

TEACHING BUSINESS ENGLISH TO MASTER'S STUDENTS: MODELING AND DEVELOPMENT OF A DIGITAL LEARNING RESOURCE

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Abstract

Introduction. This study is made relevant by a clear need to provide Master's students with remote learning opportunities. We describe the development of a sustainable model for a digital learning resource, Business English for Master's Students, and report on its pilot integration into university training.

Materials and Methods. We examined pedagogical literature to determine the extent to which it explores the theoretical aspects of designing digital learning resources. Through reviewing academic findings and comparing existing models of digital resource design, we built a foundation for generating new knowledge and gaining a comprehensive understanding of our study's target. The modeling method allowed us to clearly present the stages, structures, and relationships within the digital resource development process. Our study's novelty is underscored by insufficient prior research in this specific area and by the discrepancy that we identified between the theoretical need for digital learning resources, on the one hand, and their practical adoption into teaching a foreign language to Master's students at non-linguistic universities, on the other hand.

Results. The study offers both theoretical and practical insights. Theoretically, it substantiates a step-by-step model of course design, accounting for its didactic, organizational, and technical aspects. Practically, it presents a model for our digital learning resource, Business English for Master's Students.

Conclusions. The study established that an effective digital learning resource must support meaningful teacher-student interactions, enabling educators to instruct their students and monitor knowledge acquisition remotely. The model encompasses specific design and monitoring stages, along with requirements for efficient resource management. The findings can assist pedagogy researchers and foreign language instructors in higher education.

Keywords: modeling, digital learning resource, higher education, foreign language

МОДЕЛИРОВАНИЕ И РАЗРАБОТКА ЦИФРОВОГО РЕСУРСА ДЛЯ ОБУЧЕНИЯ МАГИСТРАНТОВ ДЕЛОВОМУ ИНОСТРАННОМУ ЯЗЫКУ

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Аннотация

Введение. Актуальность исследуемой проблемы обусловлена объективной необходимостью дистанционного обучения для магистрантов. Цель статьи — описать разработку устойчивой модели цифрового образовательного ресурса «Деловой английский для магистрантов» и его пилотное использование в образовательном процессе университета.

Материалы и методы. Для выявления степени разработанности теоретических аспектов моделирования цифровых образовательных ресурсов использовались такие методы, как изучение и анализ научных публикаций в области педагогики. Изучение педагогического опыта и сравнение имеющихся моделей проектирования цифровых ресурсов позволили получить актуальную информацию об объекте исследования. Метод моделирования дает наглядное представление об этапах работы над созданием цифрового ресурса, а также о его структуре. Выявленные противоречия между объективной необходимостью теоретического обоснования и практической апробацией модели проектирования цифрового образовательного ресурса для обучения иностранному

языку магистрантов неязыкового вуза и недостаточная изученность данного вопроса определяют научную новизну исследования.

Результаты. Теоретическая значимость исследования заключается в обосновании модели, включающей в себя поэтапную организацию педагогической деятельности с учетом дидактической, организационной и технической составляющих моделирования. Практическая значимость заключается в разработке модели цифрового образовательного ресурса «Деловой английский язык для магистрантов».

Заключение. В результате исследования выявлено, что понятие «цифровой образовательный ресурс» предполагает возможность взаимодействия педагогов с обучающимися в дистанционном формате, включая элементы обучения и контроля уровня знаний. Разработанная модель включает в себя конкретные этапы разработки, мониторинга и требования для обеспечения эффективного использования ресурсов. Материалы статьи могут быть полезны исследователям в области педагогики, преподавателям иностранных языков высших учебных заведений.

Ключевые слова: моделирование, цифровой образовательный ресурс, высшее образование, иностранный язык

Introduction

The new education paradigm is making digital learning resources (DLRs) increasingly crucial to teaching Master's students at the Lobachevsky Institute of Mathematics and Mechanics, part of Kazan Federal University (KFU). The demands for remote learning at university level are closely aligned with Russia's national strategy, where digital transformation in education is the ultimate goal. Contemporary research reframes teaching as instructing students in both physical and virtual spaces, calling for the development and application of digital technologies (Seidullayeva et al. 2022). According to I. P. Burukina and A. V. Ponachugin, DLRs foster teacher–student interaction; meanwhile educators themselves gain and improve their design skills through digital course creation (Burukina 2021, 1; Ponachugin, Lapygin 2019).

