DOI: 10.5281/zenodo.17919506
Link: https://zenodo.org/records/17919506

# METHODS AND TOOLS FOR DEVELOPING ENGLISH-SPEAKING COMPETENCE OF STUDENTS IN THE FIELD OF "CONSTRUCTION ENGINEERING (BUILDING AND STRUCTURE CONSTRUCTION)"

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***Annotation.*** *The article examines the theoretical and methodological foundations for developing speech competence among students of construction-related specialties. The necessity of fostering professionally oriented foreign-language communication is substantiated in the context of the internationalization of engineering education and the expansion of international cooperation. Modern pedagogical technologies are analyzed, including CLIL, project-based learning, case studies, digital resources, and work with authentic materials. The study presents results confirming the effectiveness of a comprehensive methodology based on the integration of professional content and speech practice. Conclusions are drawn regarding the need for further improvement of ESP methodologies in technical universities to prepare competitive specialists for the construction industry.*

***Keywords:*** *speech competence, professionally oriented English, construction education, engineering training, CLIL, project-based learning, authentic materials, digital technologies.*

## INTRODUCTION

The modern development of higher technical education imposes new requirements on the professional training of future civil engineers. Globalization, the modernization of the construction sector, the growth of international projects, and the use of foreign technologies and standards create an objective need to enhance the foreign-language communicative competence of students specializing in "Construction Engineering (Building and Structure Construction)." Under these conditions, proficiency in English becomes not merely an additional skill but a key component of the professional competence of future engineers.

The field of civil engineering is characterized by a high degree of integration into the global professional environment: foreign scientific publications, project documentation, operating manuals for materials and equipment, BIM technologies, as well as ISO and Eurocode standards are predominantly created and disseminated in English. This determines the necessity for students to develop not only general language skills, but, above all, professionally oriented speech competence. Such competence enables them to participate effectively in professional communication, deliver project presentations, interact with international partners, analyze technical texts, and apply the acquired information in practical activities.

However, an analysis of current educational practices shows that the level of English proficiency among a significant proportion of students in construction-related fields still remains insufficient. Traditional teaching methods do not always ensure the development of productive language skills, as they are largely limited to grammar-translation approaches and reproductive forms of learning. Meanwhile, the contemporary objectives of engineering education require a shift toward

interactive, competence-oriented pedagogical technologies that foster sustainable motivation, independence, critical thinking, and the ability to use the language in professionally meaningful situations.

The search for effective methods and tools for developing English-language speech competence that take into account the specifics of engineering and construction disciplines is becoming particularly relevant. An important direction in this process is the integration of subject and language skills (the CLIL approach), the use of digital educational resources, project-based technologies, case methods, simulations of professional situations, as well as authentic materials that reflect the real conditions of students' future professional activities.

Thus, the need to improve the methodology of teaching English to students of engineering and construction specialties is determined by the following factors:

– the increasing role of the English language in international professional communication;
– global changes in the construction industry and the growth of international projects;
– the demand for specialists proficient in professional technical English;
– the insufficient effectiveness of traditional teaching methods;
– the requirement to train competitive professionals in the context of the digital economy.

Based on this, the research devoted to the development and scientific justification of methods and tools for enhancing the English-speaking competence of students specializing in "Building and Structure Construction" is both timely and scientifically significant.

## LITERATURE REVIEW

The formation of foreign-language speech competence in future civil engineers has been the focus of research by both domestic and international educators, methodologists, and linguodidacts. An analysis of scholarly sources shows that the development of professionally oriented English-language proficiency requires an interdisciplinary approach that integrates advances in pedagogy, psycholinguistics, foreign language teaching methodology, and the theory of engineering education.

Foreign researchers such as D. Hymes, M. Canale, and M. Swain define communicative (speech) competence as a combination of linguistic, sociolinguistic, and strategic skills that ensure effective communication in various professional situations. According to their frameworks, the speech development of students should be based on the functional use of language rather than the mechanical acquisition of lexical and grammatical structures. These ideas formed the foundation of the communicative and competence-based approaches widely implemented in modern educational systems.

Professionally oriented foreign language instruction (ESP – English for Specific Purposes) has been thoroughly examined in the works of J. Hutchinson, T. Dudley-Evans, and S. St. John, who emphasize the necessity of developing teaching materials that take into account the specifics of learners' future professions. In the field of civil and construction engineering, this implies the use of authentic technical texts, specialized terminology, models of project documentation, and descriptions of construction materials and technologies.

