

RU

Методика развития академического письма на английском языке для специальных целей и цифровой грамотности у студентов-юристов средствами совместного редактирования

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Аннотация. Цель исследования – разработать и эмпирически апробировать методику на основе скаффолдинга (поэтапного педагогического сопровождения), интегрирующую профессионально-дискурсивную компетентность, академическое письмо и цифровую грамотность в рамках курса ESP (English for Specific Purposes – английский для специальных целей) для студентов-юристов первого курса посредством выполнения последовательных заданий на совместное редактирование юридической терминологии, интеграцию источников и создание оригинальных текстов в контролируемой цифровой учебной среде (CDLE – Controlled Digital Learning Environment). В статье представлена трехэтапная методика, реализованная посредством контролируемой цифровой учебной среды (CDLE), которая функционирует не как техническая платформа, а как целенаправленно сконструированное педагогическое условие, обеспечивающее защищённое (от внешнего доступа и педагогически контролируемое) пространство для совместного редактирования текстов студентами в малых группах (2-4 человека). В ходе восьминедельного исследования, организованного по принципу дизайн-исследования (design-based research), с участием 50 студентов первого курса юридического факультета (уровень английского языка B1 и выше) применялись смешанные методы сбора данных: рубричное оценивание, анализ журналов правок, автоматический лингвистический анализ и опросы. В рамках постепенного уменьшения внешней поддержки (скаффолдинга) – редактирование юридической терминологии (в адаптированных энциклопедических статьях), интеграция авторитетных источников (нормативных актов, научных публикаций) в редактируемый текст и создание оригинальных разделов учебной статьи – оценивалось развитие у студентов профессионально-дискурсивной компетентности (включая терминологическую точность), навыков академического письма и цифровой грамотности (в части работы с источниками). Научная новизна исследования состоит в следующем: во-первых, разработана и апробирована трёхэтапная методика с поддержкой (скаффолдингом) для студентов-юристов, объединяющая профессионально-дискурсивную компетентность, академическое письмо и цифровую грамотность через совместное цифровое редактирование в среде CDLE; во-вторых, в рамках данной методики предложена логика постепенного снятия поддержки – от редактирования терминологии через интеграцию источников к созданию собственных разделов – с обязательным формирующим оцениванием; в-третьих, обосновано, что CDLE в данном случае – не просто технический инструмент, а полноценное педагогическое условие, которое позволяет интегрировать три компетенции в ESP-курсе, в полном соответствии с требованиями федеральных государственных образовательных стандартов высшего образования третьего поколения (ФГОС ВО 3++) к формированию универсальных компетенций УК-4 (коммуникация на иностранном языке) и УК-1 (поиск, критический анализ и синтез информации). В рамках предлагаемой методики контролируемая цифровая учебная среда (CDLE) позволяет решать ряд ключевых педагогических задач, обеспечивая студентам безопасное пространство для экспериментирования с языковыми и жанровыми формами, снижая тревожность и страх публичной ошибки, и создаёт условия для обучения через пробные действия и последующую корректировку на основе обратной связи. При этом процесс совместной работы студентов в малых группах остаётся прозрачным: все правки и изменения текста фиксируются, что позволяет осуществлять более точное формирующее оценивание каждого этапа. Последовательность заданий на каждом этапе трёхэтапной методики способствует постепенному переходу от работы с поддержкой (скаффолдингом) к самостоятельной деятельности в течение восьминедельного модуля. Предложенная методика соответствует требованиям ФГОС ВО 3++ к универсальным компетенциям в сфере профессиональной коммуникации на иностранном языке и информационно-коммуникационных технологий. Полученные результаты подтверждают, что профессионально-дискурсивная компетентность, академическое письмо и цифровая грамотность могут эффективно развиваться в указанной педагогически структурированной среде (CDLE).