A review of pedagogical literature reveals the variety of DLR design and implementation aspects examined by researchers. For instance, I. P. Burukina and A. V. Ponachugin focus on how universities use multimedia DLRs, in terms of resource design, analysis, and examination (Burukina 2021, 1; Ponachugin, Lapygin 2019), whereas G. Seidullayeva thoroughly explores the various stages of DLR creation (Seidullayeva et al. 2022). The study by O. Istrate proposes using digital resources and online applications to create learning opportunities

(Istrate 2018). Focusing on the improvement of teachers' digital literacy, R. Tammaro notes that designing open learning resources is one possible way to achieve it (Tammaro et al. 2025). In another study on the challenges of teacher training, K. A. Aidarbekova highlights that future primary school teachers need to learn how to use DLRs, while the digital learning environment needs to be reframed as an integrated system (Aidarbekova et al. 2021). Research by M. Abdurazakov concerns instructional principles applied in DLR development (Abdurazakov et al. 2020). Meanwhile, A. Cohen puts forward a hypothesis that creating local and distributed DLR databases across various levels can improve educator efficiency (Cohen et al. 2013). In the works of O. Estrada-Molina and K. Xie, we find an overview of DLR design components and associated technologies, along with researcher-designed guidelines and criteria for assessing how productively such components and technologies are utilized. In its assessment of DLR usability, the model combines research insights in education and computer technology (Estrada-Molina et al. 2022; Xie et al. 2018).

As M. A. Camilleri and I. Alberola-Mulet examine teacher attitudes toward DLRs, they discover that educator interest is notably growing (Alberola-Mulet et al. 2021; Camilleri, Camilleri 2017). Similarly, T. B. Pavlova's research focuses on how DLRs are perceived by higher

educators implementing blended learning (Pavlova 2021). For an additional perspective on the research, design, culture, and practice of introducing open DLRs, we can turn to the work of H. Tang, who believes that digital learning will lower student expenses on textbooks without diminishing education outcomes (Tang 2021). In a study dedicated to university-level digital courses in the humanities, D. N. Bilalova concludes that with DLRs, the methodological toolkit expands and students enjoy more diverse assignment formats, making classes more engaging and memorable (Bilalova et al. 2020). The practical challenge of DLR integration is addressed by M. G. Moskalev through developing and testing a specialized training course for educators (Moskalev et al. 2022). The focal points of J. Choppin's work are modern trends and prospects in DLR design, development, and use: the author examines issues that arise from the differing interests and interactions among resource designers, administrators, publishers, and end users at the DLR creation stage (Choppin, Borys 2017).

Pedagogical literature analysis points to a lack of sufficient theoretical and practice-oriented research on modeling Master's level DLRs for foreign language classes. This gap leads to our study's key question: how can one create an effective DLR for teaching Master's students Business English? This article thus proposes a DLR design model, targeted at a non-linguistic university.

Literature review

Select approaches to defining DLR as a concept

Currently, researchers define DLRs in a variety of ways, based on the resource's focus, language environment, didactic goals, type of training, methodological purpose, programming mechanism, and organizational specifics (Ponachugin, Lapygin 2019). For instance, V. N. Podkovyrova views a DLR as a comprehensive information and learning system consisting of simple and complex elements (subsystems) (Podkovyrova 2009). Another notable study

by D. Churchill explores various approaches to DLR design and integration with curricula, specifically the development of digital courses for STEM students. The researcher describes DLRs as multimedia resources specifically developed for education (Churchill 2017).

Based on the approaches described above, we can define a DLR as a teaching tool digitally designed and tested for sustainably supporting remote learning. It needs to facilitate monitoring lessons, grading unsupervised assignments, and testing the students' knowledge level — all while meeting the requirements of the Federal Higher Professional Education Standard for Master's Students, in our case Master's students at a non-linguistic university.

DLR design: Development stages

Researchers are confident that the task of designing a DLR requires competence in information technology (IT) and capacity for applying IT knowledge in practice. Literature identifies a number of DLR development stages and recommends implementing them consistently to obtain a high-quality teaching tool (Burukina 2021). Pedagogical studies employ several approaches to defining DLR design stages. Some authors attach primary importance to the analytical stage, which includes determining the subject scope, reviewing materials, and formulating requirements (Ponachugin, Lapygin 2019). Others, like G. Seidullayeva, find it crucial to first determine what a DLR is being designed for, and then correlate the resource's purpose with its content. The next essential step, according to the same researcher, is to select technologies that match the digital literacy level of the teacher creating the resource (Seidullayeva et al. 2022). Other important stages include testing, making adjustments, and assessing the resource's effectiveness — as agreed upon by multiple studies (Ponachugin, Lapygin 2019; Seidullayeva et al. 2022). We further concur with G. Seidullayeva in that recommendations on DLR use need to be singled out into a separate stage. When properly instructed, students will find working with this new teaching tool to be less stressful, and the

course's overall impact will improve (Seidullayeva et al. 2022).

