

УДК 65.9

THE PRACTICE OF IMPLEMENTATION OF METHODS OF PROBLEM-BASED TRAINING OF MECHANICAL ENGINEERS

ПРАКТИКА ВПРОВАДЖЕННЯ МЕТОДІВ ПРОБЛЕМНОГО НАВЧАННЯ ІНЖЕНЕРІВ-МЕХАНІКІВ

Kisietov J. V. / Кісетов Ю.В.

c.t.s., as.prof. / к.т.н., доц.

ORCID: 0000-0002-5360-9376

National University of Shipbuilding, Mykolayiv, av. Geroyiv Ukraine, 9, 54007

Миколаїв, Національний університет кораблебудування, пр. Героїв України, 9, 54007

Abstract. *The modern approach to the professional and practical training of specialists at the level of higher education, based on the methods of problem-based learning and the requirements of the training standard, is analyzed. Some questions of the practical experience of using problem-based learning methods for the specialization "Management of ship technical systems and complexes" in specialty 271 "River and sea transport" for the first (bachelor) level of higher education are given.*

Key words: *components of the educational process; methods of problem-based training of ship mechanics, practical training experience.*

Introduction.

In the conditions of growing volumes of information from many fields of science, engineering and technology, putting forward high professional requirements for future ship mechanics, there is a need for constant intensification of the processes and methods of their training.

Main text.

The peculiarity of maritime education is that it is regulated by national and mandatory normative documents of the International Maritime Organization. In particular, the training of maritime transport specialists in Ukraine must meet the requirements of the International Convention on Training, Certification of Seafarers and Watchkeeping PDNV-78/95 (STCW) and the PDNV Code with Manila Amendments 2010 p. [1-2].

The professional features of the processes of training and subsequent activities of ship mechanics are also a sufficiently large volume of the practical component of the educational complex. In addition, certain features of the study of some issues require a collective (group) solution through group discussions, role-playing games, acting out situations, using simulators, etc.

Such rather specific conditions of training call for the actual combination of forms of face-to-face and distance learning, in which the student (cadet) studies

individual courses or sections independently in an electronic format, which does not exclude his direct contact with the teacher both face-to-face and electronically. In this regard, learning becomes a process of solving non-standard scientific and educational tasks by methods of problem-based learning, the essence of which was the formation of problem situations in the learning process, identification and solving of problems by students [3-4].

In such conditions, electronic sources of information become not an additional, but a leading tool at many stages of the educational process, not only distance correspondence, but also face-to-face education, providing the teacher with new opportunities for creative search for content, methods, and work tools.

Conclusions.

In general, the education system is an educational complex that combines the advantages of all forms of teaching educational material - the textbook; study guide for independent study of the material; lecture notes; methodological instructions and manuals for practical classes and practice at enterprises and ships, laboratory work, course and diploma design; reference literature. The paper analyzes the practical issues of implementing problem-based learning methods for mechanical engineers.

References:

1. Манільські поправки до Кодексу з підготовки та дипломування моряків та несення вахти (ПДНВ) 25.06.2010 р. [Електронний ресурс]. — Режим доступу: http://SEARCH.LIGAZAKON.UA/L_DOC2.NSF/LINK1/MU10242.HTML

2. International Convention on Standards of Training, Certification and Watchkeeping for Sea farers as amended, including the 1995 and 2010 Manila Amendments. STCW Convention and STCW Code. 2011 edition. Language(s): ENG, FRE, SPA, RUS, CHI, ARA (IMO-IC938).

3. Кісетов Ю., В., Кукліна О. Ю. Деякі питання організації самостійної роботи студентів. Суднова енергетика: стан та проблеми: Матеріали VIII Міжнародної науково-технічної конференції. – Миколаїв : НУК, 2017. с. 432-434.

4 Features of the information-management system for the preparation of bachelors in marine education. Theory, practice and science. Abstracts of XXIII International Scientific and Practical Conference. Tokyo, Japan. April 27-30, 2021. Pp. 400-405. Available at: DOI - 10.46299/ISG.2021.I.XXIII.

© Кісетов Ю.В.