конкурентоспроможна особистість – це така особистість, яка здатна швидко й безболісно адаптуватися до постійних змін суспільних умов, науково-технічного прогресу й нових видів діяльності та форм спілкування [11]. Конкурентоспроможність особистості, у викладені Л. Галаган, – є її здатність до успішної конкурентної взаємодії, що визначається психологічними характеристиками особистості, характеризується відносністю, динамічністю, індивідуальністю та активним саморозвитком [3].

Узагальнюючи, констатуємо: конкурентоспроможність особистості є суккупністю її сформованих якостей та характеристик, яка визначає її успішність у професійній та соціальній діяльності. **Метою статті є обґрунтувати педагогічну доцільність практичної підготовки майбутніх фахівців морського навчального закладу як базову основу їхньої конкурентоспроможності.**

**Методи дослідження.** У досліджені використано теоретичні методи: системний аналіз педагогічної та методичної літератури, спрямований на розкриття поняття "конкурентоспроможність", аналіз поточного стану підготовки в морських навчальних закладах, визначення особистісних та професійних складових компетентності конкурентного фахівця морського навчального закладу. Емпіричні методи: анкетування здобувачів освіти з метою виявлення стану якості підготовки фахівців та здійснення аналізу особистісних і професійних складових компетентностей, необхідних для конкурентоспроможного фахівця морського навчального закладу.

**Вклад основного матеріалу.** Сучасні морські судна здатні перевозити вантажи будь-якого типу і служать для зовнішньоекономічних зв’язків. Зростання торгівельного флоту, означає розширення міжнародного ринку праці, який вимагає фахівців та спеціалістів не
independence, communication, activity, and adaptability.

Since graduates of maritime educational institutions mostly work in the international labor market, they should meet the requirements not only of the state standard, but also of the foreign one. The State Standard of Basic and General Secondary Education defines the key competencies (Table 1) for the student to acquire and achieve the learning outcomes in accordance with the educational program of specialized secondary education (the first-year students are studied according to the program of general secondary education).

### Table 1

<table>
<thead>
<tr>
<th><strong>Mother/ state language.</strong></th>
<th><strong>Foreign language.</strong></th>
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<tbody>
<tr>
<td>Information and digital competence.</td>
<td>Environmental awareness and healthy life.</td>
</tr>
<tr>
<td>Social and civic competence.</td>
<td>To learn throughout life.</td>
</tr>
<tr>
<td>Sciences and technologies.</td>
<td>Initiative, sense of entrepreneurship.</td>
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<tr>
<td>Mathematical literacy.</td>
<td>Cultural awareness.</td>
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</tbody>
</table>

The goal of each educational discipline is the development of general and professional competences among students, considering the specific conditions of production, regulatory documents, standards, regulations and instructions, as well as ensuring their ability to function effectively in the European professional environment and beyond. The acquired professional experience creates a basis for the development of a competitive personality (practice on board a ship is about 8-11 months after the third course). The specifics of a future sailor's work require both general and professional competencies in maritime activities (Table 2).
### General and professional competences

<table>
<thead>
<tr>
<th>General competences</th>
<th>Professional competences</th>
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<tbody>
<tr>
<td><strong>Instrumental competences:</strong></td>
<td><strong>Integral competencies:</strong></td>
</tr>
<tr>
<td>- to plan and manage time;</td>
<td>- to keep a safe watch in the engine room;</td>
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<td>- written and oral communication in a professional environment in the national and English languages;</td>
<td>- to ensure fire safety and the ability to fight fires on ships;</td>
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<tr>
<td>- to search, research, process and use information to solve professional problems;</td>
<td>- to operate the main and auxiliary mechanisms and related control systems;</td>
</tr>
<tr>
<td>- to identify, pose and solve problems.</td>
<td>- to maintain the ship's seaworthiness;</td>
</tr>
<tr>
<td><strong>Interpersonal competences:</strong></td>
<td>- to use in-ship communication systems;</td>
</tr>
<tr>
<td>- to work in a team, to organize the work of the team, including in difficult and critical conditions;</td>
<td>- to ensure compliance with legal requirements related to the safety of human life at sea and the protection of the marine environment within its sphere of responsibility;</td>
</tr>
<tr>
<td>- professional communication when performing professional tasks to achieve set goals;</td>
<td>- to operate fuel, lubricant, ballast and other pumping systems and related control systems;</td>
</tr>
<tr>
<td>- to work in a multicultural environment.</td>
<td>- to carry out maintenance of ship mechanical systems, in particular control systems;</td>
</tr>
<tr>
<td><strong>System competencies:</strong></td>
<td>- to perform the necessary actions, calculations, and records during operations with oil products;</td>
</tr>
<tr>
<td>- to work autonomously;</td>
<td>- to be aware of responsibility when making decisions in unforeseen and emergency situations related to the operation of ship's power equipment;</td>
</tr>
<tr>
<td>- to act from a position of social responsibility;</td>
<td></td>
</tr>
<tr>
<td>- to learn;</td>
<td></td>
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<tr>
<td>- to adapt to new situations in professional activity;</td>
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We made an attempt to summarize the main competencies of the formation of professional practical skills.

