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USING PROFESSIONAL TECHNICAL VOCABULARY IN ENGLISH LESSONS AT ENGINEERING UNIVERSITIES

Shakhida Yusupova
docent, Bukhara State Technical University
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Abstract. This article examines the characteristics and methodological approaches to teaching professionally oriented technical vocabulary to engineering students in English for Specific Purposes (ESP) classes. The role of interdisciplinary integration, authentic materials, and modern digital tools in developing future engineers' foreign language communicative competence is analyzed. The key challenges students face in mastering terminological vocabulary are identified, and effective strategies for overcoming them are proposed.

Keywords: English for Specific Purposes (ESP), technical vocabulary, terminology, professionally oriented learning, engineering education, interdisciplinary integration.

In the context of globalization and accelerating scientific and technological progress, fluency in professional English is becoming a key competency for engineering university graduates. Improving engineering solutions, participating in international research projects, and working with English-language technical documentation require specialists to possess not just academic language skills, but also fluency in highly specialized terminology.

However, teaching the course "Foreign Language in Professional Spheres" faces a number of specific challenges: students' varying initial language proficiency, the high density and abstract nature of engineering terminology, and the need to combine linguistic and subject-specific approaches.

1. Specifics of Technical Vocabulary and Language Barriers

The professional vocabulary in technical English has distinct characteristics:

High degree of terminologizing: a predominance of concepts with a narrow, strictly defined meaning, eliminating ambiguity.

Noun Clusters: constructions of several consecutive nouns (e.g., high-pressure liquid chromatography system), the syntactic analysis of which often poses difficulties for students.

False friends and interdisciplinary homonymy: words with common meanings acquire a different meaning in a technical context (e.g., bus, current, valve).

Abbreviations and acronyms: extensive use of abbreviations (e.g., PLC, CAD, HVAC), requiring an understanding of the processes behind them.

2. Methodological Approaches and Strategies for Vocabulary Acquisition

For effective acquisition of professional vocabulary, it is advisable to use a combination of the following methodological approaches:

Contextual learning and working with authentic texts: Memorizing isolated lists of terms ("vocabulary columns") is ineffective. The best results are achieved by introducing vocabulary through authentic sources: equipment specifications, operating instructions, patents, scientific articles, and standards (ISO, IEEE).

Interdisciplinary Integration (CLIL): Content and Language Integrated Learning (CLIL) involves coordinating the English language curriculum with graduating departments. When students study a topic in a specialized subject (e.g., "Strength of Materials" or "Fundamentals of Robotics") in parallel with its discussion in English, a synergistic effect on concept reinforcement occurs.

Identifying terminological clusters and lexical units (Lexical Approach): Teaching to focus on typical word combinations (collocations), rather than individual concepts: Not just: voltage, but set expressions: apply voltage, drop voltage, high-voltage grid, voltage fluctuation.

3. Practical Tasks and Digital Tools

Task Type / Tool	Purpose and Methodology
Analysis of Diagrams and Blueprints (Visual-to-Text Transfer)	Students describe how a mechanism operates or explain a flow diagram using target vocabulary (action verbs: convert, regulate, transmit, actuate).
Case Studies	Solving a specific engineering problem (e.g., troubleshooting a system failure) followed by writing a mandatory technical report in English.
Interactive Flashcards (Anki, Quizlet)	Regular spaced repetition training to memorize definitions and master correct pronunciation of technical terms.
Corpus Linguistics (SKE, COCA)	Working with text corpora to enable self-directed student search for rare term contexts and word collocations.

The systematic and methodologically grounded use of professional technical vocabulary in English language classes at technical universities transforms the language discipline from an abstract subject into a practical tool for future engineering.

Key success factors include moving away from passive rote learning in favor of contextual practice, coordinating with specialized engineering departments, and actively incorporating digital corpus resources. This approach fosters a flexible professional-communicative competence, enabling students to seamlessly integrate into the global engineering environment.

REFERENCES:

1. Dudley-Evans T., St John M. J. Developments in English for Specific Purposes: A multi-disciplinary approach. — Cambridge University Press, 1998.
2. Yusupova, S. (2025, April). NEW PEDAGOGICAL TECHNOLOGIES IN ENGLISH LESSONS IN DUAL EDUCATION. In CONFERENCE OF MODERN SCIENCE & PEDAGOGY (Vol. 1, No. 1, pp. 74-76).
3. Yusupova, S. (2021). Pedagogical Technologies and Students' technical Thinking. TJE-Tematics journal of Education ISSN, 2249-9822.
4. Yusupova, S. (2019). PECULIARITIES OF FORMATION STUDENTS'TECHNICAL THINKING IN EDUCATIONAL PROCESS. Proceedings of Academic Science-2019, 6, 56.