A DLR is expected to comply with certain requirements, which researchers divide into didactic, organizational, and technical (Bychkova 2021; Ponachugin, Lapygin 2019).

The foremost didactic requirements, as per A. V. Ponachugin, are:

- reliable scientific data;
- accessibility;
- a personalized approach to remote learning; and
- development of skills that facilitate interaction in the digital environment (Ponachugin, Lapygin 2019).

Organizational requirements are, in turn, listed as follows:

- compliance with educational standards, curricula and disciplinary programs;
- customizable content; and
- recommendations for students on how to use the resource.

Finally, technical requirements should include:

- stable operation;
- student data protection;
- high-speed information sharing; and
- easy installation on a personal computer (Ponachugin, Lapygin 2019, 5).

A. V. Ponachugin's approach is shared by D. D. Bychkova and G. Seidullayeva, who further recommend introducing mental and physical health safeguards, tailored to how students engage with the material across age groups. This will foster a comfortable and welcoming environment and protect students from academic burnout (Bychkova 2021; Seidullayeva et al. 2022). Of particular interest is E. R. Barros' experience in applying innovative design processes to the creation of digital learning content. A multimedia application, when used as a textbook supplement, opens the doors for creative education adapted to the student's personal learning pace (Barros et al. 2014).

Most commercial LMSs (learning management systems, which we define as software applications for administering remote courses) do not include recommendation tools for guiding

students through the learning process. When using such platforms, according to N. M. Ndiyaе, teachers do not have the full picture of their students' activities; nor can they provide any recommendations, comments, or timely support. The researcher, therefore, finds it especially important to ensure that teachers and students can communicate throughout using the DLR (Ndiyaе et al. 2019).

A monograph by A. Kh. Guseva builds a theoretical foundation for structuring a DLR and choosing a format for multimedia didactic materials; additionally, it provides practical recommendations on teaching tool development. The author emphasizes that the e-learning products used in the higher education system require an in-depth analysis in terms of their structure, content elements, and means of assessment. We find A. Kh. Guseva's approach to the stages of DLR design particularly relevant to our study. The researcher identifies such important stages as:

- methodological approach formulation;
- material selection;
- goal-oriented content and software selection;
- DLR web design;
- module navigation and cross-referencing;
- document and multimedia arrangement; and
- online registration and DLR administration (Guseva 2018).

Likewise, D. D. Bychkova's research is of great interest, as it both divides the process of DLR design into stages and provides a detailed description of each stage's content (Bychkova 2021). This author's structural outline of the teaching tool follows a clear logic, making it possible to replicate her DLR design in real practice. The first step is to determine the design goals and resource structure, followed by a specification of DLR features and requirements. Next comes the software selection and the formulation of uniform requirements, along with an algorithm for designing each course module. Finally, the DLR is brought to completion, and its developers begin to upload lesson materials (Bychkova 2021). That said, D. D. Bychkova's work does have certain limitations, in that her model lacks several design stages: DLR assessment criteria, expert evaluation, and student-

oriented recommendations and consultations on DLR use and on designing personalized DLR elements.

Discussion

DLR design: Search for effective models

Modeling is one of the most reliable and widely used methods of pedagogical research. It involves designing, studying, and testing models that offer new knowledge on various education aspects and on the entities involved in the education system. Such models must include the following key elements:

- a visual representation of the phenomenon in question;
- an abstract representation of all components;
- a creative approach with elements of scientific forecasting;
- the use of logic and analogy in the model's structure;
- hypothetical nature;
- potential for practical implementation by both developers and users (Downes 2007).

Developers note that creating a model is a complex and labor-intensive process that needs to align with specific pre-approved stages. During the first stage, researchers consolidate hand-on experience to formulate a hypothesis for the model. The second stage involves planning the research, organizing practice-oriented classes, correcting errors identified during the pilot launch, and following the recommendations of experts or reviewers. The third stage results in the model's final version, potentially selected from several projects prepared at the previous stage (El Mhouti, Azeddine 2013).

When researching the development of models for sustainable open learning resources, S. Downes combines financial, technical, and content model types in order to create an effective DLR (Downes 2007). An important component of the modeling process is the development of administrative, organizational, psychological, pedagogical, didactic, and technological criteria for analyzing and assessing DLR quality and efficiency. The model developed by E. M. El Mkhouti Abderrahim involves

the evaluation of DLRs used in the classroom or online (El Mhouti, Azeddine 2013).

