

Developing Lexical Competence in Non-Linguistic Specializations: A Critical Review of Literature and Emerging Research Directions

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Abstract

This article examines the concept of lexical competence and provides a comprehensive review of scholarly literature addressing its development within the context of English for Specific Purposes (ESP). Despite its long-standing history in applied linguistics, lexical competence still lacks a single, unified definition. In ESP instruction, developing lexical competence requires learners to acquire not only subject-specific terminology and conceptual vocabulary but also high-frequency general academic words, semi-technical items, and relevant phraseological units. The analysis reveals that effective lexical competence development cannot be limited to the teaching of terminology in isolation; rather, it must integrate general, academic, semi-technical, and professional vocabulary within a coherent instructional framework. A review of methodological trends demonstrates that although different approaches have been employed across historical periods, content-and-language integrated approaches—such as CLIL and ICLHE—are considered particularly effective for teaching disciplines characterised by academic and conceptual language, including mathematics. These approaches promote deeper lexical processing, contextual usage, and meaningful engagement with subject-specific discourse.

Keywords: lexical competence; English for Specific Purposes (ESP); subject-specific terminology; professional and semi-technical vocabulary; academic vocabulary; mathematics education.

Introduction

The teaching and learning of vocabulary had long been undervalued in language education; however, over the past thirty years, lexical competence has become a central focus in numerous linguistic studies. In particular, the rapid development of linguistics, psycholinguistics, computational linguistics, and discourse analysis in the 1990s brought renewed attention to the role of vocabulary in foreign language instruction. Extensive international research has demonstrated that vocabulary is one of the key determinants of successful language learning and teaching. As a result, the field has witnessed the emergence of a wide range of theoretical and empirical studies, which in turn have generated numerous definitions and terms associated with the concept of “lexis.”

Literature review

The notion of lexical competence, due to the multifaceted nature of words and the complex relationship between form, meaning, and function, does not have a single universally accepted definition. Although scholars across different periods have offered various interpretations of this concept, the Common European Framework of Reference for Languages (CEFR) provides the following definition: “lexical competence is the knowledge of the words of a language and the ability to use them appropriately” [5, 2001]. Lexical competence refers to the knowledge of a language’s lexical and grammatical elements as well as the ability to use them effectively. It comprises both lexical and grammatical components. The lexical elements include phraseological units, collocations, fixed expressions, idiomatic clusters (phrasal verbs, complex prefixes,

set expressions), individual words, and unstable combinations.

At the core of lexical competence lie the concepts of vocabulary or lexis and lexical knowledge, which differ in meaning. Initially, regarding the notions of vocabulary or lexis, the Merriam-Webster online dictionary defines them as “all the words known and used by a person that constitute a language”. Richards and Schmidt describe vocabulary as “a set of lexemes that includes single words, compounds, and idioms” Indeed, in recent years, the term lexis has increasingly been used interchangeably with vocabulary [16, 2006]. Barkroft, Shunderman, and Schmitt explain that the term lexis, derived from ancient Greek, refers to all the words in a language, i.e., the complete vocabulary of a language [3, 571-583p]. Jackson and Amvela emphasize that the terms vocabulary, lexis, and lexicon are synonymous. However, another group of researchers argues that a distinction exists between vocabulary and lexis. Vocabulary consists of words and their meanings, whereas lexis encompasses not only words but also other layers of lexical knowledge [6, 2000]. Lexical knowledge, according to Laufer and Goldshtein, can be defined as “a set of interrelated small units of knowledge” or interpreted as “a continuum of several levels of knowledge, starting from superficial acquaintance with a word to the ability to use it freely and correctly” [7, 399-436p]. In recent years, the development of English lexical competence in various professional fields in our country has become a central focus of scholarly research. These fields include, in particular, engineering, railway and aviation personnel, as well as specialists in economics, medicine, tourism, business and management, energy, banking and finance, and computer engineering. Such studies primarily emphasize the formation of a professional vocabulary tailored to

students’ respective fields, the understanding of terminological units, and the development of skills to use them effectively in communicative activities.

