

# Competency Framework as an Instrument to Assess Professional Competency of Future Seafarers

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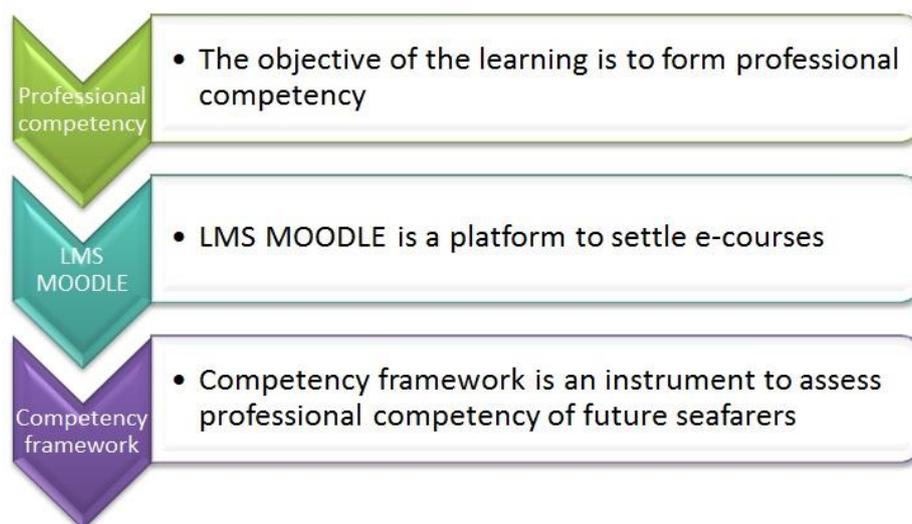
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**Abstract.** The purpose of the article is to use the framework for evaluating communicative competencies in the English language course of Kherson State Maritime Academy for future ship engineers.

**Keywords:** Professional Competency, Competency Framework, Digital Badges, Higher Educational Establishments, MOODLE.

## 1 Introduction

Competency framework of Kherson State Maritime Academy (KSMA) is a hierarchical list of Competencies defined by standards of STCW.



**Fig. 1.** The connection of Professional competency, LMS MOODLE and Competency framework in KSMA.

The standards of maritime education strictly defines list of ship engineer's minimum standard of competence for officers in charge of ship engineering watch at the operational level, which contains nine main professional competencies

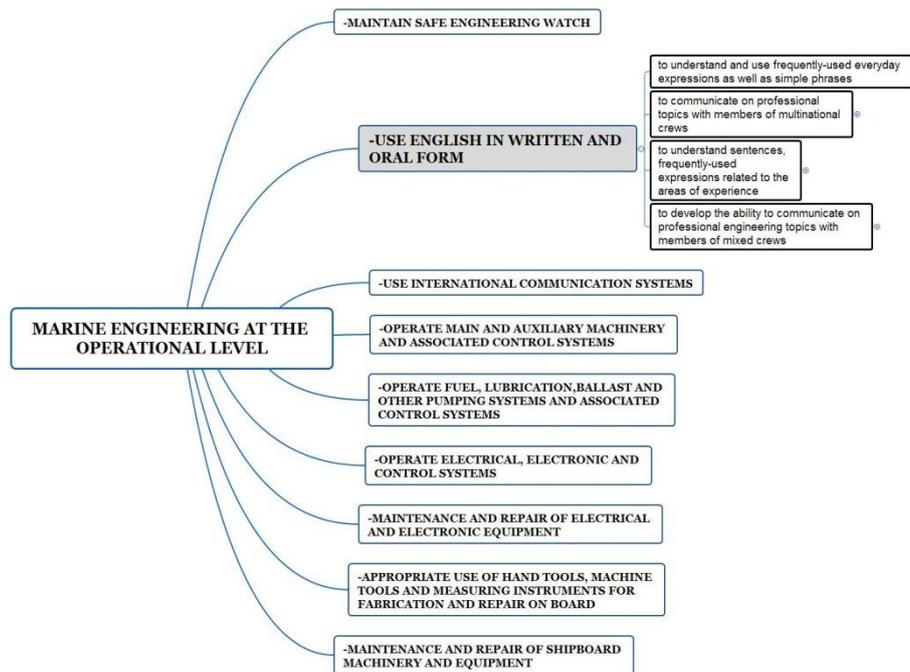


Fig. 2. Professional competencies of ship engineer at the operational level according to STCW.

## 2 Analysis of Recent Research and Publications

Nowadays there is a large number of studies devoted to the analysis of the effectiveness of Competency Framework usage in MOODLE when studying. The research was carried out by such scientists as K. Hancox, A. Kirkbride, G. Markovic, A. Herron, R. Elliott, S. Kalmbacher, B. Sandow, M. Davis and others.

The questions of Competency Framework usage in the educational process in the higher educational establishments, namely while the development of electronic courses in LMS MOODLE, were considered in the studies of A.P. Lopes, J. Cook, M. Dougiamas, P.C. Taylor, J. Fruitet, I. Wild, S.S. Nash, W. Rice and others.

