

MODERN METHODS OF TEACHING MARITIME ENGLISH TO FUTURE SHIP ENGINEERS: "SAFETY OF LIFE AT SEA" MODULE

A. Yurzhenko*, Yu. Bevzenko, O.Kononova**, A. Rosliakova****

*Kherson State Maritime Academy, **Maritime Applied College of Kherson State Maritime Academy

***Abstract.** The use of innovative learning technologies in teaching Maritime English for future ship engineers while martial law in Ukraine is described in the research. The example is given in the "Safety of Life at Sea" module. Blended learning technologies are also listed in the paper. LMS MOODLE is used to provide future ship engineers with all necessary online courses. The role of the teacher is described in blended learning.*

***Keywords:** maritime education and training, Maritime English, MOODLE, ship engineers, maritime professionals.*

СУЧАСНІ МЕТОДИКИ ВИКЛАДАННЯ МОРСЬКОЇ АНГЛІЙСЬКОЇ МОВИ МАЙБУТНІМ СУДНОМЕХАНІКАМ: МОДУЛЬ «ОХОРОНА ЛЮДСЬКОГО ЖИТТЯ НА МОРІ»

А. Ю. Юрженко*, Ю. Ю. Бевзенко, О. Ю. Кононова**, А. В. Рослякова****

*Херсонська державна морська академія, **Морський фаховий коледж Херсонської державної морської академії

***Анотація.** У дослідженні описано використання інноваційних технологій у навчанні морської англійської мови для майбутніх суднових механіків в умовах воєнного стану в Україні. Приклад наведено в модулі «Безпека життя на морі». Технології змішаного навчання також перераховані в статті. LMS MOODLE використовується для забезпечення майбутніх суднових механіків усіма необхідними онлайн-курсами. Роль вчителя в змішаному навчанні описана у статті.*

***Ключові слова:** навчання та підготовка моряків, морська англійська мова, MOODLE, суднові механіки, морські фахівці.*

Safety at sea plays a key role in ensuring the safety of life and health of seafarers, as well as the protection of the environment and ships.

There are numerous international standards and regulations that regulate safety at sea, including the International Safety Management Code (ISM Code) and the Convention for the Safety of Life at Sea (SOLAS). These documents define the minimum safety standards that ships and their crews must comply with.

Safety at sea is a complex and multifaceted issue that requires constant attention and effort. However, through proper training, compliance with safety procedures, the use of modern safety systems, a safety culture on board, and compliance with international standards and regulations, it is possible to ensure the safety of ships and their crews [1].

2nd and 3rd-year, students have modules dedicated to safety, and they demonstrate knowledge and understanding of safety and security aspects, engine room applications and functions, watch-keeping routines, and duties in their lessons.

KSMA offers a blended learning format combining traditional face-to-face and online learning. This approach allows cadets to utilize interactive classroom discussions and the flexibility of digital resources. Blended learning supports a more personalized approach to learning, accommodating the diverse needs and pace of students [2].

The Moodle platform allows cadets to study a lesson, watch video lectures, complete a written assignment, or take a test on their own time. This promotes self-directed learning, an important skill for marine engineers who must adapt to the rapidly changing demands of the industry.

In addition, using blended learning is in line with global trends in maritime education, allowing KSMA to remain competitive in preparing cadets for a changing labour market [3, 4].

With the use of digital platforms, the role of the teacher changes. They become active “creators” for solving educational tasks, and the students become more independent, motivated, and responsible. Thus, the approach to learning called “Flipped Classroom” becomes relevant due to its advantages for teachers and students, as well as due to the new opportunities that open with the spread of the digitalization process.

The founders of the idea of flipped learning are American teachers Aaron Sams and Jonathan Bergmann, who believed that with the help of this approach:

- firstly, students who missed classes will be able to “catch up” on the material at a time convenient for them (i.e. listen to a lecture, watch a video, or read a text; complete an easy test or assignment);
- secondly, in the classroom, time should not be spent on explaining new material, but on using it for practice and answering questions that arose in the process of studying the material [5].

We used this blended learning approach effectively when studying the topic of SOLAS (Safety of Life at Sea). This approach allowed students to work through the material in a structured yet flexible way. Individually, they worked through the core content step by step, using online resources, video lectures, interactive activities, and discussions that provided a comprehensive overview of the SOLAS conventions. This independent learning phase allowed students to learn at their own pace, ensuring a deep understanding of the material before their study.

Group assignments, such as case studies of real maritime incidents, helped students apply the theoretical principles of SOLAS to practical scenarios. Role-playing exercises, where students took on the roles of crew members or safety officers, challenged them to think critically and make decisions based on the SOLAS regulations. Additionally, collaborative problem-solving fostered teamwork and allowed students to explore the nuances of implementing security measures on board ships [6].

