

УДК 378.147: 811.124 Чистякова Г. В., Ларионова Ю. С, Красилова Т. А

# ОБУЧЕНИЕ ЛАТИНСКОМУ ЯЗЫКУ СРЕДСТВАМИ LMS MOODLE В МЕДИЦИНСКОМ ВУЗЕ

## **Аннотация**

Цель исследования состоит в создании и внедрении авторского электронного курса «Латинский для врачей-стоматологов», разработанного в LMS Moodle, для реализации образовательного процесса по изучению латинского языка для студентов Кемеровского государственного медицинского университета. В статье рассматриваются вопросы лингвистической подготовки медицинских кадров в условиях цифровой трансформации образования; описывается организация образовательной деятельности студентов вуза по дисциплине «Латинский язык» на основе принципов цифровой дидактики. Предметом исследования является организация образовательного процесса по дисциплине «Латинский язык» в электронной образовательной среде вуза. Научная новизна работы состоит во внедрении новых методов организации образовательной деятельности обучающихся в условиях цифровой трансформации образования за счет интеграции авторского электронного курса «Латинский для врачей-стоматологов» в LMS Moodle в аудиторную и самостоятельную работу студентов КемГМУ. Результатами исследования являются: создание авторского электронного курса «Латинский язык для стоматологов» в LMS Moodle для студентов Кемеровского государственного медицинского университета; описание принципов организации образовательного процесса по дисциплине «Латинский язык» с использованием электронного курса, разработанного на образовательной платформе LMSMoodle.

**Ключевые слова:** латинский язык, электронный курс, электронная информационная образовательная среда, цифровая трансформация, медицинские кадры, мотивация, образовательная платформа LMS Moodle, терминологическая компетентность, инновационная методика, термины греко-латинского происхождения.

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# PEDAGOGY

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# LEARNING LATIN LANGUAGE IN LMS MOODLE AT A MEDICAL UNIVERSITY

# **Abstract**

The purpose of the research is to work out and integrate the authors' electronic course «Latin for dentists», developed in LMS Moodle platform to realise Latin learning process for students of Kemerovo State Medical University. The article deals with the issues of linguistic training of health care staff in the context of education digital transformation. The organisation of students' educational activities in the discipline "The Latin language" based on the principles of digital didactics is described. The subject of the study is the organisation of educational process of the Latin language learning at Kemerovo State Medical University through the electronic educational environment. The scientific novelty of the work is in the introduction of new methods for students' educational activities organisation in the context of education digital transformation by integrating the authors' elec-

tronic course «Latin for dentists» through the LMS Moodle to organize students' classroom and independent work at Kemerovo State Medical University. The results of the study are: the development of the authors' electronic course «Latin for dentists» in LMS Moodle for students of Kemerovo State Medical University; the description of the principles of educational process organisation in the discipline «The Latin language» using the electronic course developed in LMS Moodle.

**Keywords:** Latin language, electronic course, electronic information learning system, digital transformation, health care staff, motivation, learning management system Moodle, terminological competence, innovative teaching method, terms of Greek-Latin origin.

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The education digital transformation has not only created the need for the significant modernisation of the entire educational process, but it also gives unlimited potential for professional teachers' creativity. Thanks to innovative methods, it became possible to combine the best teaching traditions and new digital technologies integrated into the educational process, which made it more interesting and more attractive for students. Besides they significantly increased the students' motivation to study disciplines and develop self-education skills.

The scientific and methodological sources review showed that the digital technologies introduction into educational process is becoming increasingly popular in the system of higher education. Many foreign and Russian researchers consider mastering basic digital competencies of higher school teachers (L. Levano-Francia, et al [1], Yu Zhao, et al [2], L. A. Alkova [3], O. G Achkasova [4], O. V. Bugrova [5], N. N. Kondrasheva [6], D. S. Konstantinova, et al [7], etc.); tasks for formation of electronic informational educational environment of the university and students' e-learning organisation (I. M. Degil, et al [8], I. N. Khmelidze [9], A. G. Shirokolobova, et al [10], etc.). Nowadays electronic courses for professional and general humanitarian disciplines, including foreign languages, are being actively developed and integrated into university educational process. The leading Russian universities place their electronic educational courses not only on their university platforms, but also on the largest international online platforms.

