

EDUCATIONAL POTENTIAL OF DIGITAL TOOLS IN THE INDIVIDUAL WORK OF FUTURE NAVIGATORS IN THE CONDITIONS OF BLENDED LEARNING

ОСВІТНІЙ ПОТЕНЦІАЛ ЦИФРОВИХ ІНСТРУМЕНТІВ У САМОСТІЙНІЙ РОБОТІ МАЙБУТНІХ СУДНОВОДІІВ В УМОВАХ ЗМІШАНОГО НАВЧАННЯ

The problem of independent work of future navigators in the conditions of mixed training is analyzed. Theoretical analysis of the independent work category in the modern scientific plane is carried out. Methods of introduction of a complex of exercises and tasks for independent work on the LMS MOODLE KSMA platform are developed and presented. The study of the problem of independent work has demonstrated the essence of this category and the definitions related to it in the scientific field. The source base is analyzed and it is determined that independent work is a multi-vector category and does not have an unambiguous interpretation by scientists. Depending on the function in the educational process or educational activity, it is defined as a type, means, method, form, cognitive educational activity. The study presents the scientific positions of scientists on the interpretation of categories related to independent work, such as: independent educational work, independent educational activity, etc. This approach to the analysis of the essential characteristics of independent work and its role in the educational process provides a comprehensive understanding of the problem. The role of independent work in the system of education of future navigators is determined and their ability and readiness for independent educational activity in the conditions of blended learning is analyzed. In the process of studying this aspect of the problem, the phenomenon of the concept of "self-study" is actualized. This concept is associated with the practical implementation of such individual determinants of personality as self-organization, self-discipline, self-education, which are crucial in the professional training of future navigators.

Key words: independent work, blended learning, future navigators, Ukrainian language, LMS MOODLE KSMA platform

Матеріал статті репрезентує актуальну проблему освітнього потенціалу цифрових інструментів у самостійній роботі здобувачів вищої освіти. Дослідження означеного питання відбувається на прикладі

фахової підготовки майбутніх судноводіїв. У статті представлений теоретичний аналіз проблеми самостійної роботи та її ролі у системі сучасної вищої освіти. З'ясовано, що самостійна робота – це поліфункціональна категорія, котра у науці вивчається різнопланово. Акцентовується увага на її унікальності та феномені «я-само», який вона формує в особистості. Серед індивідуальних детермінант здобувача вищої освіти значущими є такі: самоорганізація, самодисципліна, самоосвіта та ін. Їх сформованість у сучасних випускників вишу – майбутніх судноводіїв особливо важлива в умовах змішаного навчання. У статті наголошується на тому, що специфіка фахової діяльності майбутніх судноводіїв актуалізує роль саме цих категорій. У межах предмету дослідження виокремлено роль цифрових інструментів і їх освітнього потенціалу для організації та практичного впровадження у самостійній роботі майбутніх фахівців морської галузі. Представлений матеріал ілюструє ефективність застосування освітньо-цифрових ресурсів, зокрема платформу LMS MOODLE KSMA, що активно використовується в освітньому процесі Херсонської державної морської академії. У статті обґрунтовується ефективність і доцільність означеного ресурсу у самостійній роботі здобувачів вищої освіти. Унаочнюються ключові параметри аналізованого ресурсу (матеріал лекцій, діагностувальне тестування, контроль та оцінювання здобувачів вищої освіти, зворотній зв'язок тощо) та можливість їх активного використання у самостійній освітній діяльності в умовах змішаного навчання. У матеріалі дослідження наведено конкретні приклади імплементації освітньо-цифрового ресурсу LMS MOODLE KSMA у процесі формування мовно-мовленнєвої особистості майбутніх судноводіїв.

Ключові слова: самостійна робота, цифрові інструменти, майбутні судноводії, українська мова, платформа LMS MOODLE KSMA.

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Problem statement. Modernization of the system of modern higher education in Ukraine has raised the issue of finding new, methodologically appropriate, rational and creative forms of work for the preparation of higher education. The problem of finding and implementing such forms of work in the process of professional training of future navigators has increased due to the impact of the COVID-19 pandemic and the logical introduction of mixed forms of education in the educational process. The use of forms of blended learning of future specialists in

the maritime department outlined several factors that have become determinants for the successful implementation of the educational process in modern conditions. Let's define them: digitalization of the educational environment of a specific institution of higher education; actual content of educational components; willingness and ability of all participants in the educational process to work well in non-standard conditions of blended learning. Particular attention should be paid to the factor of individual work of higher education seekers, the role of which

has significantly increased due to the introduction of blended learning.