Студенты продемонстрировали значимый прирост в точности использования юридической терминологии (+3,5 балла), оформлении авторитетных источников (нормативных актов, научных публикаций) (+4,4 балла) и структуре/стиле текста (+2,6 балла). Качественный анализ выявил растущее понимание студентами жанрово-стилистических норм юридического дискурса. Предложенная методика может быть адаптирована для курсов ESP в других дисциплинах (медицина, инженерия, экономика) путем замены дисциплинарных материалов на соответствующие, сохраняя ключевые принципы методики, и служит примером интеграции совместного цифрового редактирования в учебные планы, соответствующие национальным образовательным стандартам.

EN

A methodology for academic writing in English for Specific Purposes and digital literacy development in law students through collaborative editing

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Abstract. The aim of this study is to develop and empirically test a scaffolding-based methodology (gradual pedagogical support) that integrates professional discourse competence, academic writing, and digital literacy within an English for Specific Purposes (ESP) course for first-year law students through a sequence of collaborative editing tasks focusing on legal terminology, source integration, and original text production in a Controlled Digital Learning Environment (CDLE). The article presents a three-stage scaffolding methodology implemented via a CDLE, which functions not as a mere technical platform but as a deliberately designed pedagogical condition – a secure (externally restricted and pedagogically controlled) space for collaborative text editing in small groups (2-4 students). During an eight-week design-based research study involving 50 first-year law students (English level B1 and above), a mixed-methods data collection approach was used: rubric-based assessment, revision log analysis, automated linguistic analysis, and surveys. Within the sequence of gradually fading external support (scaffolding) – editing legal terminology (in adapted encyclopaedic entries), integrating authoritative sources (legal acts, research publications) into the edited text, and creating original sections of a student research paper – the development of students' professional discourse competence (including terminological accuracy), academic writing skills, and digital literacy (in terms of source handling) was assessed. Scientific novelty of the research lies in the following: (1) a three-stage scaffolding methodology for law students has been developed and tested, integrating professional discourse competence, academic writing, and digital literacy through collaborative digital editing in a CDLE; (2) within this methodology, a logic of gradual scaffolding withdrawal is proposed – from terminology editing through source integration to original section writing – with mandatory formative assessment at each stage; (3) it is substantiated that the CDLE in this context is not merely a technical tool but a fully-fledged pedagogical condition that enables the integration of the three competences within an ESP course, in full compliance with the requirements of the Russian Federal State Educational Standard (FSES HE 3++) for universal competences UC-4 (communication in a foreign language) and UC-1 (information search, critical analysis, and synthesis). Within the proposed methodology, the CDLE addresses key pedagogical tasks by providing students with a controlled environment for experimenting with linguistic and genre forms, reducing anxiety and fear of public error, and creating conditions for learning through trial actions and subsequent correction based on feedback. Moreover, the collaborative work process in small groups remains transparent: all text revisions are logged, enabling more precise formative assessment at each stage. The sequence of tasks within each of the three stages facilitates a gradual transition from scaffolded work to independent activity over the eight-week module. The proposed methodology aligns with the FSES HE 3++ requirements for universal competences in professional foreign language communication and information and communication technologies. Findings confirm that professional discourse competence, academic writing, and digital literacy can be effectively developed within this pedagogically structured environment (CDLE). Students demonstrated significant gains in legal terminology accuracy (+3.5 points), formatting of authoritative sources (legal acts, research publications) (+4.4 points), and text structure/style (+2.6 points). Qualitative analysis revealed students' growing understanding of the genre and stylistic norms of legal discourse. The proposed methodology can be adapted for ESP courses in other disciplines (medicine, engineering, economics) by replacing the disciplinary materials accordingly while preserving the key principles of the methodology. It serves as an example of integrating collaborative digital editing into curricula that comply with national educational standards.