Many universities include e-learning courses into their curricula of the main higher education professional educational programs. Higher education institutions are aimed to expand the use of high-quality educational e-learning courses into educational process not only by the existing regulatory framework of the education system in the Russian Federation, but also by the priority project «Modern Digital Educational Environment in the Russian Federation» [10].

According to a number of researchers, the digital technologies usage in the educational process of the university makes it possible to include several ways of presenting material to students, to combine e-learning programs and elements of classroom activity with a teacher and to introduce e-learning courses into educational process, which allows to redistribute resources and increase students' achievements and their motivation to learn [11, p. 31].

The modular object-oriented dynamic learning environment (LMS Moodle) has gained particular popularity in the implementation of the e-learning project in Russian universities. As A. R. Memon and F. A. Rathore mention, it is the most used everywhere and it is a well-known, user-friendly and verified open-source software-learning management system. It can provide a learning interface as well as a source of communication. Its learning interface allows uploading lecture videos, presentations, documents, pictures, and assessment of assignments and quizzes. Whereas its combination interface allows for forum discussions and private messaging between learners [12, p. 1077].

The LMS Moodle platform has become an effective tool for implementing e-learning in the context of digital transformation. Learning through LMS Moodle becomes students' oriented due to the variability and flexibility of educational material assimilation based on the individual pace of the student. In addition, the LMS Moodle system provides a comprehensive educational process thanks to its extensive educational content, a system for controlling, monitoring and evaluating the quality of students' knowledge [13, 14].

The educational process organisation in the discipline «The Latin language» is of great importance at the medical university. The subject occupies the fundamental place in the structure of major professional academic programs, as it is impossible to achieve some significant results in the profession without mastering the basic concepts dated back to ancient Greek and Roman medicine. The study of the discipline contributes to the development of the general language and terminological competence of future doctors. The terminological dictionary of medicine is huge, and its ignorance gives the insurmountable difficulties to study up any special clinical subjects and, as a result, further professional activity. «Unsure language skills of the conceptual and terminological apparatus gives rise to students' doubts about their knowledge, loss of interest in learning. On the other hand, the timely successful mastery of anatomical, clinical, pharmaceutical terms of Greek-Latin origin, their free use in the learning process not only stimulates interest in the theoretical and clinical subjects students are studying, but also activates mental activity, the ability to apply a systematic approach for solving problems in professional area» [15, p. 95].

The Latin language is known to be a dead language that significantly reduces the range of innovative educational technologies, which would enhance the cognitive activity of students. The main purpose of learning the discipline «The Latin language» in a medical university is to master basic theoretical knowledge and practical skills to use medical terminology of Greek-Latin origin in studying theoretical and clinical subjects, as well as in further practical activities. Thus, learning the basics of grammar (the level of phrases) and memorising the basic set of vocabulary (the level of morphemes, words and phrases) comes to the fore. To study grammatical rules and to fix a large corpus of terms in mind is not of great interest for students, which leads to the motivation decrease in mastering the material of the discipline after a quite short period of time. We believe that the described problems can be leveled by introducing digital technologies into educational process.

The relevance of this research is due to the need to expand the practice of digital technologies usage in educational process organisation for mastering the discipline «The Latin language» at a medical university. The development and integration of the electronic course in LMS Moodle platform into the university educational process will significantly increase students' interest to learn the dead language.

The subject of the work is organising the educational process in the discipline "The Latin language" through the electronic educational environment at Kemerovo State Medical University. The object is developing and integrating an authors' electronic course in LMS Moodle platform into the educational process.

The scientific novelty of the study is determined by the expediency of introducing digital technologies into the process of organising the students' educational activities in connection with the introduction of federal state standards of a new generation, which reduce the classroom load and increase the independent student's work, in most cases, being carried out in an electronic environment.

The purpose of the article is to describe the framing of the educational process in the discipline «The Latin language» at Kemerovo State Medical University using the authors' electronic course developed in LMS Moodle platform.

The purpose mentioned can be achieved through:

Describing the structure of the electronic educational course «Latin for dentists», developed in LMS Moodle platform, in order to organise educational process in the discipline «The Latin language» at Kemerovo State Medical University;

Outlining the system of working with students of Kemerovo State Medical University within the framework of mastering the discipline «The Latin language» using the authors' electronic course developed in LMS Moodle.