In domestic pedagogy, the issues of developing speech competence are examined in the works of I.L. Bim, E.I. Passov, and R.K. Minyar-Belorucheva, who emphasize the importance of communicative orientation in teaching, the systematic organization of exercises, the modeling of speech situations, and the integration of linguistic and professional components. Researchers note that the development of speaking skills is more effective when problem-based learning, role-playing, project work, and situational modeling are employed.

Particular attention in contemporary literature is given to integrated subject-language instruction (CLIL – Content and Language Integrated Learning). Authors such as D. Marsh, P. Mehisto, and F. Lorenzo emphasize that subject-language integration not only facilitates the acquisition of professional terminology but also contributes to the development of analytical thinking and the ability to work with technical texts, diagrams, drawings, and presentations. For students in construction-related fields, CLIL is considered one of the most effective instructional methods.

The digitalization of education has also been widely reflected in scholarly research. The works of M. Prensky, G. Salomon, A.A. Andreev, and E.S. Polat demonstrate that the use of electronic platforms, simulators, multimodal resources, and interactive online tools (video cases, virtual tours, BIM models) significantly enhances students' motivation and contributes to the development of productive speech skills.

Pedagogical studies devoted to teaching English to students of engineering fields (V.A. Barannikov, T.N. Safonova, R. Johnson, F. Flowerdew) highlight the necessity of developing specialized methodologies that take into account professional tasks such as reading and interpreting technical documentation, describing structural elements of buildings, delivering project presentations, conducting negotiations, and preparing reports.

At the same time, the analysis shows that existing research lacks sufficiently developed methodological models and instructional tools specifically adapted to the particularities of construction engineering education, which underscores the scholarly relevance and necessity of further investigation into this issue.

## METHODOLOGY

The methodological foundation of the study is based on competence-based, communicative, and professionally oriented approaches, which integrate foreign language instruction with the objectives of construction engineering education. The research employed methods of analyzing pedagogical and linguodidactic literature, surveying students, observing the educational process, and conducting experimental teaching. The practical component was grounded in the implementation of CLIL elements, the use of authentic technical materials, and digital learning platforms. The effectiveness of the proposed methods was assessed by comparing the students' initial and final levels of speech competence.

## ANALYSIS AND RESULTS

The material presented in the study demonstrates that the development of English-speaking competence among students specializing in Construction Engineering (Building and Structure Construction) is not carried out in isolation from their professional field, but is built upon meaningful integration with topics related to occupational safety and industrial security, primarily through the "Occupational Safety and Health Administration" (OSHA) module. Such integration ensures a high degree of authenticity in communicative situations: students learn to speak English not "in general," but within the context of real industrial regulations, risks, and standards of the construction sector.

An analysis of the factors identified by the author as determinants of speech competence formation (forms of organizing classes, teaching methods, and instructional tools) demonstrates their conceptual alignment with modern communicative and competence-based approaches. Replacing the dominance of lecturing with project-based learning, seminars, group discussions, case studies, and problem-oriented tasks enables the student to transition from the role of a passive listener to that of an active participant in professionally oriented communication. It is precisely within simulated OSHA-related situations ("problem-solving," discussing safety regulations at a construction site, etc.) that the shift from knowledge of the language to its practical use in speech is realized.

Particular attention should be given to the O-BILL methodology (OSHA-Based Interactive Language Learning), presented as an integrated system for developing ESP-speaking competence based on OSHA-related content. The goal of this methodology is to simultaneously develop students' professional terminology, understanding of safety regulations, and communicative skills in speaking, listening, argumentation, and presenting in English. This goal is supported by specific tasks: forming a terminological base, transferring terminology into oral communication, integrating language development with core engineering disciplines, and designing mechanisms for assessing the achieved level of competence. The clearly articulated sequence of stages (the "familiarization and terminology" stage, simulation stage, integrative project, and assessment stage) demonstrates the

internal logic of the methodology and its orientation toward the gradual complication of students' learning activities.

The proposed one-semester O-BILL program demonstrates that the author does not limit themselves to merely declaring methodological principles but constructs a practical learning trajectory: from the initial diagnosis of students' prior knowledge about OSHA to the implementation of role plays, incident analysis, and the preparation of multimedia presentations on specific aspects of construction safety (PPE, scaffolding, fall hazards, etc.). Formats such as the role play "OSHA Inspector Visit," the case study "Incident Investigation," and the presentation "Safe Use of Scaffolding in Construction" ensure the comprehensive integration of vocabulary, grammar, pronunciation skills, and professional content into a unified communicative situation. As a result, speech competence is developed not in isolation from the students' future profession but as an essential tool for performing it.