Introduction

The relevance of this study is grounded in global trends emphasizing digital competencies in education (UNESCO, 2024; Bendeck Soto, 2024), which have prompted Russian higher education to continue exploring structured digital environments for developing academic and professional competencies. Modern students exhibit

a sustained engagement with digital tools and participatory online environments (Xiaodi, Yunus, Rafiq, 2024), rendering such settings particularly promising. In the initial stages of specialist training, there is a strong focus on acquiring precise terminological proficiency as a foundational element for mastering profession-specific discourse (Kravchenko, 2024). However, the transition from traditional instructional formats to more collaborative and text-centered approaches remains uneven and requires careful pedagogical adaptation to local professional, linguistic, and regulatory frameworks. International studies point to the potential of digital collaborative platforms for fostering professional, digital, and communicative skills (Benabbes, Algazo, Alghazo, 2025; Bellhäuser, Siegfried, Röpke et al., 2025; Mena-Guacas, Meza-Morales, Fernández et al., 2024; Ransanz Reyes, Arana-Cuenca, Manzanal Martínez, 2025). However, much of the international research assumes either high learner autonomy or the use of open platforms – conditions that often do not fit our nationally regulated curricula. Novice learners need structured scaffolding: without it, they struggle with text organisation, correct referencing, and consistent style. In this study, “academic writing” means professional legal English that follows genre conventions, maintains a formal tone, and integrates sources properly.

The present study proposes and implements a scaffolded pedagogical methodology for first-year students within an English for Specific Purposes (ESP) context to address this gap and to empirically explore its pedagogical potential for collaborative digital editing. The key element of our pedagogical design is the implementation of a Controlled Digital Learning Environment (CDLE) – not merely a secure technical platform, but a deliberately structured learning condition that enables students to engage in authentic collaborative editing and source integration while ensuring psychological safety, structured feedback, and alignment with institutional requirements.

The study addresses the following research tasks:

1) to design and test a three-stage scaffolded methodology (terminology editing → source integration → section creation) in a CDLE for first-year law students, clarifying what each target competence consists of – namely, professional discourse competence (accurate legal terminology and genre conventions), academic writing (logical argumentation, formal tone, evidence), and digital literacy (finding, verifying, integrating, and referencing authoritative sources) – and how collaborative digital editing with structured scaffolding helps develop them;

2) to show how the methodology aligns with the Russian Federal State Educational Standard (FSES HE 3++) requirements (universal competences in foreign language communication and information and communication technologies), measuring its effect on students’ performance across four rubric criteria: terminological accuracy, use of sources, encyclopaedic style, and logical structure;

3) to identify and systematize the key pedagogical conditions (such as minimum language proficiency, availability of adapted discipline-specific materials, and instructor competence in formative assessment) and invariant design principles (three-stage scaffolding, controlled digital environment, and iterative feedback) that ensure the methodology’s replicability in other professional domains (medicine, engineering, economics).

The research material comprised a cohort of 50 first-year law students who produced over 2,300 text revisions within the CDLE, providing extensive empirical data for analysis. A mixed-methods design-based research (DBR) approach was employed, integrating quantitative rubric-based assessment, automated linguistic text analysis, and qualitative analysis of student reflections and edit logs. The study uses a multi-source data collection strategy (Evenstein Sigalov, Cohen, Nachmias, 2024) and a qualitative, descriptive analytical framework (Adl-Amini, Völlinger, Eckart, 2024) to evaluate the process and outcomes.

The theoretical foundation of the present study draws on digital social constructivism (Salmons, 2009) and problem-based learning (PBL) (Hmelo-Silver, Eberbach, 2012), which emphasize the value of authentic tasks involving information search, evaluation, and application. We also draw on prior research on collaborative digital editing in ESP contexts (Alves, Stephenson, Terán, 2025; Shulgina, Costley, Shcheglova et al., 2024; Tafazoli, McCallum, 2025). We borrowed principles from clinical and professionally oriented education: gradual responsibility transfer, learner agency, and functionally grounded task design (Ghani, Rahim, Yusoff et al., 2021). Based on these, we structured the work into three stages: terminology editing, source evaluation, and section creation.

Russian and international research traditions differ clearly. Russian studies (Бера, Круглякова, 2024; Бермус, 2022) concentrate on aligning with national standards, whereas their international counterparts (Sigalov, Cohen, 2024; Alves, Stephenson, Terán, 2025) prioritize hands-on experimentation.

