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Liudmyla MOROZ

Candidate of Philological Sciences, Professor,
Head at the Foreign Languages Department of
Rivne State University for the Humanities

Rivne, Ukraine

ORCID: 0000-0002-2750-8694

e-mail: kafedrarshu@ukr.net

Natalia DANILOVA

Senior Lecturer at the Foreign Languages Department of
Rivne State University for the Humanities

Rivne, Ukraine

ORCID: 0000-0002-9916-4106

e-mail: kafedrarshu@ukr.net

Natalia MICHUDA

Senior Lecturer at the Foreign Languages Department of
Rivne State University for the Humanities

Rivne, Ukraine

ORCID: 0000-0001-7936-7996

e-mail: kafedrarshu@ukr.net

Vladyslav KOVALIUK

Senior Lecturer at the Department of Foreign Languages of
Rivne State University for the Humanities,

Rivne, Ukraine

ORCID: 0000-0001-6419-7197

e-mail: ftalazol72@gmail.com

**IMPROVING IT STUDENTS' TERMINOLOGICAL VOCABULARY
IN THE PROCESS OF LEARNING ENGLISH**

Abstract. The article deals with the ways of developing IT students' English-language competence which is an integral component of professionally directed communicative competence within ESP (English for Specific Purposes) university course. Innovative and interactive methods of studying such as students' project work in the form of posters and oral presentations, role-play activities, conferences are analyzed. It has been substantiated that a set of such training techniques provides the IT students with an opportunity to master professional vocabulary more efficiently. The authors sort out and analyze the English on-line resources that reveal the crucial issues on Information

Technologies. It has been also shown that such resources promote the effective learning of English vocabulary of specific purposes, because they motivate and stimulate students to keep in mind lexical material, as well as help to improve the level of professional language comprehension.

It is stated that the formation of lexical competence is based on the study of authentic professionally oriented texts. Such texts are considered not only the main source for building students' professional terminological vocabulary but also a key means for developing their professional skills and enhancing the culture of terminological communication and particular attention in the process of language acquisition should be given to the development and enrichment of students' lexical repertoire, as well as to the study and systematization of terminological vocabulary.

The authors emphasize that it should be noted that it is not enough to simply translate terms – it is important to understand their potential meanings. To achieve this, students should consult English explanatory dictionaries, study definitions, synonyms, antonyms, word-formation patterns, and common collocations in which the term functions. In our opinion, studying the lexical system of the English language is the key to mastering it fluently; however, it is equally important to actively use the acquired lexical units in real communication.

Keywords: ESP (English for Specific Purposes), lexical competence, English vocabulary of specific purposes, IT students, online resources.

Problem setting. Ukraine's integration into the global community requires proficiency in foreign languages; therefore, language learning plays a crucial role in implementing a new educational paradigm. This is due to the specific nature of language as a means of intercultural communication and access to world culture. At the present stage, the study of Language for Specific Purposes (LSP) has become especially important, since society needs highly qualified and competitive specialists with creative thinking who are capable of acquiring information from foreign-language sources and applying it for the benefit of their country.

IT students must acquire solid knowledge, develop relevant skills, and form the necessary professional competencies according to their qualifications. Most importantly, they must be able to apply these competencies to solve practical problems in their professional activity. According to statistics, more than 75% of all software development orders received by domestic specialists come from international companies. Therefore, fluent professional communication in English is an essential prerequisite for effective cooperation.

English is necessary for IT students to understand terminological vocabulary, since most programming languages are based on English keywords; to work with English-language interfaces; to read technical documentation (all reference materials and technical specifications are in English); to search for professional information across various media while understanding terms and abbreviations (the newest books and articles in the IT field are published in English); to comprehend extended professional discourse of varying complexity (lectures, conference presentations, business meetings, etc.); to actively engage in both formal and informal discussions on IT topics; and to work abroad.

Future programmers must keep up with the latest technologies, discoveries, and trends to remain competitive in the labor market.

Analysis of basic research and publications. The importance of developing foreign-language lexical competence has been emphasized in the research of many scholars (see works by R. Carter and M. McCarthy [1], R. Ellis [2], R. Grains [4], D. Gardner [3], M. Lewis [5], etc.). In particular, they have explored various methods and techniques for revealing the meanings of foreign words intended for students' receptive acquisition; analyzed the functioning of the lexical mechanism in different types of speech activity; studied the process of students' functional mastery of vocabulary in accordance with the regularities of speech production; developed new types and kinds of exercises for teaching terminological vocabulary to students of non-linguistic higher education institutions; and defined criteria as well as described procedures for selecting lexical units to create a minimum vocabulary list [5, p.122].