An important issue is the role of professional training of the student and the formation of cognitive skills and abilities required for the performance of their duties on ships, ensuring the safety and efficiency of maritime operations. Future seafarers, from the second year of study, can master professional training using various technical systems and equipment on board the ship. This includes knowledge of auxiliary machinery, electrical systems, safety systems, navigation and communications. They are also trained to maintain and repair equipment in case of malfunctions.

Нами створено спробу узагальнити основні компетенції формування професійних практичних навичок.

Важливим питанням постає роль професійної підготовки здобувача освіти та формування у нього когнітивних навичок та вмінь, що вимагаються для виконання їх обов'язків на суднах, забезпечення ним безпеки та ефективності морських операцій. Майбутні моряки, вже з другого курсу, мають змогу оволодівати професійною підготовкою щодо роботи з різними технічними системами та обладнанням, що знаходиться на борту судна. Це включає знання про машинне устаткування, електричні системи, системи безпеки, навігацію та комунікаційні засоби. Вони також навчаються обслуговувати та ремонтувати обладнання на випадок...
The professional competitiveness of an individual is determined by orientation to success, communicative competence. Thus, according to the STCW-78 Convention (International Convention on Standards of Training, Certification and Watchkeeping for Seafarers), international norms and rules for training future seafarers in accordance with duties in the engine room are established. According to the convention, the minimum standard of competence of the engine room crew includes, among other components "the use of the English language in written and oral forms." Communicative competence in Marine English is an important component for ship engineers, which consists in possessing an active dictionary of commonly used professional vocabulary, highly specialized terminological vocabulary, and using other technical literature [10]. In addition, future ship engineers should be prepared to compete with English-speaking specialists, because the labour market for ship engineers in English-speaking countries is very competitive. Therefore, graduates must have the relevant skills and experience to stand out from other candidates.

The rapidly changing labour market requires new approaches and creative searches in every profession. A competitive specialist should be persistent, with an individual style of task performance, take responsibility for making decision, quickly adapt to constant changes in social conditions, engage in self-education and use all opportunities for development [8]. The individuality of each student is unique. This is because each person has a one of a kind set of knowledge, abilities, skills and personal qualities. For example, a future specialist may not be competitive in one setting or at the beginning of his career, but later become more competitive as a result of training, development and experience.
Before the beginning of practice, the students were asked to take a survey and answer the following question: – "What is needed to be competitive?".

When answering this question, future graduates could choose answers from the options provided, and add their own variants. As can be seen from Fig. 1, students relied more on their knowledge, without having their own experience. Thus, 15.2% of respondents answered, "to be able to work in a team"; 12.3% of them chose the option "ability to learn"; 15.5% – "choose the right profession"; 12.2% – "know your responsibilities"; 14.9% – "to be physically strong"; 13.8% – "to be motivated"; 14.1% – "to know a foreign language".

It is clear from the answers that those students lean more on theoretical knowledge, on what they read in textbooks or heard from teachers. Therefore, indicators such as choosing the right profession and working in a team have the same percentages.