Academic mobility, in particular the enrollment of foreign students at universities, creates a demand for DLR courses that support remote learning. By working with foreign students remotely, teachers can adjust and customize course content, improving education outcomes. In this respect, E. Yu. Semushina finds reverse design models and flexible models to be the most productive. The former are the most suitable for mastering a discipline, as they presuppose that students will achieve certain results. Conversely, if the training process involves mixed groups of multilingual students and aims for a diversified approach based on their individual skill levels, the researcher considers flexible models to be more effective (Semushina 2023).

Additionally, E. Yu. Semushina lists four most frequently used DLR models (ADDIE, SAM, ASSURE, and 4C/ID), highlighting the advantages of the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model for working with mixed multilingual groups. The researcher points out that any teacher, regardless of prior training level, should be capable of creating a DLR that follows the ADDIE model. Consequently, ADDIE finds many uses in open online courses, at universities, and in the corporate sector, both in the synchronous and the asynchronous format. The model encompasses five stages, which are clearly spelled out in its name and correspond to the sequential steps taken by developers. The ADDIE model has a number of advantages. It is versatile, and its system is complex, taking into account both the design stage and the subsequent preparation, development, and effectiveness evaluation. Finally, it is grounded in thorough analysis that involves formulating research-informed hypotheses. Nonetheless, E. Yu. Semushina highlights the model's shortcoming: it takes a significant amount of time to develop, due to the scope of the course program and the study depth.

The approaches to developing a DLR model, as discussed above, are further illustrated in Table 1.

Table 1

Approaches to developing a DLR model

Author	Key features	Disadvantages
S. Downes (2007)	Model specifications: a visual representation of the phenomenon; an abstract representation of all components; a creative approach with elements of scientific forecasting; the use of logic and analogy in the model's structure; hypothetical nature; potential for practical implementation by both developers and users	The process of choosing the type of model (funding, technical, and content aspects) is too complex There are requirements for volunteers, incentives, community, partnerships, co-production, sharing, and distributed management and control
E. Yu. Semushina	The model can be used synchronously and asynchronously for open online courses at universities and in the corporate sector. It is versatile and suitable for working with mixed groups of multilingual students	The design, preparation, development, and effectiveness evaluation stages are too complex The model requires in-depth analysis that involves leveraging research insights to build upon the scientific hypotheses
E. M. El Mhouti Abderrahim, N. Azeddine (2013)	The model includes three fixed stages: 1. Formulating a hypothesis through studying, analyzing, and summarizing hands-on experience; 2. Planning research, organizing practice-oriented classes, correcting errors identified during the pilot launch, and following the recommendations of experts or reviewers; 3. Preparing the final version of the model	The creation of the model is complex and labor-intensive, and has to follow a set of pre-approved stages
D. D. Bychkova (2021)	The model includes four stages: 1. Determining the goal and structure of resource design; 2. Specifying the resource features and requirements; 3. Selecting software and formulating uniform requirements and the algorithm for designing each module; 4. Completing the DLR, adding lesson materials	The model lacks the following important steps: development of DLR assessment criteria, expert evaluation, student-oriented recommendations and consultations on DLR use and on designing personalized DLR elements
A. Kh. Guseva (2018)	The model substantiates the DLR's structural features and multimedia content with prior research. It is complemented by practical recommendations for developing a digital multimedia teaching tool. The model includes seven stages: 1. Methodological approach formulation; 2. Material selection; 3. Goal-oriented content and software selection; 4. DLR web design; 5. Module navigation and cross-referencing; 6. Document and multimedia arrangement; 7. Online registration and DLR administration	The structure, content elements and assessment tools used in the higher education system's remote learning products require an in-depth analysis

When choosing a model for the Business English for Master's Students course, we accounted for three factors: time costs, training objectives, and the course format. The time allotted by the university is sufficient for course design. Course developers are required to follow the Federal Standard, as it is assumed that those students who have successfully completed the course will receive diplomas and government certificates. In the process of modeling the course, we noted the need for a number of stages not included in the ASSURE model. Namely, the model lacks a technological stage, where the content, methods, and technical means of addressing education challenges are determined. Nor does it account for a result analysis stage, a pilot launch stage, or a stage where the course is integrated into the discipline's curriculum. Our pedagogical literature review and practical experience in DLR modeling allowed us to condense our design concept into a diagram (Fig. 1) and move on to course development and the model's actual content.