The main contribution of this research is the presentation of a structured, context-sensitive adaptation of collaborative digital editing to the Russian legal ESP context. Its practical significance lies in the provision of a replicable, FSES-aligned pedagogical methodology that can be integrated into ESP curricula with minimal structural disruption. The proposed CDLE-based methodology and its accompanying assessment rubrics can be adapted for other professional domains (e.g., medicine, engineering) and implemented within standard university learning management systems. The findings also offer guidance for instructor training and the development of sustainable communities of practice. Thus, this study addresses a critical gap in pedagogies that blend digital collaborative tools with genre-based writing instruction in ESP contexts, aligning with contemporary research on writing-enriched curricula.

Discussion and results

Before presenting the findings, we define our three target competences based on the relevant literature (Байбурина, 2023; Kravchenko, 2024; Benabbes, Algazo, Alghazo, 2025; Shulgina, Costley, Shcheglova et al., 2024). In line with these studies, professional discourse competence means using legal terminology correctly and following

English legal writing conventions. Academic writing means structuring logical arguments, maintaining a formal tone, and presenting evidence clearly. Digital literacy means finding, verifying, integrating, and correctly referencing authoritative sources (legal codes, academic publications) using digital tools.

As described in the Introduction, the CDLE functions as a pedagogical setting that balances psychological safety with academic oversight (Benabbes, Algazo, Alghazo, 2025; Veddayana, Suyitno, Widyartono et al., 2025). In the present study, this locally hosted, access-restricted workspace enabled students to revise texts and integrate sources without the privacy and integrity risks associated with open platforms.

To develop and implement the proposed collaborative digital editing methodology, a design-based research approach was adopted. This approach is particularly suitable for developing and testing educational innovations through iterative cycles of design, implementation, and formative evaluation in authentic classroom settings. The study design centred on the initial implementation and evaluation of an adapted pedagogical approach integrated into the standard first-year Legal English curriculum. All the activities replaced conventional tasks such as terminology exercises and short written assignments while maintaining the same instructional time, which helped maintain ecological validity. The study was conducted during the spring semester of the 2024/2025 academic year at a Russian university with a cohort of 50 first-year law students (approximately 60% female, 40% male; aged 18-20 years) in a single-group design, typical for initial pedagogical interventions. The cohort reflects a standard student group in the target context, allowing for an authentic examination of the methodology's feasibility and impact. Inclusion criteria were:

- enrolment in the first-year Legal English course;
- a declared English proficiency level of B1 or higher, as mandated by the course;
- no prior formal experience with structured collaborative digital editing projects.

All participants were native Russian speakers. Law students were selected because of the structured nature of legal terminology and the emphasis on developing terminological competence at the early stage of training (Байбурин, 2023), aligning with the FSES HE 3++ requirements and the importance of maintaining freshman motivation (Eegdeman, Plak, Meeter, 2025; Rooij, Jansen, Grift, 2018). Participation was part of regular coursework; informed consent was obtained for the use of anonymised educational data.

The CDLE was set up as a locally managed workspace with the following technical and pedagogical features.

- Entry & Access: Students access the environment through the institutional LMS, ensuring security and authentication.
- Workspace: Each group works within a dedicated, locally hosted HTML copy of an encyclopaedia-style article, providing a safe, offline editing space.
- Core Pedagogical Functions:
 1. Safe Experimentation – a moderated, closed environment free from public visibility, creating a low-risk space for novice editors.
 2. Structured transparency through edit logging – all edits, comments and version history are tracked, enabling detailed formative feedback and transparent assessment of the collaborative process.
 3. Standards Alignment – the task design and environment structure are explicitly scaffolded to develop competencies outlined in the FSES HE 3++.
- Output: The final product is a collaboratively edited and expanded academic text, with the entire process log available for review.