Moreover, research in this area is not limited solely to the development of profession-specific lexical competence. It also aims to improve English teaching methodologies across different educational specialties, identify effective methods for developing lexical competence, and design innovative technological tools for instruction. Specifically, the issue of developing English lexical competence in non-philological fields has been examined by a number of local researchers from various perspectives. For example, Sh. R. Madrahimova, in her work “Lexical Competence and Methods for Its Development,” explored the content and essence of lexical competence and approaches to teaching it [8, 303-309 p]. N. X. Rashidova, in her article “Linguodidactic Problems of Developing Students’ Lexical Competence in English,” analyzed the theoretically dynamic nature of English vocabulary [10, 283-289 p]. H. B. Bakirova, in her article “Educational Content for Developing Lexical Competence and Determining the Professional Lexical Minimum,” provided a scholarly analysis of principles for selecting a domain-specific lexical minimum, emphasizing the identification of field-specific terminologies, their communicative significance, and their functional role within the learning process [2, 86-100 p].

In addition, A. S. Butunbayev and M. X. Gulyamova, in their study “Communicative Approach and the Development of Terminological Competence in Teaching Medical English” [1,2025], D. J. Buranova, in “Methodology of Professional Approach to Teaching English for Medical Students” [4, 119-132 p] and N. A. Rakhimova, in “Specific Features of Teaching Medical Terminology in English Practical Classes,”

investigated effective methods for developing lexical competence in medical students, emphasizing contextual and integrative approaches [11, 80-83 p].

B. H. Kholiyorov and Sh. Khasanova, in their research “Developing Lexical Competence in English Instruction for Agriculture-Oriented Fields,” analyzed the effectiveness of acquiring professional vocabulary through authentic texts [14, 87-95 p]. Additionally, H. U. Saydullayeva, in “Methods for Developing English Lexical Competence in Mining Faculty Students,” highlighted ways to reinforce terminological knowledge in professional communication [12, 105-109 p]. H. V. Nishanova, in “Teaching English Based on Professional Terminology in the Tourism Sector: Innovative Approaches,” examined modern technologies and content-based teaching methods for vocabulary development [9, 337-343 p].

Methodology

This study adopts a theoretical and analytical approach to examine the development of lexical competence in the context of specialized English for academic purposes. Given the focus on reviewing existing theories and research, the methodology emphasizes systematic literature analysis and critical synthesis rather than empirical data collection.

Discussion

However, in most existing studies, the process of developing lexical competence seems primarily limited to expanding terminological knowledge or mastering professional terms. In our view, the full scope of lexical competence is not confined to terminology; rather, in professional communication within a specific field, semi-technical and general academic lexical units are actively used alongside terms. In professional activities, specialists communicate not only through terms but also through these additional lexical layers, which are used for explaining, clarifying,

justifying, comparing, and creating connections between ideas; such processes are carried out through general academic and semi-technical vocabulary. Specifically, in the field of mathematics education, effectively organizing a student’s professional communication, accurately understanding scientific texts, and ensuring clarity and logical coherence in academic writing require the comprehensive acquisition of all layers of specialized vocabulary — technical, semi-technical, and general academic units. This is because, in mathematical discourse, terms are often closely connected with general education and academic vocabulary; for example, units like “derive,” “assume,” “consider,” “solve,” “therefore,” and “let us denote” form the core of theoretical expressions. Furthermore, this type of vocabulary plays a decisive role in expressing mathematical thinking through language, developing logical consistency, and facilitating interdisciplinary integration. In English for Specific Purposes (ESP) courses aimed at particular professional goals, the primary focus is usually on developing professional lexical competence. Professional vocabulary mainly serves as a linguistic tool for specialists, which is why it is also referred to as “professional–field vocabulary” in the educational process. Professional–field vocabulary consists of words that representatives of a particular profession use in their daily work. N.M. Karpukhina defines professional vocabulary as a “secondary meaning,” that is, a layer positioned between terms and professional jargon. In this study, we refer to this layer in a narrower sense as “specialized language vocabulary.” Future specialists, in their professional activities, encounter not only general professional words but also concepts representing narrow specialties, scientific terms, frequently used general lexical units, and even idiomatic