Answering this question for the second time, already after practice, the future specialists more consciously chose the answers from those given in the survey (Fig. 2) based on their own experience. As can be seen from the diagram, a different range of options was chosen, which means

Fig. 1. Answers of future specialists to the question before practice

Answering this question for the second time, already after practice, the future specialists more consciously chose the answers from those given in the survey (Fig. 2) based on their own experience. As can be seen from the diagram, a different range of options was chosen, which means

Відповідаючи на це питання вдруге, вже після проходження плавальної практики, майбутні фахівці більш усвідомлено вибрали відповіді з поданих в опитуванні (рис. 2), маючи за основу свій власний досвід. Як видно з діаграми, було вибрано інше коло варіантів, що означає більш
more reasonable and thoughtful answers, and therefore: "know a foreign language" – 17.1% (most of them worked in an international crew), "be responsible" – 7%, "be mobile" – 8.2, "initiative" – 7.1%, "stress-resistant" – 8%, "ability to work in a team" – 8.5%, "having leadership qualities" – 7.1%, "thinking critically/analytically" – 8%, "having practical skills" – 10.4%, "being motivated" – 8.3%, "being a professional in your field" – 10.3%, "knowledge of international norms and rules" – 10%.

As can be seen from the answers, the majority of future specialists chose the answer "knowledge of a foreign language". In order to get into the company, students undergo an interview in English, where they answer questions not only on conversational topics (family, leisure, environmental protection), but also on professional topics (main and auxiliary machinery and mechanisms, their maintenance and repair, practical ability to read ship schemes). Therefore, the ability to speak English opens up more employment opportunities and will ensure communication with international crew.
members. In addition, students indicated "having practical skills", "being a professional in their field", having knowledge and a deep understanding of maritime processes, international norms and rules, which stimulate them to acquire professional knowledge in order to become a professional in their field.

The future specialist has a huge advantage if he knows how to think critically and analytically, to solve a problem, looking at it from different points of view, to find the only optimal option for its solution.

Students are faced with stress not only during studies, but mostly during practice. Therefore, providing psychological support and studying stress management skills affects the motivation and success of training of future specialists. Developing psychological resilience and coping skills can help students achieve better results. Therefore, it is quite appropriate to create a system of psychological support for future graduates in an educational institution, which will include such services as counselling, trainings, and seminars.

When working in a team, it is important to develop emotional intelligence, which includes the ability of an individual to understand and manage his emotions, motives, thoughts, and behaviours. It is also the ability to understand other people's emotions, to notice their needs and empathize with them, to be observant. The development of this skill can positively affect the social adaptation of future sailors, their communication and interaction in the team.

Among other personal components of the competence of a competitive specialist of a maritime educational institution, one can mention communication skills (hard skills), that is, the ability to effectively communicate and interact with team members, which may be of different cultures and nationalities, in other words, to have a good knowledge of Maritime English. Internships in an international environment give marine engineers the opportunity to gain practical experience and knowledge that can be valuable for researches.
their future careers. Self-education and continuous improvement are also important.

It is an urgent matter for future graduates to undergo practice, and they take their first steps using modern innovative learning methods, such as virtual and augmented reality. They allow future ship engineers to get unique opportunities to acquire knowledge and develop skills, as well as make the learning process more interesting and motivated. Using virtual reality, future specialists can access virtual simulators that allow them to practice professional skills in a safe and controlled environment. They can learn to perform repair work on marine machinery and mechanisms without the risk of injury or damage to equipment. The use of virtual reality and augmented reality saves the time and money required for training on real ships.

In addition, future graduates can undergo practical training (and acquire procedural skills) on modern ship engineering simulators and computer simulation of ship systems and mechanisms. These simulators allow students to practice professional skills in conditions that are as close as possible to real ones.

Finally, practical training on real vessels with the support of experienced professionals is required so that future ship engineers can consolidate the acquired knowledge and skills. The internship allows them to gain experience working in a real maritime environment, learn how to interact with other ship crew members, and gain experience working with different types of vessels and equipment. Therefore, the use of modern innovative teaching methods allows future specialists to receive high-quality training.

Conclusions and research perspectives. Thus, the graduate’s competitiveness is a combination of the formed qualities and attributes of the individual, his ability to successfully realize himself in professional activities, to be in demand on the international labor market and to achieve high results.
In the process of professional training of future specialists, it is necessary to create a practically oriented environment that will promote professional growth and ensure the comprehensive development of students, their acquisition of knowledge and skills necessary for effective professional activity.

The perspective of further research is to study the experience of successful practice of maritime educational institutions of other countries in the field of training future specialists and consider the information received when developing criteria and indicators for evaluating the future graduate.

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