The module was implemented over eight weeks, with students working in pre-assigned pairs or small groups of three to four persons within the CDLE. The work followed a scaffolded sequence of three stages designed to progress from foundational to complex tasks:

1. *Weeks 1-3: Terminology and Definition Editing* – groups critically reviewed and improved terminology, definitions and translations of adapted articles on core legal concepts (e.g., contract, liability) using curated digital glossaries and corpora, focusing on precision and consistency in professional lexicon.
2. *Weeks 4-5: Source Integration and Verification* – students identified claims requiring support, searched for authoritative sources (legal codes, academic publications) and integrated correctly formatted citations; instructors provided workshops on source evaluation and citation norms.
3. *Weeks 6-8: Collaborative Section Creation* – groups co-authored new sections for their articles on a related sub-topic, requiring clear thesis, structured argumentation, integration of multiple verified sources and adherence to encyclopaedic style conventions.

This design aligns with research showing that digital scaffolding improves text quality (Benabbes, Algazo, Alghazo, 2025) and that technology is effective only when paired with a sound pedagogical strategy (Veddayana, Suyitno, Widyartono et al., 2025).

Throughout all stages, the process was iterative and included cycles of peer feedback within groups and formative feedback from instructors based on assessment rubrics. The module implementation followed a three-phase structure:

- Preparatory Phase: selection and adaptation of articles; orientation sessions.
- Main Phase (three-stage): terminology editing → source integration → original section creation.
- Evaluation Phase: instructor and peer assessment, self-assessment, and reflective writing.

In practice, students made 2,358 text revisions, indicating strong participant engagement and the practical feasibility of the methodology in authentic learning conditions.

To assess the development of the three target competences (professional discourse competence, academic writing, and digital literacy), a 10-point rubric was used (available on request) with four criteria: terminological accuracy, use

of sources, encyclopaedic style, and logical structure. These four criteria were selected because they directly correspond to the target competences. Terminological accuracy shows how well students handle legal terms – that is their professional discourse competence. Use of sources is about digital literacy: finding sources, checking if they are reliable, and citing them correctly. Encyclopaedic style and logical structure together cover academic writing – neutral tone, formal language, clear argumentation. The final score for each student was the average across these four criteria. For the final assignments we also used a separate 40-point holistic rubric. Because this was an exploratory study, we focused more on qualitative analysis – looking at how the texts improved and what students wrote in their reflections. Quantitative data were used to identify general trends rather than to support broad generalizations. We used three open-access tools to get specific, transparent metrics:

- Grammatical errors: number of flags per 100 words (LanguageTool).
- Citation accuracy: ratio of correctly formatted references to total references.
- Vocabulary expansion: increase in unique content words between initial and final text versions.

To improve reliability and validity, two instructors independently assessed a subset of student work. Initial inter-rater agreement was 92% for revision tasks and 87% for holistic writing, with discrepancies resolved through discussion. The rubrics were developed in consultation with subject-matter experts to align with disciplinary standards, and automated tools provided objective checks on linguistic features supporting manual rubric-based assessment. Prior to assessment, both raters participated in a calibration session where they discussed the rubric criteria and scored sample texts until consensus was reached.

Our analysis of the full dataset showed clear progress across all targeted competencies. Table 1 presents the mean scores before and after the intervention on the 10-point scale.

Table 1. Criteria for assessing students' edits

Criterion	Max	Mean Score (Before)	Mean Score (After)	Change (Δ)	SD / Range (Before)	SD / Range (After)	Description / Example
Terminological accuracy	10	5.2	8.7	+3.5	SD $\approx$ 1.3 (range 3.5-7.0)	SD $\approx$ 0.9 (range 7.5-9.8)	Precise use of legal terms "agreement" $\rightarrow$ "legally binding contract"
Use of sources	10	4.5	8.9	+4.4	SD $\approx$ 1.5 (range 2.0-7.0)	SD $\approx$ 0.8 (range 7.5-10)	2+ authoritative, correctly formatted Added: Article 29 of the Constitution of RF (1993)
Encyclopaedic style	10	5.8	8.4	+2.6	SD $\approx$ 1.4 (range 3.5-7.8)	SD $\approx$ 1.0 (range 6.5-9.5)	Neutral tone, formal constructions Reduced colloquial language, increased passive voice
Logical structure	10	5.5	8.1	+2.6	SD $\approx$ 1.6 (range 2.5-7.8)	SD $\approx$ 1.1 (range 6.0-9.5)	Clear thesis $\rightarrow$ argument $\rightarrow$ example Applied claim – data – warrant model

Note: The 10-point scale was used for evaluating individual text revisions.