However, we did not find out as a result of the analysis of the scientific work researchers who studied the introduction of interactive MOODLE courses using Competency Framework for cadets of higher maritime educational establishments.

### 3 "Maritime English" E-Course

To study Maritime English competency framework according to STCW was created in LMS MOODLE and Maritime English is studied.

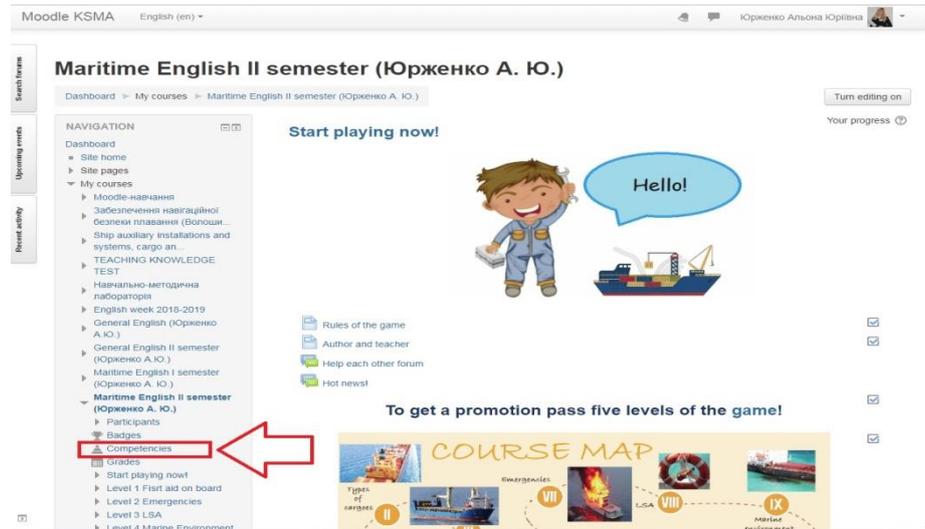


Fig. 3. The position of Competency Framework in LMS MOODLE "Maritime English" e-course.

### 4 Results

The principle of gamification is formed by the use of game design elements in e-learning process. The combination of digital technology learning games is already perceived as a legitimate educational tool that is highly effective in comparison with traditional training. Another instrument that helps to assess students' professional competencies is the electronic system of badges. Badges are visual tokens of achievement sharable across the web.

They appear on a user's page, identify and show the skills, knowledge, etc. of the participant. This rewards system helps to increase the level of students' motivation, and provides a course on the elements of the computer game.

## Maritime English II semester (Юрженко А. Ю.): Badges

Number of badges available: 6

Image	Name ^	Description	Criteria
	Third Engineer	You've got an epaulettes of Third Engineer!	Users are awarded this badge when they complete the following requirement: <ul style="list-style-type: none"> <li>The following activity has to be completed: <ul style="list-style-type: none"> <li>"Quiz - Stop and check 3"</li> </ul> </li> </ul>
	Second Engineer	You've got an epaulettes of Second Engineer!	Users are awarded this badge when they complete the following requirement: <ul style="list-style-type: none"> <li>The following activity has to be completed: <ul style="list-style-type: none"> <li>"Quiz - Stop and check 4"</li> </ul> </li> </ul>
	Motorman	Congratulations! You've got a promotion! Now you're Motorman!	Users are awarded this badge when they complete the following requirement: <ul style="list-style-type: none"> <li>The following activity has to be completed: <ul style="list-style-type: none"> <li>"Quiz - Stop and check 1"</li> </ul> </li> </ul>
	Fourth Engineer	You've got a promotion! Now you're Fourth Engineer!	Users are awarded this badge when they complete the following requirement: <ul style="list-style-type: none"> <li>The following activity has to be completed: <ul style="list-style-type: none"> <li>"Quiz - Stop and check 2"</li> </ul> </li> </ul>
	First aider	You made good presentation on "First aid kit" topic!	Users are awarded this badge when they complete the following requirement: <ul style="list-style-type: none"> <li>The following activity has to be completed: <ul style="list-style-type: none"> <li>"Assignment - Presentation "First aid kit""</li> </ul> </li> </ul>
	Chief Engineer	You've got an epaulettes of Chief Engineer!	Users are awarded this badge when they complete the following requirement: <ul style="list-style-type: none"> <li>The following activity has to be completed: <ul style="list-style-type: none"> <li>"Quiz - Stop and Check 5"</li> </ul> </li> </ul>

Fig. 4. Digital system of badges on "Maritime English" e-course to assess professional competencies of cadets.

## 5 Conclusions

The use of the competency framework implemented in KSMA on the MOODLE platform is aimed to increase the effectiveness of the learning process management and to implement a competency approach in the process of forming a communicative competency. The existence of a scheme for the development and compilation of a computer, its visual representation, confirmation of the activity in the interactive electronic course allows to improve the quality and increase the efficiency of the formation of competencies, to optimize the educational process, to make it personalized and diverse.

## References

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