The method of theoretical analysis aimed at researching and summarising the work of Russian researchers about education digital transformation, the teachers' digital competence and the usage of LMS in educational activities; the method of observation are used in the study.

The practical significance of the study is in the fact that the structure and the principles of working with the authors' electronic course «Latin for dentists», developed in LMS Moodle platform, can be used to create and integrate electronic courses for students of other medical specialties. The active use of such courses in the discipline «The Latin language» learning will make it possible to prepare students better for professional communication in the framework of the study of theoretical and clinical diciplines, as well as in further practical activities.

# **Results and Discussion**

Teaching Latin is often associated with a number of difficulties due to its specifics: the language is not spoken (a dead language) and it is used in a narrow professional sphere. The need to memorise a large corpus of professional terms, which are not supported by professional background yet, quickly reduces students' motivation. The teacher is faced with an additional task to increase students' interest in the material being studied. One of the most successful solutions, in our opinion, is the use of modern digital technologies. «The main task of organising training with the use of digital technologies is in intelligently, technically and methodically competent, effective management of the learn-

ing process, in the competent activity of the teacher ensuring an effective educational process» [16, p. 280].

The authors of this work have developed an electronic course «Latin for dentists» on LMS Moodle platform. The course is intended for the students of the Faculty of Dentistry of Kemerovo State Medical University studying the discipline «The Latin language» in the 1st academic semester. The course was made in accordance with the requirements of the Programme of the discipline «The Latin language» and the Order for developing online courses in the LMS Moodle, used in Kemerovo State Medical University. It regulates the processes and standards for developing of electronic educational resources (remote online courses).

The choice of the platform is explained by the wide range of digital tools offered for use. The Moodle system includes many methods and means, necessary for distance learning organisation. It has a great set of course elements, among which the following ones may be separated: questionnaire; database; external tool; glossary; task; lecture; feedback; survey; SCORM package; seminar; test; forum; chat, etc.

The course structure is presented in 9 modules: 3 informational modules, 4 educational modules, 2 knowledge control modules. Let's look at each module in more detail.

The **informational and organizational module** is an introductory one. It contains the following blocks: the course information card, teacher announcements, the Question-Answer forum, information about the authors and teachers of the course, instructions for working and downloading assignments to the course, the programme of the discipline. The main objectives of the module are to get acquainted students with the structure and rules of working in the electronic course, as well as with the mechanism of interaction with the teacher.

The module **«Course learning outcomes»** introduces students to the acquired competencies and their indicators, which, for the convenience of students, are also described through a set of knowledge, skills and abilities (*You will know how to ...*, *You will get skills of ...*, *You will be able to ...*).

The module **«Reference resources and additional tools»** includes a list of basic and additional literature on the course, as well as of useful Internet resources; a link to an electronic dictionary and a mobile application "Latin-Russian Dictionary»; methodological guidelines for section tests; samples of assignments; criteria for evaluating completed assignments; aphorisms. The main objective of the module is to provide students with the opportunity to choose between various educational resources that can be used in the process of learning the Latin language.

This is followed by 4 training modules developed in accordance with the sections of the discipline programme: **Section 1 «Introduction»** (3 topics), **Section 2 «Anatomical terminology»** (9 topics), **Section 3 «Clinical terminology»** (7 topics), **Section 4 «Pharmaceutical terminology»** (7 topics). Each topic of any of the above sections includes a set of tasks for theoretical material mastering and practical skills training. Let's consider the types of the course tasks.

The theoretical material of each section is presented through the resource «Book» and the module «Lecture». The resource «Book» allows a teacher to create a multipage resource, similar to a book, with chapters. In the course described, Books contain media-files, presentations and also long text information, divided in sections. It is used as a reference book and as a book with practical skills training tasks.

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Using the module «Lecture», the teacher develops interactive lectures characterised by high adaptability to the needs of each student. The lectures in the course presented consist of two types of pages: content pages (lecture text) and task pages (tasks to control the understanding of the lecture material, checked automatically). Hyperlinks to content with video lectures and/or presentations are integrated in the text of the lecture.