Table 1 presents the mean score gains for each criterion on the 10-point rubric. The largest improvement occurred in use of sources (+4.4 points), followed by terminological accuracy (+3.5 points). Encyclopaedic style and logical structure both increased by +2.6 points. These quantitative gains are consistent with the qualitative patterns described earlier.

To better understand the nature of students' learning activity, we analysed the distribution of the 2,358 edits across different task types and calculated the average quality scores for each edit category. Table 2 combines competency development metrics with edit type distribution, providing a comprehensive picture of student performance and activity.

Table 2. Student performance dynamics and edit characteristics

Criterion / Edit Type	Before $\rightarrow$ After (Δ)	SD / Range (After)	Share of Edits	Avg. Quality (/10)	Key Example
Terminological accuracy	5.2 $\rightarrow$ 8.7 (+3.5)	SD $\approx$ 0.9 (7.5-9.8)	22% (518)	9.0	Active professional vocabulary expanded. Example: "agreement" $\rightarrow$ "legally binding contract"
Use of sources	4.5 $\rightarrow$ 8.9 (+4.4)	SD $\approx$ 0.8 (7.5-10)	29% (692)	8.4	Citation accuracy >80%. Example: added Constitution of the RF, Art. 29 (1993)
Encyclopaedic style	5.8 $\rightarrow$ 8.4 (+2.6)	SD $\approx$ 1.0 (6.5-9.5)	—	—	Increased formality, neutral tone
Logical structure	5.5 $\rightarrow$ 8.1 (+2.6)	SD $\approx$ 1.1 (6.0-9.5)	13% (301)	8.7	Clear "thesis – argument – example" structure
Grammatical control	—	—	36% (847)	7.1	Based on automated analysis (errors per 100 words)
Motivation & satisfaction	>4.5/5 (post-survey)	—	—	—	High level (mean >4.5/5 on post-module survey)
Sense of contribution	>75% reported	—	—	—	Widely reported (>75% of students)

Note: This table combines competency development metrics (mean scores before/after) with edit type distribution (share and average quality). Variability is indicated by standard deviation (SD) and range.

Distribution of edits by type was not calculated for the encyclopaedic style criterion, as it was assessed holistically based on final text characteristics rather than individual revisions.

Analysis of the entire edit corpus of 2,358 changes showed that the most frequent contributions were text translation and adaptation, accounting for approximately 33%, and sourcing tasks, accounting for approximately 29%. Terminology refinement and new section creation, though less frequent, received the highest expert ratings for quality and complexity, indicating successful engagement with more cognitively demanding tasks. The progression in individual competence can be seen in the following examples:

- **Terminological Precision:** A student's definition evolved from a generic statement – “A contract is an agreement between parties that creates obligations” – to a precise, profession specific formulation: “A legally binding contract under common law constitutes an agreement between two or more competent parties that creates enforceable obligations.”
- **Source Integration:** A vague claim – “Freedom of speech is protected by law” – progressed to a correctly cited legal reference: “Freedom of expression is guaranteed by Article 29 of the Constitution of the Russian Federation (1993)...”
- **Argumentation Structure:** Reflective essays showed advancement from a simple observation – “I learned that contracts need to be clear” – to a structured, source supported argument: “The task required defining essentialia negotii... distinguishing between offer, acceptance, and consideration... supported by referencing Articles 420 and 432 of the Civil Code of the Russian Federation.” (More examples and full descriptions are available on request.)