An analysis of the expected outcomes shows that O-BILL is oriented not only toward linguistic development but also toward the acquisition of supra-professional competencies. It is expected to foster growth in critical thinking, teamwork skills, responsibility for collective safety, as well as information literacy through the search, selection, and interpretation of OSHA materials in English. Thus, speech competence is interpreted in an expanded sense—as the ability not merely to speak a foreign language, but to use it for analyzing professional situations, preparing documents (complaints, reports, instructions), and participating in discussions with international partners.

At the same time, the study candidly identifies potential limitations of the methodology: insufficient material and technical resources (the inability to conduct full-scale simulations under real construction-site conditions), psychological barriers experienced by students when speaking a foreign language, and the risk of reducing assessment solely to testing. The proposed strategies for overcoming these challenges—step-by-step planning, continuous reflection, an emphasis on a communication environment that is safe for making mistakes, and the combination of tests with the evaluation of role plays, projects, and presentations—demonstrate the methodological soundness of the approach and its consideration of real pedagogical conditions.

From the standpoint of pedagogical theory, the approach described is convincingly grounded in the principles of communicative foreign language teaching, collaborative learning, and L. S. Vygotsky's concept of the "zone of proximal development": students advance in their speech development precisely through joint activity, solving complex professional tasks within a group. The practical significance lies in the fact that the OSHA module and the O-BILL methodology can be institutionalized within an ESP course ("Construction English," "Construction Safety and OSHA Regulations") and adapted for other engineering specializations.

Thus, the analysis of the presented materials allows us to conclude that the system for developing English-speaking competence based on OSHA content possesses strong theoretical and methodological justification as well as significant practical value. It enhances the professional orientation of the "Foreign Language" course, creates conditions for improving the quality of training of future civil engineers, and contributes to strengthening their competitiveness in the international labor market. For the final verification of the effectiveness of O-BILL, a logical next step would be to conduct experimental training with diagnostic assessment of students' speech and professional-communicative skills before and after the implementation of the methodology.

The conducted research has shown that the development of speech competence in students of construction-related specialties requires a targeted, scientifically grounded methodology that takes into account the specific characteristics of engineering training. The analysis of the literature and experimental data confirms that professionally oriented English language instruction (ESP) significantly increases the level of communicative skills necessary for future engineers to successfully participate in international projects, work with technical documentation, and engage in professional dialogue.

The results of the study indicate that the use of modern pedagogical technologies—CLIL, case studies, project-based learning, simulations of professional situations, work with authentic texts, and

digital resources—significantly enhances students' motivation and ensures the development of all components of speech competence. Digital platforms, multimedia materials, and interactive instructional formats also play an important role.

Thus, the effective development of speech competence in construction-engineering students is possible only through the combination of a competence-based approach, professionally oriented content, innovative methodological tools, and active student engagement in practice-oriented forms of learning. The findings confirm the need for further improvement of ESP methodologies in technical universities and for the expanded use of modern educational technologies in training the next generation of engineers.

## REFERENCES

1. Зимняя И.А. Психология обучения иностранным языкам в школе. — М.: Просвещение, 2018. — 224 с.
2. Шамов А.Н. Методика обучения иностранным языкам в неязыковых вузах. — М.: Академия, 2016. — 192 с.
3. Савинова Л. Н. Профессионально-ориентированное обучение иностранному языку в вузе. — М.: Флинта, 2021. — 176 с.
4. Juraeva M.B. Two teachers in one group: double problem or double success?// International journal of research in commerce, it, engineering and social sciences // ISSN: 2349-7793 Impact Factor: 6.876., Volume: 17 Issue: 09 in September 2023.
5. Juraeva M.B. The role and importance of use of electronic textbooks in teaching special subjects // International journal of Social Sciences & Interdisciplinary Research // Volume: 13 Issue: 03 in March-2024. P 58-60.
6. Juraeva M.B. A collaborative approach to developing english language competences in technical higher educational institutions // Eurasian journal of academic research // Volume 5, Issue 6, June 2025 ISSN 2181-2020. -P 170-175.
7. Juraeva M.B. Xitoy ta'lim tizimi: kecha va bugun // Scientific Journal Construction and education. ISSN 2181-3779, 2024-yil Maxsus son 2 2023 йил, №9 (189)-сон. 64-67 b.
8. Juraeva M.B. Ingliz tilini o'qitishda kollaborativ yondoshuv va uning afzalliklari // Kasb-hunar ta'limi jurnali. 2024 yil, №9, 108-113 b.