These classroom activities were designed to promote active learning, helping students combine the theoretical knowledge they had gained through independent study with practical application. Discussions often focused on current maritime security issues, such as compliance challenges with new amendments or the integration of advanced security technologies, allowing students to engage in forward-looking dialogue [7, 8].

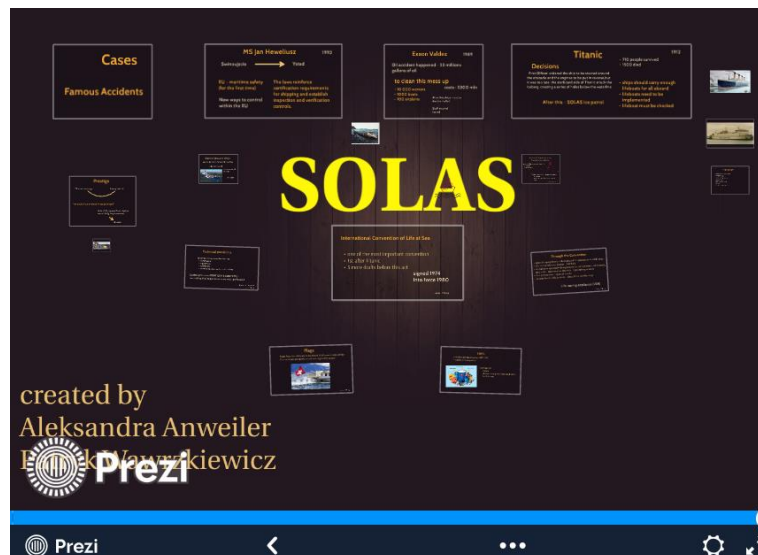


Figure 1 – Presentation of SOLAS

The project method is an effective approach to learning that stimulates the active participation of students in solving real-world problems and creating practical projects. Using this method at the end of the module, students were divided into groups to perform complex tasks that require in-depth analysis, research, and a creative approach. Working on SOLAS projects, students not only gain knowledge on a specific topic but also develop skills in teamwork, critical thinking, and the application of theoretical knowledge in practice. After making the project students present them to the class.

In maritime education, this method helps future ship engineers solve practical tasks related to ship systems, maritime safety, environmental standards, and the latest technologies [9].

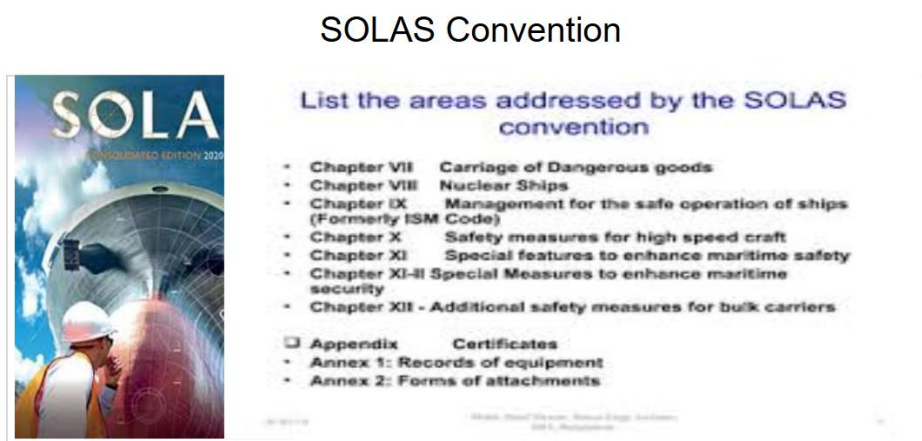


Figure 2 – Students` project

The case study method encourages students to apply theoretical knowledge to real-life situations. In this method, students are presented with detailed case studies that address maritime safety issues such as ship accidents, non-compliance, or emergencies where SOLAS regulations play a crucial role.

Analyzing the cases, students learn to identify the relevant SOLAS provisions that should have been applied in each situation. For example, the class discussed the situation that led to the Titanic disaster. They investigated the causes, assessed their consequences, and looked for alternative approaches that led to the SOLAS amendment. This process develops problem-solving and decision-making skills, as students must consider several factors such as human error, technological limitations, and regulatory compliance.

This case study method encourages collaboration as students often work in groups to analyse and discuss the case, promoting teamwork and communication skills that are important in the maritime industry.