The problem of individual work in educational institutions of different levels has always been relevant in the scientific community and was characterized by polyvectorism. N. Golub (2008), O. Malykhin (2009), S. Trubacheva (2012), A. Dobryden (2015), I. Nagrybelna (2017) and others showed diverse scientific interest in individual work.

Awareness of these factors and the diverse scientific interest of scientists led to the formulation of the research problem - the educational potential of digital tools in the individual work of future navigators in a blended learning environment.

The urgency of the problem and the strengthening of the role of individual work of future navigators in the conditions of blended training outlined the range of problems that encourage scientific discussion and definition of specific methodological proposals. Among the key issues that confirm the relevance of the study are the following: the ability and willingness of higher education seekers to work individually in the process of blended learning; self-organization as an individual determinant of the personality of the future specialist in the maritime industry; digital tools and their educational opportunities in the individual work of higher education students; methodological support of the obligatory individual component of the studied course.

The purpose of the study is to analyze the educational potential of digital tools and the representation of specific means of individual educational activities of future navigators in the process

of blended learning. The logic of the analysis of the raised problem and the specified purpose of research provide the decision of the following problems:

1. To find out the essence of the category “individual work” and related definitions in the scientific field.

2. To determine the role of individual work in the education system of future navigators and to analyze their ability and readiness for individual educational activity in the conditions of blended learning.

3. Investigate the role of digital tools in the individual work of future navigators in a blended learning environment.

4. To develop and represent types of work for individual educational activity from the course “Ukrainian language (by professional direction)” for applicants for higher education in the specialty “River and sea vessels”, specialization “Navigation and control of vessels”.

Research methods: analysis, synthesis, generalization, induction, deduction.

Presentation of the main material. Individual work in the system of modern higher education.

The essence of the category of individual work in the scientific dimension. The study has already noted the urgency of the problem of individual work in the scientific field. The scientific search of researchers allowed to determine the multivector nature of the studied category and at the same time demonstrated the number of its interpretations in the scientific literature. In order to avoid misinterpretations and repetitions in our study, key definitions related to the problem were analyzed and summarized. We present them in Table 1. Key definitions of the study.

Table 1

Key definitions of the study

Concept	Definition	Author / Source
Individual work	planned individual or collective work of students, performed on the task and methodical guidance of the teacher, but without his direct participation [3].	Encyclopedia of Education
Individual work	method of teaching and self-education, a prerequisite for didactic connections between different methods [8].	Psychological and pedagogical dictionary
Individual work	specific pedagogical means of organization and management of independent activity in the educational process [7].	M. Pentilyuk
Individual work	planned organizationally and methodologically coordinated (pre-classroom, classroom, extracurricular) cognitive activity of the future primary school teacher to master professional competencies (language, speech, communicative, research, self-education), which is implemented without the imperative guidance of the teacher. each student of an individual educational trajectory [4].	I. Nagrybelna
individual educational work	various types of individual and collective educational activities of students, which are carried out by them in the classroom or at home on the instructions of the teacher or under his guidance, but without his direct participation [1, p. 297].	Ukrainian pedagogical dictionary
individual educational work	type of educational activity, which provides a certain level of independence of the student in all its structural components: from problem statement to control, self-control and correction with a dialectical transition from the simplest types of work to more complex, exploratory, with constant transformation of management functions of pedagogical management towards its transition to the form of orientation and correction with the gradual transfer of all functions to the learner [2, p. 302].	Dictionary of pedagogy

Thus, the study of scientific and methodological literature on the problem allowed to state that given the diversity and multifunctionality of the studied category, there is no single interpretation of individual work. We fully agree with the statement that the category of individual work in various versions has become quite widespread in the last decade and is used in part arbitrarily by many researchers: “individual activity”, “self-educational activity” [4, p. 53].

2.2. Individual work as an individual psychological determinant of the future specialist in the maritime industry. In the system of higher education of future pilots, individual work plays an important role. This is due not only to the needs of time in the training of a competitive specialist and the requirements of blended learning, but also to the fact that individual work actualizes the phenomenon of the concept of “self-self”. This concept is related to the implementation in practice of such individual determinants of personality as self-organization, self-discipline, self-education, self-education, etc. Undoubtedly, the specifics of the chosen profession of a sailor involves the development of these qualities in future pilots. That is why the aspect of independent work in educational activities of mixed format in higher education is a kind of confirmation of the individual psychological determinants of the future specialist in the maritime field.