Results

Designing a digital learning resource for teaching Master's students

This study section presents the genesis of the Business English for Master's Students DLR. This resource's target audience are first-year Master's students from the Institute of Computational Mathematics and Information Technology, enrolled in one of the following programs: Applied Mathematics, Applied Mathematics and Computer Science, Information Systems and Technologies, Information Security. The Business English discipline is part of Year 1 full-time Master's program and awards 2 credits for 72 academic hours, of which practical classes take up 18 hours, and the remaining 54 hours are dedicated to unsupervised assignments. The goal of the course is to give students new social perspectives through foreign language mastery, for a better-rounded self-actualization, self-expression, and self-affirmation. The course has eight modules, each

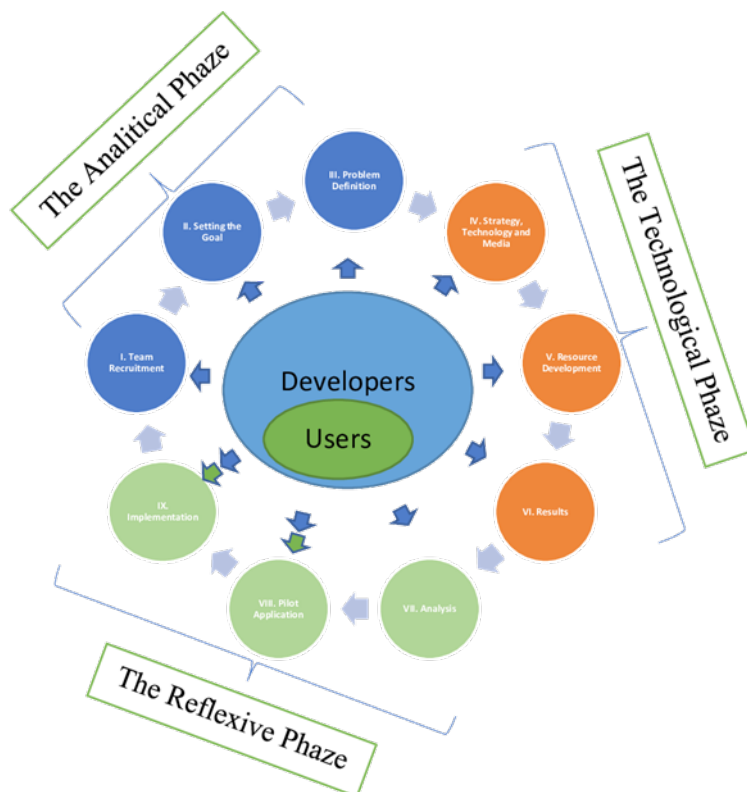


Fig. 1. Model of the Business English for Master's Students DLR

containing texts, glossaries, exercises, videos, and tests that help form, activate, and consolidate the essential business English vocabulary. Throughout the course, students also have their knowledge levels monitored as they prepare for earning their midterm and final credit.

In order to test the effectiveness of the DLR model developed for the course, 97 first-year Master's students participated in its pilot launch. The control group (48 students) relied solely on textbooks and study guides recommended by the university's Department of Foreign Languages and available at the university library. The experimental group (49 students) took the Business English for Master's Students course via the DLR.

The course's desired outcome is a competent application of modern communication techniques to academic and professional interactions in a foreign language. Following the training, a Master's student should have a grasp on business English and use it in various real-life situations; know grammar structures and conversational formulas typical of business etiquette and professional communication; and be aware of English-speaking countries' traditions and cultural norms.

The Master's student is therefore expected to:

- understand spoken English through context cues;
- use appropriate vocabulary;
- replicate lexical compounds, idioms, clichés, and phrasal verbs;
- identify professionally relevant information when browsing online resources and media in English;
- engage in dialogue and monologue during business communication;
- read, translate, and analyze professional and business texts written in English;
- compose business correspondence according to the official language norms;
- use dictionaries, reference literature, and Internet resources; and
- communicate in English over the phone.

All of the above calls for both listening skills, which are essential for understanding solo presentations and conversations in a business environment, and for writing skills, crucial

to business correspondence and documentation. Additionally, it is vital for the student to be able to engage in business negotiations and speak at meetings.

When starting their DLR-facilitated classes, Master's students must meet the following requirements:

- their English proficiency must be at B1 or higher;
- they must complete their assignments as instructed; and
- they must submit the completed assignments before the deadline set by the teacher.

The aforementioned eight course modules are listed below:

1. Company Structure: An Internal Perspective;
2. Business Telephone Etiquette;
3. Conflict Management and Negotiation;
4. Business Presentations;
5. Business Correspondence;
6. Discussing Future Plans;
7. Cultural Differences in Business Communication;
8. Job Interviews, Career Planning, and CV Writing.