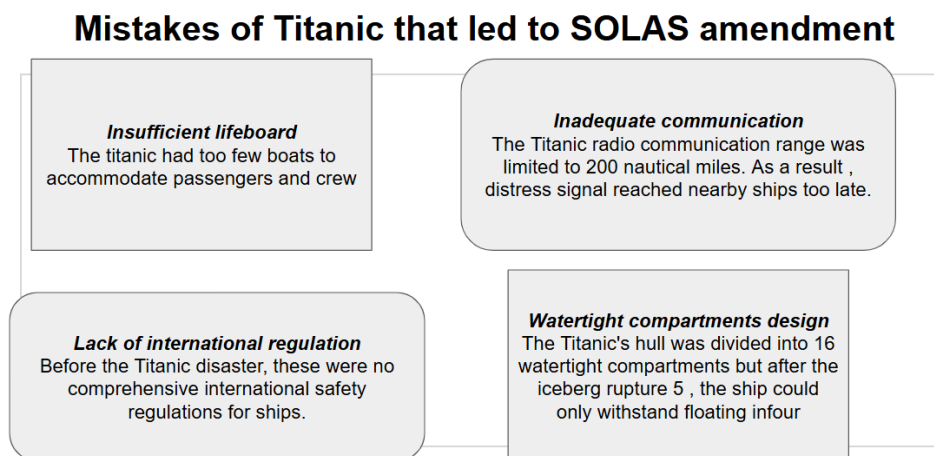


Figure 3 – Placard after discussing the topic

Conclusions. By combining individualized learning with interactive classroom instruction, the blended learning approach not only deepened students’ understanding of SOLAS but also improved their analytical and collaborative skills, preparing them to effectively implement these important security measures in their future maritime careers. The case method is an invaluable tool for studying different topics, as it bridges the gap between theoretical knowledge and practical application. By analysing real-life maritime safety scenarios, students not only gain a deeper understanding of topics but also develop critical thinking, problem-solving, and decision-making skills that are essential for their future careers. This approach fosters active engagement with the material, encourages teamwork, and helps students navigate the complexities of implementing safety standards in dynamic maritime environments. Ultimately, the case method equips future marine engineers with the practical skills and knowledge they need to handle safety challenges effectively and responsibly in the maritime industry.

REFERENCES

1. Shcherbyna O. A. “Skills repository” Module for learning management system Moodle. *Journal of Postgraduate Education, University of Education manag. of NAPS Ukraine*. 2012. Vol. 7 (20). P. 244–251 (in Ukrainian).
2. Voloshynov S. A., Yurzhenko A. Yu., Sherman M. I. Creation of an electronic course “Maritime English language for professional guidance” on the MOODLE platform. Theory and practice of using the Moodle learning management system. *Proceedings of the Sixth International Scientific and Practical Conference*. Kyiv, KNUBA, May 25, 2018.

3. Diahyleva O. S., Gritsuk I. V., Kononova O. Y., Yurzhenko A. Y. Computerized adaptive testing in educational electronic environment of maritime higher education institutions. *The 8th Workshop on Cloud Technologies in Education*. Kryvyi Rih National University, 2020. P. 411–422.
4. Yurzhenko A. Y. Pedagogical conditions for training of future ship engineers in the process of English for specific purpose learning. *Engineering and Educational Technologies*. 2018. 6 (4). P. 48–57. URL: <https://doi.org/10.30929/2307-9770.2018.06.04.05>.
5. Yurzhenko A. The concepts of “communicative competence” and “gamification of English for special purpose learning” in scientific discourse. *EUREKA: Social and Humanities*. 2018. Number 6. P. 34–38. URL: <http://dx.doi.org/10.21303/2504-5571.2018.00803>.
6. URL: <https://mdl.ksma.ks.ua/>.
7. Solovey O., Ben A., Dudchenko S., Nosov P. Development of control model for loading operations on heavy lift vessels based on inverse algorithm. *Eastern-European Journal of Enterprise Technologies*. 2020. 5(2 (107)). P. 48–56. URL: <https://doi.org/10.15587/1729-4061.2020.214856>.
8. Hushko S., Solovieva V., Shaikan A., Khvostina I., Semerikov S. On the Way to Novelty – Society of Ambient Intelligence. *SHS Web of Conferences*. 2021. 100, 00001. URL: <https://doi.org/10.1051/shsconf/202110000001>.
9. Yurzhenko A. Structure Of Professional English Training Of Future Ship Engineers. *Information Technologies in Education*. 2018. 4(37). P. 137–148. URL: <https://doi.org/10.14308/ite000685>.

Yurzhenko Alona PhD, Associate Professor of English language department for maritime officers (abridged programme), Head of International Affairs Department at Kherson State Maritime Academy, International Teachers Association Manager of Education for Ukraine. ORCID: <https://orcid.org/0000-0002-6560-4601>; yurzhenko.alona@ksma.ks.ua.

Bevzenko Yuliia teacher of the first category at Maritime Applied College of Kherson State Maritime Academy. ORCID: <http://orcid.org/0000-0003-2286-3731>; piterovayulia1@gmail.com.

Kononova Olena teacher of the first category at Maritime Applied College of Kherson State Maritime Academy. ORCID: <http://orcid.org/0009-0007-1386-6590>; konon2017@ukr.net.

Rosliakova Anna teacher of the first category at Maritime Applied College of Kherson State Maritime Academy. ORCID: <http://orcid.org/0000-0002-5842-8267>; anna.rosliakova@ukr.net.