

SUPER-PROFESSIONAL SKILLS: THE HIDDEN ASSET FOR MARINE ENGINEERS

СУПЕР-ПРОФЕСІЙНІ НАВИЧКИ: ПРИХОВАНА ЦІННІСТЬ ДЛЯ МОРСЬКИХ ІНЖЕНЕРІВ

The article examines the development of super-professional skills in future marine engineers at English lessons. Super-professional skills for marine engineers encompass both technical expertise and essential soft skills. They include strong analytical and problem-solving abilities, the ability to communicate effectively, and leadership skills. A deep understanding of marine engineering principles, including propulsion, electrical, and mechanical systems, is also crucial.

Here's a more detailed breakdown: Marine Engineering Fundamentals (a solid grasp of engineering science, including mathematics, physics, and thermodynamics, is essential); Naval Architecture (knowledge of ship design, hull construction, and stability is vital); Propulsion Systems (Understanding different types of propulsion systems, including diesel engines, turbines, and electric motors); Electrical Systems (familiarity with electrical power generation, distribution, and control systems on ships); Mechanical Systems (expertise in maintaining and repairing ship machinery, pumps, and other mechanical components); HVAC Systems (understanding the principles and operation of heating, ventilation, and air conditioning systems on board vessels); Automation and Control Systems (ability to work with automated control systems for various ship functions); Engineering Software (proficiency in using CAD, simulation, and other engineering software for design and analysis); Communication (excellent written and verbal communication skills are necessary for collaborating with different stakeholders and conveying technical information); Problem-Solving (the ability to analyze complex problems, identify root causes, and implement effective solutions is crucial); Leadership (the ability to lead and motivate teams, delegate tasks, and manage projects efficiently); Adaptability (flexibility to adjust to changing conditions and challenges in the marine environment); Safety Awareness (strong understanding of safety regulations and procedures); Continuous Learning (a commitment to staying updated with the latest advancements in marine technology and practices); Decision-Making (ability to make sound decisions under pressure and assess risks and uncertainties).

Overall, developing super-professional skills can significantly enhance the effectiveness and success of marine engineers, improve their performance, and facilitate professional growth.

Key words: super-professional skills, soft skills, hard skills, marine engineers, Maritime English.

У статті розглянуто розвиток супер-професійних навичок у майбутніх морських інженерів на заняттях з англійської мови. Суперпрофесійні навички морських інженерів охоплюють як технічні знання, так і важливі

комунікативні навички. Вони включають сильні аналітичні навички та навички вирішення проблем, здатність ефективно спілкуватися та лідерські навички. Глибоке розуміння принципів морської інженерії, включаючи системи двигунів, електричні та механічні системи, також має важливе значення.

Ось приклад тих галузей знань, які необхідні морським інженерам: основи суднобудування (необхідне ґрунтовне знання інженерних наук, включаючи математику, фізику та термодинаміку); корабельна архітектура (важливе знання конструкції корабля, конструкції корпусу та остійності); пропульсивні системи (розуміння різних типів пропульсивних систем, включаючи дизельні двигуни, турбіни та електродвигуни); електричні системи (знайомство із системами генерації, розподілу та управління електроенергією на суднах); механічні системи (досвід в обслуговуванні та ремонті суднового обладнання, насосів та інших механічних компонентів); системи ОВК (розуміння принципів роботи систем опалення, вентиляції та кондиціонування повітря на борту суден); системи автоматизації та управління (уміння працювати з автоматизованими системами управління різними функціями судна); інженерне програмне забезпечення (уміння використовувати САПР, моделювання та інше інженерне програмне забезпечення для проектування та аналізу); комунікація (відмінні навички письмової та усної комунікації необхідні для співпраці з різними зацікавленими сторонами та передачі технічної інформації); вирішення проблем (здатність аналізувати складні проблеми, визначати першопричини та впроваджувати ефективні рішення); лідерство (здатність керувати та мотивувати команди, делегувати завдання та ефективно управляти проектами); адаптивність (гнучкість, що дозволяє пристосовуватися до умов і проблем, що змінюються в морському середовищі); поінформованість про безпеку (гарне розуміння правил та процедур безпеки); постійне навчання (прагнення бути в курсі останніх досягнень у галузі морських технологій та практик); прийняття рішень (здатність приймати обґрунтовані рішення у стресових ситуаціях та оцінювати ризики та невизначеності).

Загалом розвиток супер-професійних навичок може значно підвищити ефективність та успішність морських інженерів, покращити їх роботу та сприяти професійному зростанню.

Ключові слова: супер-професійні навички, гнучкі навички, жорсткі навички, морські інженери, морська англійська мова.

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Problem statement. Until now, critical thinking, information and digital literacy, communication, technical, social skills, cooperation and the ability to resolve conflict situations remain the main and effective skills in learning. The priority skills of the 21st

century are considered to be flexible, super-professional, covering a wide range of abilities necessary for success in professional activities.

In recent years, education in Ukraine has faced challenges, the introduction of martial law, changes in

economic strategy, and labor market demands, which have determined the need for more flexible, adaptive skills necessary for career growth and successful life in new conditions. In the modern world, traditional professions are disappearing and new ones are emerging, which indicates the need to equip future specialists with a set of super-professional skills.

Given the popularization of social media, which has changed the way people interact and created new challenges for navigating professional situations, and the expansion of access to materials via the Internet, education seekers are faced with the task of learning to process and analyze large volumes of information. With the introduction of smart ships, where machines and software take over tasks and create new demands on a generation of competent, highly skilled maritime professionals [4, p. 3], the maritime sector is increasingly seeking a workforce with flexible literacies and high skills. Thus, there is a need to study the super-professional skills of future ship mechanics and to explore ways of developing these skills in higher education applicants.