We are impressed by the thesis that “individual learning activity involves a holistic complete system of actions that contains positive motivation, instruction, optimal awareness and understanding of the task by the student, self-performance, analysis of results, correction of errors, self-assessment and evaluation according to certain criteria immediately after its completion” [4, p. 53].

Relying on this statement and the formation of higher education seekers of the qualities of the type “I-self-”, we can talk about their ability and readiness for individual educational activities in a blended learning environment.

2.3. Educational and methodical support of individual work in the conditions of blended learning. As a digital tool for the implementation of an individual component of the course was chosen a modern service – platform LMS MOODLE. Its technical and educational capabilities fully allow for the implementation of individual educational activities in a mixed learning environment. In support of this, a set of exercises and tasks for individual work was developed and posted on the LMS MOODLE platform, which is actively used in the educational process of the Kherson State Maritime Academy (KSMA). Experience of teaching with the use of this platform allows us to agree with the characteristics of LMS MOODLE: to modern educational needs. Thus, the capabilities of the information environment MOODLE allow you to effectively organize the interaction of teacher and student in distance learning through forum, chat, advanced commenting and evaluation of theoretical and practical tasks, and automatic testing tools significantly save teacher time and free from rou-

tine work. The openness of its form makes it possible to add new modules and blocks, as well as constantly improve the training material [6, p. 165]. This resource has ample opportunities for individual work of students, as its functional potential involves the remote operation of students at a convenient time for them without the direct guidance of the teacher. We represent the types of work for individual educational activities in the course “Ukrainian language (for professional purposes)” for graduates of the specialty “River and sea vessels”, specialization “Navigation and ship management”.

We offer a set of exercises and tasks for individual work on the topic “**Norms of the modern Ukrainian language**”. The developed complex has a methodical apparatus aimed at practical mastery of the norms of the Ukrainian language and their application in professional activities.

1. Communicative norms of the Ukrainian language.

1.1. Simulate the practically communicative situation suggested in the exercise. Implement it in accordance with the rules of business communication.

- communication of the ship’s Master’s assistant with the pilot;
- communication of the ship’s Master’s with the shipowner;
- communication of the boatswain with sailors during mooring operations.
- business communication with the stakeholder;
- teams on the gangway;
- communication of the watch officer with the shore services during the mooring in the port.

1.2. Following the rules of public speaking, prepare a short speech on behalf of the Master to the crew before going to sea.

2. Spelling rules of the Ukrainian language.

2.1. Write the given nouns in the correct case, opening the brackets.

2.2. Justify the spelling of endings. Explain how the changes recorded in the new version of the Ukrainian spelling affected the spelling of the proposed expressions.

Pay tribute (Master, team, pilot, leader). Special clothes for (worker, sailor, mechanic). Inflict damage (company, shipowner). Rely on (witness, crew, logistician).

3. Lexical norms of the Ukrainian language.

3.1. Explain the lexical meaning of professional words.

3.2. Justify which of the presented words are ambiguous. Make sentences in which the given words are used in one case in the literal sense, and in another – in the figurative.

Stern, rudder, oil tanker, lotion, keel, qualification, logistics, bollard, windlass, anchor chain, lock, running lights, tank, gyrocompass, sounder, frame, hold, adjustable pitch screw, point.

3.3. Consider why most of the terms in the given word cloud are foreign. From which languages of the world were these words borrowed?

3.4. Consider, are there any explanations for this related to world history, the history of maritime development, the history of language?

The LMS MOODLE platform also provides opportunities for self-checking the level of mastering theoretical material on the topic. In the content of the educational component “Ukrainian language (for professional purposes)” for this purpose, diagnostic testing is used on the material of self-developed lecture material.

Course management parameters allow you to set the number of possible attempts to test the applicant on a particular topic, passing score and method of assessment. This approach allows the applicant to rationally use their time for self-preparation and further self-control, and the teacher indirectly controls the state of individual mastery of theoretical material and the level of its assimilation by cadets.

In order to illustrate what has been said, we will illustrate this with an example.