In line with the researcher-proposed requirements, a DLR must:

- support students' understanding and retention of course material;
- be intuitive and easy to use;
- be interactive; and
- support sustainable student-teacher communication.

According to literature, meeting the criteria above means that a DLR will optimize personalized remote learning and increase student motivation to engage with the discipline (Bychkova 2021, 2; Seidullayeva et al. 2022, 6).

The DLR was developed on the do.kpfu.ru website, by means of LMS Moodle (Modular Object-Oriented Dynamic Learning Environment), a platform designed to create and test courses. This allowed for transferring the course, once tested, to the edu.kpfu.ru remote learning portal. With LMS Moodle, educators can build a remote learning system, test students, engage in communication, collect databases, and analyze education outcomes. Fig. 2 below features a screenshot of the

course's first module, including such essential DLR components as instructions for students, a list of references, a lecture on grammar, a Power Point presentation for the lecture, and a glossary.

A mandatory DLR aspect for a Master's foreign language course is the development and

improvement of reading comprehension, specifically that of authentic academic texts, as well as listening comprehension of spoken English in professional and academic settings. Therefore, the course developers included texts, links to videos, and assignments to test how well the students understood the material (Fig. 3).

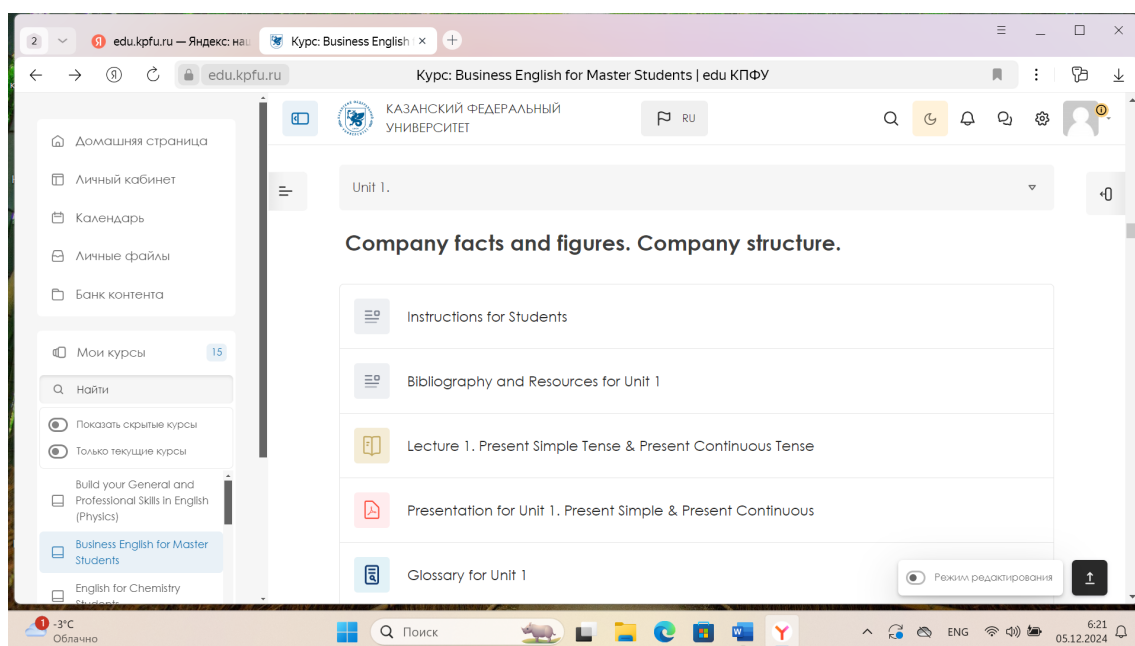


Fig. 2. Mandatory DLR components

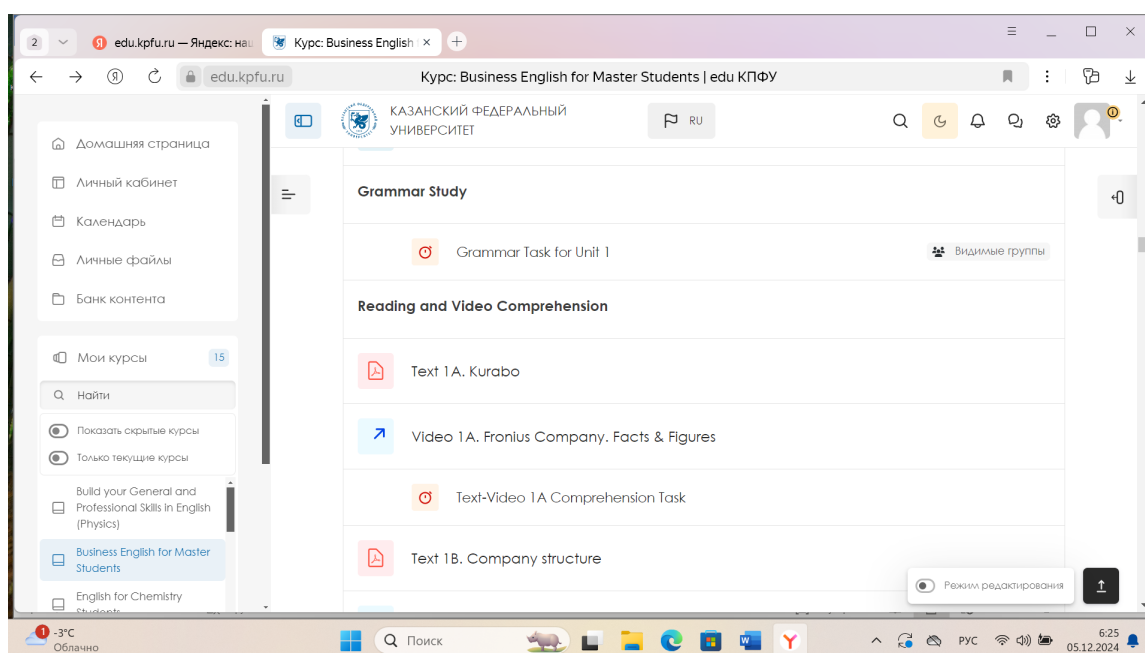


Fig. 3. Development of reading and listening skills

Speaking and writing in English, both in academic and professional circles, is an important skill for Master's level mathematics students. The following figure (Fig. 4) displays training materials and tasks for improving speaking and writing proficiency, as well as unsupervised assignments for self-assessment.