Identification of previously unresolved aspects of the general problem. Despite existing achievements in the field of teaching foreign-language professional vocabulary, current trends in foreign language instruction highlight the need to improve the quality of students' mastery of English lexical material in specific specialties. This is especially relevant for teaching terminological vocabulary to students majoring in Information Technology during their 3rd and 4th years of study for the Bachelor's degree, who are learning English for Specific Purposes (ESP). Therefore, there arises a need for a specialized investigation of this issue.

The aim of the article is to identify ways to improve the lexical competence of IT students, as well as to select and analyze online resources for studying English professional vocabulary in accordance with the requirements of future IT specialists.

Presentation of the basic research material. The formation of lexical competence is based on the study of authentic professionally oriented texts. Such texts are considered not only the main source for building students' professional terminological vocabulary but also a key means for developing their professional skills and enhancing the culture of terminological communication.

The professional vocabulary that IT students learn through texts meets the need to expand their professional lexicon, shapes their lexical competence, and creates prerequisites – according to D. Gardner – for the formation of professionally oriented communicative competence [4, p. 18]. The ability to adequately use terminological vocabulary contributes to better understanding of professional information in oral and written texts and facilitates the appropriate application of this information in the students' own speech [4, p. 18].

At the first stage of learning English, priority should be given to reading professional texts related to the field of Information Technology. This approach allows students to acquire a large number of terminological units within a relatively short period of time. Therefore, at this stage, students are offered general scientific texts and materials relevant to their faculty specialization, such as Computers Today, Input/Output Devices, and Storage Devices.

At the second stage of learning, when students have already formed a basic

conceptual foundation, the process shifts from studying general-purpose texts to highly specialized materials, which helps build a thesaurus of sublanguage vocabulary for specific fields. As is well known, the field of Information Technology encompasses not only computer technologies but also all areas related to the transformation, protection, storage, transmission, and retrieval of information. Therefore, students are offered topics such as How an Operating System Controls Hardware, How Programming Languages Work, and How Internet Security Fights off PC Invaders, among others.

Associative connections are extremely important for retaining learned terminology in long-term memory. Derivational associations make it possible to group words with the same root into word-formation nests and create derivational chains based on words with a shared morphological pattern. In the sublanguage of the IT field, the following connections can be distinguished:

Synonymic series: monitor, display, screen; to implement, to execute, to apply; to update, to upgrade, to modernize; bug, error; random, temporary; to maintain, to support, to keep in existence; computer geek, computer expert; to back up, to copy.

Antonymic series: input – output; to install – to uninstall; wired – wireless; to log on – to log off; to scroll up – to scroll down; to plug in – to unplug; volatile – non-volatile; low-tech – high-tech.

Associative-derivational series: digit – to digitize – digital; to process – processing – processor; magnet – magnetic – magnetically – magnetism – to magnetize; fragment – fragmentation – defragmenter – fragmented; to maintain – maintenance – maintainability – maintainable; to compute – computer – computation – computing – computational – computerized; to develop – development – developer; to debug – debugger – debugging.

It should be noted that it is not enough to simply translate terms – it is important to understand their potential meanings. To achieve this, students should consult English explanatory dictionaries, study definitions, synonyms, antonyms, word-formation patterns, and common collocations in which the term functions. In our opinion, studying the lexical system of the English language is the key to mastering it fluently; however, it is equally important to actively use the acquired lexical units in real communication.

When studying new IT-related topics, it is advisable to use visual aids such as diagrams, illustrations, and mind maps, where terminological vocabulary is visually structured. When creating a mind map, the central or key concept is placed in the center, with related terms branching out from it, ultimately forming an interconnected network. On the one hand, this visually demonstrates the main concepts in an organized way; on the other, it makes them easier to memorize and use in communication. Furthermore, this is an effective tool for organizing review sessions of learned vocabulary during both classroom and independent study.

Traditional teaching materials should also be supplemented with electronic

resources and multimedia educational programs. Multimedia tools can be used for independent learning, enhancing the effectiveness and productivity of foreign (English) language acquisition. This approach employs appropriate teaching techniques and technologies while adjusting the proportion and methods of different learning activities.

It is essential to use innovative and interactive methods in student training that aim to develop broad competencies through professionally oriented learning. Future IT specialists must be able to apply acquired knowledge in practice to solve professional problems, think critically, generate new ideas, communicate with people from different social groups, resolve conflicts, adapt to changing life situations, engage in international professional communication, and work independently on their moral, intellectual, and intercultural development [2, p. 60].