expressions. Therefore, terms constitute the primary object of professional vocabulary. For this reason, many studies have focused solely on developing terminological competence, aiming to design various approaches, methods, and exercise systems. However, professional vocabulary is not limited to terms; it encompasses a broader set of words, including professionalisms, semi-technical, and general academic vocabulary, representing the wider layer of specialized lexical units.

In traditional ESP lessons, approaches to teaching vocabulary are often limited to teaching words in isolation, separated from the text. Such methodology prevents students from understanding the contextual meaning of words as well as their grammatical and semantic connections, and hinders the development of their competence in comprehending texts as a whole. It is known that in the history of foreign language teaching methodology, the attitude toward lexical competence has developed gradually, with each period forming its own didactic principles and approaches. In the earliest approaches, vocabulary acquisition was subordinated to grammatical knowledge, whereas in later methodological evolution, lexical units began to acquire independent communicative and cognitive significance.

For many years, in ESP classes, the lexical component of language was taught through text translation or by providing glossaries of specialized words appearing in the text. In academic terminology, this teaching method is referred to as the “Grammar-Translation Method” (GTM), which dominated foreign language teaching for nearly a century (1840–1940). To adapt to global economic changes, meet the high demands of enterprises and employers, and develop learners’ communicative competence as the main goal of language learning, the communicative approach was

introduced. Education based on the communicative approach — CLT (Communicative Language Teaching) — transformed the process of learning a foreign language into a meaningful and interactive environment. Through it, learners acquired an understanding of the true meaning of words and learned to use them in communication. CLT aims to develop interpersonal communicative competence, which distinguishes it from other forms of instruction.

However, this approach is not fully suitable for fields oriented toward academic activities, such as mathematics. This is because students in mathematics do not study the language for professional or oral communication purposes, but to develop academic reading, comprehension, and writing skills. Therefore, in developing lexical competence for mathematics students, the main focus should be on improving reading skills in academic and technical contexts, correctly interpreting terms and semi-technical vocabulary, and developing analytical thinking based on texts. This approach directly addresses their real learning needs — reading, understanding, and expressing scientific texts in written form.

For this reason, in teaching English to mathematics students, a content-integrated teaching approach, such as the Content-Based Approach or CLIL (Content and Language Integrated Learning) model, is appropriate. This approach enables students to gain a deeper understanding of subject-specific content during language learning and simultaneously develops their lexical, cognitive, and subject-related competencies. As a result, students not only acquire language units but also develop mathematical reasoning and academic thinking through the English language.

Conclusion

This study highlights that developing lexical competence in ESP should extend beyond

mere terminology. Effective professional communication relies on the integration of technical, semi-technical, and general academic vocabulary. Traditional methods that teach words in isolation limit students' ability to fully comprehend texts. In contrast, communicative and content-integrated approaches, such as CLT and CLIL, provide interactive learning environments that support both language acquisition and the development of academic thinking. For mathematics and other academic fields, teaching lexical competence in an integrated manner strengthens students' abilities to read, analyze, and produce written texts accurately and coherently.