Analysis of recent research and publications.

The formation of professional skills of ship mechanic cadets has been carried out by teachers of the Kherson State Maritime Academy for many years successfully and professionally. Practical implementation is regulated by Model Course 3.17 "Maritime English" recommended by the International Maritime Organization. The leading role is played by professional skills that determine the mastery and efficiency of work, but there is a constant tendency to further improve and update them [3].

A. A. Shchekhlova in her research convinced that professional business communication in a foreign language and the integration of soft skills into the learning process are inextricably linked [2, p. 30]. Soft skills have formed the basis of a range of scientific studies by L. H. Lippman, R. Ryberg, R. Carney, K. A. Moore, L. Bailey, N. A. Dluhunovych. In their scientific works, N. M. Makhnachova and A. K. Midliar consider soft skills as helping a person to cooperate in a team, express themselves publicly, and communicate [1, p. 382]. It has been established that soft skills can be considered as the main ones in building a successful career. During online learning and using distance platforms for teaching foreign languages, soft skills have become a necessity of today.

Identification of previously unresolved parts of the overall problem. Students learn new things every day, acquire professional and social skills, take trainings and online courses, watch video tutorials, and receive certificates because previously formed skills need to be polished and improved. The ability to learn every day is a prerequisite for modern education seekers. During global changes, professions also change, which gives impetus to personal development and professional growth. In order to keep up

with the rapid changes in the labor market, you need to learn, quickly and painlessly adapt, and master new super-professional skills.

The basis of education in the 21st century is the acquisition of key academic subject knowledge and the achievement of such additional skills that will allow students to work in the new labor market, be versatile, ready for any changes in career and education, and rely on global trends. When teaching Maritime English, teachers are faced with the challenge of developing key skills that go beyond just mastering the basic academic material.

The purpose of the article is to characterize the ways of developing the super-professional skills of future marine engineers in applicants for higher education at Maritime English lessons.

Presenting the main material. Given that maritime professionals are constantly required to undergo various professional trainings and systematic certifications with subsequent renewal, it is extremely important for maritime professionals to continue their education after receiving their initial qualifications. This education can take many forms, such as attending conferences, seminars or courses, obtaining advanced degrees and participating in on-the-job training.

Teaching of Maritime English at the Kherson State Maritime Academy is carried out in accordance with the requirements of the competence and communicative approaches, which are student-oriented, develop professional and super-professional skills of applicants promoting the active development of the latter. In accordance with the fundamentals of IMO Model Course 3.17, teaching Maritime English to ship engineers involves mastering the necessary language elements (phonetic units, vocabulary, grammatical constructions) that form the hard skills of applicants when studying English in a professional field [3]. During the course of studying Maritime English, students acquire super-professional skills, namely: the ability to actively listen and hear the interlocutor and communicate with him, self-organization skills, creativity, the ability to think critically and outside the box, the ability to quickly process and assimilate information, and teach others. According to the concept of lifelong learning, communication in a foreign language is one of the key components of such learning.

In order to ensure student-centered educational activities, the Academy's academic staff develops lifelong learning skills in applicants. Learning can no longer be divided into basic subject-matter and professional practice. Instead, learning should be seen as something that happens constantly as a result of people's everyday interactions with the world around them. Lifelong learning consists of a full range of formal, informal and extra-curricular learning activities. Lifelong learning is important in maritime training. The need to take courses and renew certificates,

familiarize themselves with technological innovations, and the needs of the labor market influence the preparation of applicants [5, p. 167]. It should be noted that mastering English for one's specialty is considered one of the main features of continuous education of Maritime Education and Training specialists – a field for both postgraduate students of a maritime educational institution and for marine engineers because English is the language of information and most professional Internet resources.

The key to developing lifelong learning skills is to stay up to date with the latest developments in your industry, so students at Maritime English lessons do the following:

- become familiar with current versions of international maritime conventions and amendments to them;
- regularly read maritime news online and follow the logs of active sailors;
- communicate with other seafarers, who serve on different types of ships, sharing experiences from their practices;
- read maritime periodicals to gain knowledge about innovations in the industry;
- discuss cases that happened in real life at sea.

The absolute leaders for future marine engineers are skills related to ship technologies, the use of various equipment, etc. At Maritime English lessons, teachers pay significant attention to the development of these skills.

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The modern format of education and access to a wide range of literature contribute to the development of digital skills. The digital skills required on board are divided into two broad groups: skills required to use specialized software and skills related to general information management [4, p. 11]. The development of skills in higher education applicants necessary for information management is provided at Maritime English lessons during the implementation

of individual and group projects, mini-research, preparation of presentations and speeches, writing of abstracts of reports, etc. The above skills will be required when performing functions at operational and management levels both on board ship and on land.

There are no separate topics and modules in the Maritime English course that will help develop the skills to understand the fundamentals of maritime economics, business and maritime law. However, individual tasks contribute to the development of these skills through familiarization with international conventions, codes, organizations, features of maritime regimes, etc.

Hence, in order to reduce the skill gaps that exist and will exist in the future, it is key to develop in applicants for maritime education not only professional skills, but also super-professional skills necessary for a successful career.

Conclusion. Improvement of technical components of modern vessels defines new requirements for maritime specialists. Teachers are faced with the task of developing in applicants for higher education the skills necessary for the formation of competent and highly qualified future marine engineers. When teaching maritime English through various exercises, tasks created on the basis of cases that occurred in real life at sea, projects aimed at studying modern technologies and expanding the knowledge already acquired, teachers develop not only hard skills, skills related to ship technologies but also soft skills, life-long learning ability, digital skills. Super-professional skills are crucial for the formation of future competitive and qualified specialists in the maritime industry.

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