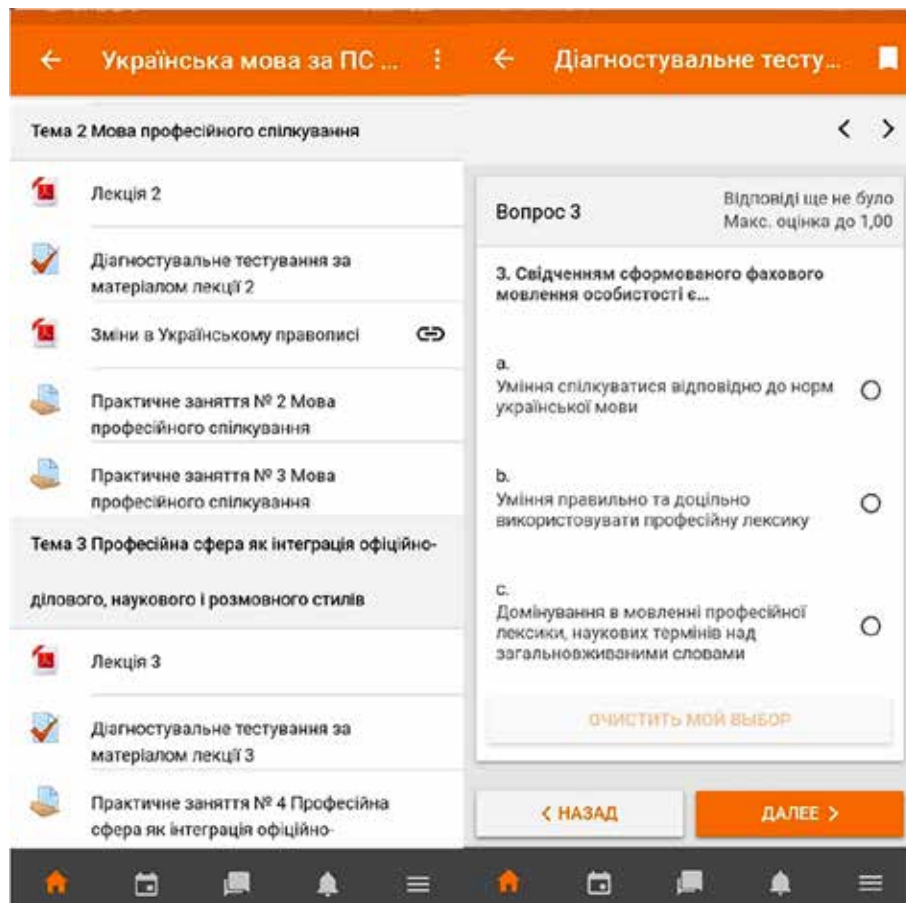


Fig. 1. Diagnostic testing based on lecture material on the LMS MOODLE KSMA platform

Conclusions. As a result of work on the research problem the following conclusions were made:

– studying the problem of individual work allowed to find out the essence of the specified category and the definitions related to it in the scientific plane. Analysis of the source base showed that individual work is a multi-vector category and does not have an unambiguous interpretation of scientists. Depending on the function in the educational process or educational activity, it is defined as a type, means, method, form, cognitive, educational activity. The study presents the scientific positions of scientists on the individual educational activity, etc. This approach to the analysis of the essential characteristics of individual work and its role in the educational process allows a comprehensive understanding of the problem;

– the role of individual work in the system of education of future drivers is determined and their ability and readiness for individual educational activity in the conditions of blended learning is analyzed. In the process of studying this aspect of the problem, the phenomenon of the concept of “I-self-” was actualized. This concept is associated with the implementation in practice of such individual determinants of personality as self-organization, self-discipline, self-education, self-education, which are crucial in the professional training of future drivers. In the context of blended learning, the role of these determinants is enhanced, demonstrating the willingness of the higher education student to work individually and his ability to master the material without the direct control and guidance of the teacher;

– developed and represented a set of exercises and tasks for individual educational activities in the course “Ukrainian language (for professional purposes)” for higher education specialty “River and sea vessels”, specialization “Navigation and ship management”. This work was carried out taking into account the capabilities and educational potential of the digital tool-platform LMS MOODLE. In the conditions of blended learning the tasks developed for individual work are placed on the LMS MOODLE platform. This resource is effective for the implementation of such types of robots in the format of (of) -line, so it is used in the educational process of KSMA. The content of the block of individual work of the educational component “Ukrainian language (for professional purposes)” is adapted to the technical parameters of the platform and allows future navigators not only to get acquainted with the tasks, but also to perform them, pass for inspection and assessment. When working with the test material, applicants have the opportunity to pass diagnostic testing as a means of self-examination of mastering the theoretical material of the course.

This study does not exhaust the problem completely, but is one of the promising aspects of its analysis, which can be continued by the development

of an electronic manual for individual work of future navigators in the course “Ukrainian language (for professional purposes)”.

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