The DLR also offers midterm and final tests to evaluate how much knowledge the Master's students have retained. The tests employ a variety of questions, including open-ended (where the student fills in a missing element), close-ended (where the student is prompted to select one or several options), questions where the student needs to complete a statement, and free-form questions (where the student submits a longer response with statements and arguments, such as an essay). The Moodle platform supports automatic test scoring, which facilitates the teacher's work and saves time on grading assignments. Each assignment is accompanied by detailed instructions for the students taking the course. The teacher sets up assignment deadlines, the number of attempts, and a point-based grading system. DLR quality assessment, approval, and implementation comply with the guidelines of the KFU Center for the

Development and Promotion of Online Education.

The data presented in the Table 2 demonstrate significant performance differences between the control group and the experimental group. In the experimental group, 26 students (53.1 %) performed well, which is 28.1 % more than in the control group (12 students — 25 %). Average performance was recorded among 21 students (42.8 %) in the experimental group and 27 students (56.2 %) in the control group. Two students (4.1 %) in the experimental group performed poorly, which is 14.7 % below the control group (9 students — 18.8 %).

To confirm the validity of the final comparison between the control group and the experimental group, we used the nonparametric Mann–Whitney U-test. By applying the statistical method, we assessed the differences between two independent samples in quantitative terms. The Mann-Whitney U-test, which is suitable for comparing small samples, allowed us to measure the performance gap between the control group and the experimental group. Below are the comparative final diagnostic data, obtained at the formative stage of the experiment (Table 2).