Extensive educational opportunities are provided by the module «Scorm package», the resource «Hyperlink», and the module «Page». They allow creating gamified tasks using external online applications and introducing them into the course in order to train and adjust the skills acquired in the classroom. The Scorm package has an additional advantage – it reduces the list of tasks in the course interface by combining several tasks in one package, which greatly facilitates working with the course, especially on mobile devices. «Page» and «Hyperlink» also provide extra opportunities for audio visualisation of the material: view educational videos, do training lexico-grammatical exercises and online tests, etc.

To maintain the interactivity of the exercises, 2 resources are provided in LMS Moodle: the module «Seminar» and the module «Task». These resources let you accumulate, view, review and evaluate student papers, including the possibility of peer review. Students may send any digital content (file), such as Word-document, tables, images, audio or video files. This is how, albeit indirect and time-dependent, but «live» communication with the teacher is built, which is often not enough for students in the case of fully automated assessing of submitted

An obligatory element of each training section is the *module* «Test», which can be used in two formats: practical skills training or skills development control on the topic being studied. The teacher chooses the format of the test depending on the purpose of the practical lesson in each specific group. He can develop tests of any complexity, set the time of test execution, the number of attempts available, the period of access to the test, etc. The main advantage of this element is that the assessment takes place automatically, a subjective approach to the student is completely excluded. Tests made up of random questions reduce the risk of cheating.

The module «Test» is used as a control measure based on the results of studying each educational section: «Anatomical terminology», «Clinical terminology», «Pharmaceutical terminology». The final tests in the three main sections of the discipline under study are combined into the module «Mid-point assessment».

The **module «Final control: pass»** describes the procedure for conducting a pass event in the discipline, contains a list of questions for preparing for the pass and an example of a pass ticket. The pass takes place in full-time format outside of the electronic course. If a student gains a course pass mark, he gets «passed» in advance.

The current academic performance is assessed using the **scale** «Progress of course elements accomplishment». The progress scale performs two functions. Firstly, it allows students to see their results of completing tasks, which, of course, is a motivating factor for further work on mastering their skills. Secondly, due to this scale the teacher can adjust the individual educational trajectory of each student and control the process of mastering the discipline material.

Thus, using the wide set of Moodle resources and elements, teachers get the possibility to fill the course with interesting, cognitive modern materials, presenting them in a proper form. Students, in their turn, get free access to new interactive methods of learning foreign languages. Due to the easiness of course redaction, a teacher may add and diversify it with different elements, complicate or facilitate if necessary. The easiness of course administration allows a teacher simply to register new users and also to publish information and news about the course.

The integration of the course into the educational process became the next stage of the course development. The electronic course «Latin for dentists» was tested in two focus groups of students, with a total of 15 people. For three months, students were doing course assignments, including the study of theoretical material. According to the results of the approbation, technical changes and additions were made. There were no suggestions/comments from students on the content of the course. The students highly appreciated the format of the theoretical material presentation (interactive lectures, video lectures, and multimedia presentations) and the widespread use of gamified practical tasks.

#### Results

The authors of the article developed an electronic course «Latin for dentists». LMS Moodle was chosen as an electronic educational platform. The course is used to realise Latin learning process for the 1st-year students of the Faculty of Dentistry of Kemerovo State Medical University.

- The course was integrated into the educational process for a focus group of the 1<sup>st</sup> year students. The practice resulted in the following conclusions:
- The electornic course encourages students' independent work, as each student can study at a comfortable pace and at a convenient time;
- The use of different types of resources and modules greatly facilitates the process of memorising a large corpus of medical terms;
- Gamification of tasks increases interest in learning the Latin language.



- From a teacher's position, the following advantages of using an electronic course in a classroom and for independent work can be noted:
- Students demonstrate a great interest in the educational process:
- The course can be used both in the classroom and as a resource for performing tasks in an independent extracurricular mode;
- Most of the assignments are checked automatically, which significantly reduces the teacher's working time;

 Integration of the electronic course into the educational process provides ample opportunities for improving the digital competence and professional creativity of teachers.

The prospect of further work is the full-scale integration of the authors' electronic course «Latin for dentists» into the educational process in the discipline «The Latin language», implemented for 1st year students of the Faculty of Dentistry of Kemerovo State Medical University. After the course being studied, it is planned to conduct an online survey aimed at identifying possible areas for improvement.

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