Students' reflections and post-module surveys showed very high satisfaction (with mean scores above 4.5 out of 5) and a strong perception that the module would be useful for future professional needs. More than 75% of participants had a sense of being part of a professional community, and about two thirds noticed a clear progress in their professional English skills. However, progress was not uniform across the cohort. A closer look revealed that a subgroup of 15-20% of students experienced difficulties. Within this subgroup, the main challenges were: language comprehension (about 24% of these students), initial source verification (around 18%), and technical formatting (approximately 15%). In response, we provided targeted scaffolding, including specially prepared glossaries, workshops on source evaluation, and step-by-step formatting guides, which helped to resolve these issues in later stages. This shows the need for embedded, adaptive support within the module's design.

Overall, the eight-week module led to positive changes across key professional and digital competencies. The structured cycle – article analysis, collaborative editing, multi-source feedback and reflective writing – provides a practical framework for integrating skill development into the curriculum and suggests pedagogical promise for developing terminological competence, academic writing quality, research skills and motivation in ESP, with core design principles adaptable to other evidence-based disciplines.

We demonstrated alignment with the FSES HE 3++ through three key pedagogical functions of the CDLE that directly support the competency development stipulated by the standard:

- safe experimentation – realised through a closed environment without public visibility – reduces affective load and creates a protected space for trial-and-error learning essential for novice students;
- structured transparency of collaboration – ensured by logging all edits, comments and version history – enables detailed formative assessment at each stage and supports students' metacognitive reflection;
- gradual transfer of responsibility – implemented through the three-stage sequence of terminology editing, source integration and original section creation – embodies the principle of fading scaffolding.

These functions directly correspond to FSES requirements for professional communication, information literacy and self-regulation. Thus, the methodology provides a replicable example of how international digital pedagogy can be adapted to a nationally regulated educational context without compromising either innovation or compliance.

To address the third research task, we systematized the factors ensuring the methodology's replicability into two categories: invariant design principles and enabling conditions for adaptation to other professional domains (e.g., medicine, engineering, economics).

The invariant design principles include:

- the scaffolded sequence as a progression structure from simple to complex;
- the controlled digital environment as a pedagogical condition ensuring safety and transparency;
- iterative feedback cycles from peers and instructors;
- focus on terminological precision and evidence-based writing as universal professional skills.

For successful adaptation in other disciplines such as medicine, engineering or economics, only contextual replacement of content and sources is required while preserving these principles. Enabling conditions for scaling include:

- minimum language proficiency at level B1;
- availability of adapted discipline specific article banks;
- instructor training in rubric-based assessment and formative feedback;
- integration into existing university learning management systems such as Moodle.

The CDLE methodology can be scaled without reliance on public platforms, making it both cost effective and compliant with institutional data policies.

Our findings are consistent with several strands of previous research. To begin with, they confirm that collaborative digital editing improves student engagement, research skills, and academic writing (Alves, Stephenson, Terán, 2025; Shulgina, Costley, Shcheglova et al., 2024; Usher, Roll, Fuhrman et al., 2025). Then they show that effective technology integration depends not only on access but also on instructor readiness and pedagogical reflection (Aagaard,

Amdam, Nagel et al., 2025; Tafazoli, McCallum, 2025). Moreover, our results echo Russian scholarship that focuses on FSES alignment and institutional capacity (Брега, Круглякова, 2024; Бермус, 2022; Drugova, Zhuravleva, Aiusheeva et al., 2021), while also addressing the demand from international studies for empirically tested, context-sensitive methodologies (Sigalov, Cohen, 2024; Alves, Stephenson, Terán, 2025; Zou, Xie, Wang, 2023). Our CDLE-based methodology tackles the challenges that domestic research has pointed out. Those include: lack of unified assessment criteria, insufficient teacher training, and technical issues (Шведова, Маевская, 2020; Кривых, Замятина, 2024; Кузьмина, Кочкина, Кузьмин, 2022; Пашков, Пашкова, 2022). We also note that the study responds to calls for FSES-aligned digital pedagogies in legal education (Richardson, McKenzie, Flanagan et al., 2023; Серебренникова, 2024) and demonstrates transferability to other professional domains, as suggested by Vonog, Kolga, Batunova et al. (2022) and Kalugina, Golubtsova (2021). Finally, our findings confirm the value of collaborative digital environments for professional learning and knowledge construction (Tyrrell, Shalavin, 2022; Steils, Hanine, 2023) and agree with evidence that structured digital editing and peer feedback improve writing outcomes (Dori, Lavi, 2023; Li, 2023; Zou, Xie, Wang, 2023).