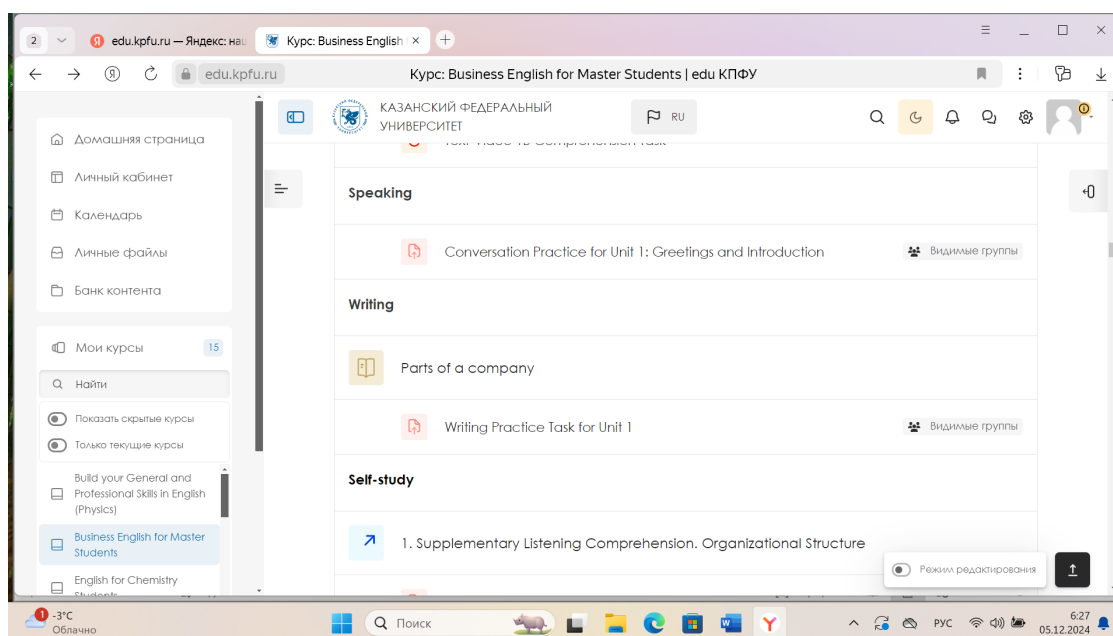


Fig. 4. Development of speaking and writing skills and unsupervised assignment completion

Table 2

**Knowledge assessment in the control and experimental student groups
upon completing the Business English course**

Group / Number of students	Poor performance 56–70 points		Average performance 71–85 points		Good performance 86–100 points	
	Number of students	%	Number of students	%	Number of students	%
Control / 48 students	9	18.8	27	56.2	12	25
Experimental / 49 students	2	4.1	21	42.8	26	53.1

The statistical significance of performance differences between students in the experimental group and the control group — i. e. the difference between their readiness for business interactions in English — has been confirmed at the 99 % confidence level.

Having analyzed literature on DLR modeling and development and possessing hands-on experience in designing the Business English for Master's Students training course, we can now present our DLR design model. The model includes an operational component, wherein

educators act as developers with authorization to edit the course. The developers are focused on the final result — increasing the effectiveness of training offered to Master's students. Therefore, their work is an essential component of the model, inextricably linked with other components. Teachers without authorized editor access and the Master's student groups taking the course do not get involved until the DLR introduction stage, whereupon they start engaging with either select modules or the entire course (Table 3).

Table 3

Development phases for the Business English for Master's Students DLR

Development phases	Development stages		Developers/Teachers/ Students and their statuses
Analytical phase	I. Recruiting the developer team II. Setting the DLR goal III. Defining the DLR problem		Teacher/developer authorized to edit the course
Technological phase	IV. Choosing the learning strategy, technology, media, and materials V. Developing the resource VI. Obtaining results		Teacher/developer authorized to edit the course
	Metadata: Promotional video; Developer copyright data; DLR subject (course name); DLR goals and objectives; The skills acquired;; Expected outcomes; Target audience; Approved curriculum that incorporates DLR use	Modules (1, 2, 3...) Lesson materials (lecture, textbook); Practical tasks; Exercises; Interactive tasks; Tests; Midterm test;; Sources cited; Forum (communication platform); Final test with automated grading;	

Table 3. Completion

Development phases	Development stages	Developers/Teachers/Students and their statuses
Reflexive phase	VII. Analyzing and reviewing the DLR design Approval from the KFU Center for the Development and Promotion of Online Education; Digital certificate and course transfer to edu.kpfu.ru VII. Launching the pilot version of the course, making adjustments and additions VIII. Integrating the course into the learning process and including it in the general curriculum and discipline plan	Teacher/developer authorized to edit the course Teacher unauthorized to edit the course Students participating in the course

Conclusion

The process of modeling a DLR for training Master's students has multiple didactic, organizational and technical aspects, which reflect the step-by-step structure of the teaching process. Our DLR model aims to improve business English skills among Master's students and to show them how to engage with remote learning tools within a digital environment.

The model created for the Business English for Master's Students course aids developers

with building a comprehensive and effective course on the Moodle platform. The steps within the model optimize the process without missing crucial components, such as quality assessment and performance monitoring.

This study does not provide an exhaustive solution to the problem of DLR modeling. Future research could focus on software tools and on identifying the criteria, levels, and algorithms for resource assessment.

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Поступила в редакцию: 28 апреля 2025.

Прошла рецензирование: 22 августа 2025.

Принята к печати: 1 декабря 2025.