REFERENCES

- A.S. Butunbayev, M.X. Gulyamova. Tibbiy ingliz tilini o'qitishda kommunikativ yondashuv va terminologik kompetensiyani rivojlantirish // Inter Education & Global Study. 2025. №6. URL: <https://researcher.uz/article/tibbiy-ingliz-tilini-o-qitishda-kommunikativ-yondashuv-va-terminologik-kompetensiyani-rivojlantirish-334659> (дата обращения: 13.10.2025).
- Bakirova X. B. Energetik-talabalarga ingliz tilini o'qitishda ta'lim mazmuni va leksik minimumni aniqlash // O'zbekistonda xorijiy tillar. — 2022. — №3 (44). — B. 86-100.
- Barcroft J., Schmitt N., Sunderman G. Lexis. In J. Simpson (Ed.), The Routledge Handbook of Applied Linguistics. Abingdon, UK / New York. — Routledge, 2011. 571-583 p.
- Buranova D. D. Methodology of professional approach in English language teaching for medical students // O'zbekistonda xorijiy tillar. — 2023. — №1 (48). — B. 119-132.
- Council of Europe. A Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Cambridge: CUP, 2001.
- Jackson H., Amvela E. Words, meaning, and vocabulary: an introduction to modern English lexicology. London; New York: Cassell, Open Linguistics Series, 2000.
- Laufer B., Goldstein Z. Testing vocabulary knowledge: size, strength, and computer adaptiveness // Language Learning. — 2004. — Vol. 54, No. 3. — P. 399–436.
- Madrahimova Sh.R. Leksik kompetensiya va uni rivojlantirish usullari (xorijiy tillarni o'rganish misolida) // Oriental Renaissance: Innovative, Educational, Natural and Social Sciences. — 2024. — T. 4, №8. — B. 303–309. — (E)ISSN 2181-1784. — ResearchBib / Index Copernicus. — URL: <https://www.oriens.uz>
- Nishanova H.V. Ingliz tilini turizm sohasi kasbiy terminlari asosida o'qitishda innovatsion yondashuvlar // Inter Education & Global Study. 2025. Vol.3 №7. B. 337–343.
- Rashidova N. Kh. Talabalarining ingliz tilida leksik kompetensiyasini rivojlantirishning lingvodidaktik muammolari // Science Shine. International Scientific Journal. — 2025. — Vol. 1, Issue 6(41). — ISSN 3030-377X. — 31.03.2025.
- Raximova N.A. Ingliz tili amaliy mashg'ulotlarida tibbiyot sohasiga oid terminlarni o'rgatish metodikasining o'ziga xos xususiyatlari // Zamonaviy dunyoda ijtimoiy fanlar: nazariy va amaliy izlanishlar: innovatsion akademiya: ilmiy, masofaviy, onlayn konferensiya materiallari. — 2025. — B. 81–83. — DOI: <https://doi.org/10.5281/zenodo.14244174>
- Saydullayeva H.U. Konchilik fakulteti talabalariga ingliz tilini o'rgatishda leksik kompetensiyani rivojlantirish usullari // Xorijiy filologiya. — 2021. — №3. — B. 105–109.

Shanskaya L.A. Пути повышения эффективности занятия по английскому языку в неязыковом вузе // Лингвистика и методика обучения английскому языку на пороге нового тысячелетия. Материалы и тезисы докладов 6-ой региональной конференции преподавателей английского языка. — Самара, 2001. — С. 58-59.

Xasanova Shaxnoza. Qishloq xo'jaligiga ixtisoslashgan ta'lim yo'nalishidagi talabalar uchun ingliz tilini o'qitishda og'zaki nutq kompetensiyasini shakllantirish va rivojlantirish uslublari (agroterminlar misolida) // Строительство и образование. 2025. №1. URL: <https://cyberleninka.ru/article/n/qishloq-xo-jaligiga-ixtisoslashgan-ta-lim-yo-nalishidagi-talabalar-uchun-ingliz-tilini-o-qitishda-og-zaki-nutq-kompetensiyasini> (дата обращения: 13.10.2025).

Richards J., Schmidt R. Longman Dictionary of Language Teaching & Applied Linguistics (4th edition). — Essex: Pearson Education Limited, 2010.

<http://www.merriam-webster.com/dictionary/vocabulary>