The study has several limitations inherent to its exploratory design:

- The lack of a control group and the single group, single context implementation limit causal inference and statistical generalisability; the findings represent indicative trends from a pilot implementation.
- The CDLE, while pedagogically justified, differs from open platforms, and the study does not capture learning effects associated with public contribution and community collaboration.
- The eight-week intervention precludes conclusions about long term skill retention and transfer, and the findings are most applicable to L2 learners at a B1 level or higher.

Conclusion

The study addresses a clear gap in Russian ESP teaching: few FSES-aligned methods for collaborative digital editing had been tested with first-year students. A scaffolded methodology, built around a Controlled Digital Learning Environment (CDLE), was designed and tested. The results show that such an environment is effective. As a pedagogical condition, not just a technical platform, the CDLE helps law students develop all three competences within a standard national curriculum.

The first research task involved defining the three competences – professional discourse competence, academic writing, and digital literacy for legal ESP. The definitions clarified how each competence develops and why a CDLE with structured scaffolding suits first-year law students. These definitions then shaped both the teaching design and the assessment criteria.

The second task was to test the methodology. A scaffolded sequence of three stages – terminology editing, source integration, and original section creation – was developed and implemented over eight weeks within a regular Legal English course, without additional teaching hours. The CDLE gave students a secure, traceable workspace. Fifty students participated and produced over 2,300 text revisions. Both numbers and qualitative evidence showed clear progress. Terminological accuracy went up by 3.5 points, source formatting by 4.4 points, and text structure/style by 2.6 points (on a 10-point scale). Citation accuracy in final assignments was above 80%, and grammar errors per 100 words dropped noticeably. Students also learned to write clearer legal definitions, use authoritative sources properly, and build evidence-based arguments. Motivation was high: average satisfaction scores were above 4.5 out of 5, and more than 75% felt they were part of a professional community.

The third task had two parts: showing that the methodology fits the FSES HE 3++ and identifying what it takes to adapt it to other fields. Three pedagogical functions of the CDLE directly support the competences required by the standard – safe experimentation, structured transparency, and gradual transfer of responsibility.

To use the same design in medicine, engineering, or economics, one only needs to replace the content and the sources. The basic enabling conditions are: B1 language proficiency, a bank of adapted discipline-specific articles, instructor training in rubric-based assessment and formative feedback, and integration into an existing LMS like Moodle.

For practitioners, several steps help make the methodology work. First, check that students have at least B1 English and give them a short introduction to collaborative editing and citation rules. Second, prepare discipline-specific materials – encyclopaedia-style article templates, glossaries, and sample source texts. Based on our experience, eight to ten weeks are sufficient for the three stages. Instructor training is also essential: rubric-based assessment, formative feedback, and using edit logs to track progress. For the long term, we suggest building a shared bank of student-edited articles and encouraging interdisciplinary communities of practice. The CDLE-based methodology can operate on standard university LMS platforms, which keeps costs low and complies with institutional data policies.

In conclusion, the methodology offers a practical example of how to combine pedagogical innovation with the requirements of a national education system. It contributes to both Russian and international discussions about effective, honest digital tools for teaching professional language.

Further research should address several questions. Longitudinal studies are needed to examine the long-term retention of terminological accuracy, academic writing skills, and source handling. The methodology should be tested in other disciplines (medicine, engineering, economics) and with students at different proficiency levels (A2, B2, C1). Another possible direction is a gradual transition from controlled environments to open knowledge platforms, with training in digital citizenship and publication ethics. The impact of CDLE-based modules on instructors' digital

pedagogical competence also remains unexplored. Finally, automated feedback tools based on edit logs and natural language processing could improve scalability and reduce teacher workload.

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