Interactive learning, as a means of effectively forming and improving English lexical competence, involves organizing pair, group, and collective interactions among all participants of the educational process while performing creative, problem-solving, and communicative tasks. These tasks are aimed at enabling students to acquire lexical knowledge and develop the ability to use it both orally and in writing within the scope of their future professional activities [2, p. 60]. Therefore, the use of project work, role-playing, seminars, and conferences is extremely important in this context.

Project work is a valuable way of applying communication skills acquired in the classroom to real-world contexts. It encourages students to immerse themselves in their professional environment. Project-based activities are ideal for mixed-level groups, as each student can contribute according to their level of preparation. The final product of project work may include oral or poster presentations, displays of materials, reports, or collages. For third- and fourth-year students, suitable project topics may include Cyberbullying, Cybercrimes, Database Models, and Cloud Databases, among others.

A collage, as a creative project in foreign language teaching methodology, serves as a visual learning aid and methodological technique that involves building the lexical background of a key concept and creating a visual-semantic schematic image of that concept. Through collages, students can present essential information on a chosen topic, study it independently, systematize knowledge, and gain experience in building visual logical structures. This, in turn, fosters the development of abstract thinking and independent learning skills.

A multimedia presentation is one of the most effective tools for enhancing students' research, independent, and communicative skills in professional English. The visual richness of presentations makes them engaging, persuasive, and conducive to the intensification of learning. Presentations activate multiple types of memory – visual, auditory, and emotional – simultaneously. They are especially effective for developing monologic speech, as students can use key words, illustrations, and diagrams of their own creation during their presentations, ensuring that their speech is coherent, logical, and expressive.

In our view, role-playing with elements of specialization is one of the most effective methods for activating learned material and motivating students to learn new content. The main goal of this form of learning is to develop speaking skills in conditions close to real-life situations, replicating the types of professional interactions students will engage in in the future. For example, lexical reinforcement games such as Guess the Word, Grab a Minute, and Lucky Bingo can be used effectively.

One of the most effective methods for improving students' professionally oriented monologic speaking skills is participation in academic conferences. The field-specific nature of conference topics serves as a significant motivational factor for mastering professional terminology, practicing accurate pronunciation, and developing the ability to articulate ideas clearly and comprehensibly to an audience. During the preparatory stage, instructors formulate individual assignments for each student, who subsequently develop detailed outlines and select relevant literature and sources.

The advantages of this form of activity are evident: students not only develop all four types of language competence – listening, speaking, reading, and writing – but also enhance their creativity, critical thinking, and research abilities through the use of innovative materials and digital tools. It is advisable that subject lecturers from core disciplines be present during such conferences to provide students with qualified and authoritative feedback on complex or debatable issues.

In the contemporary educational context, the Internet plays a decisive role in the acquisition of English for Specific Purposes (ESP) due to its vast informational potential. Senior IT students (third and fourth year) are encouraged to participate in forums, webinars, and online professional conferences, which provide opportunities for authentic communication and professional development. They also practice spontaneous professional dialogue with native speakers – both orally and in writing – through accessible communication platforms such as Skype, Viber, Telegram, and WhatsApp.

The Internet provides immediate access to current and primary sources of information, enabling students to obtain up-to-date knowledge, enrich their professional vocabulary, and deepen their understanding of specialized terminology. The following professionally oriented websites serve as valuable linguistic and informational resources in the field of Information Technology: computerworld.com, eetimes.com, eweek.com, infoworld.com, pcworld.com, oracle.com. A variety of online resources can further support the enhancement of lexical and communicative competence in the IT domain:

- 1) websites with IT-related tests and exercises;
- 2) educational applications: Lingualeo and Memrise assist learners in expanding their professional vocabulary, creating personalized glossaries of technical terms, and accessing profession-specific videos;
- 3) technical English dictionaries for programmers.
- 4) english-language professional forums that allow users to practice reading,

writing:

5) english-language podcasts, which develop listening comprehension and exposure to professional terminology – essential components of IT communication: Open Web Podcast (on modern web technologies and digital project optimization); Web Dev Radio (covering all aspects of web development, from front-end design to back-end programming); IBM Podcasts (produced by IBM, with thematic series for both management and technical staff);

6) online courses constitute an additional source of professional knowledge, simultaneously improving students' English proficiency and promoting lifelong learning and self-education;

7) educational YouTube channels that serve as additional resources for programming and professional development: ProgrammingKnowledge, Sentdex, Cave of Programming, Paul Programming, The Go Programming Language, Learning Programming, and Computer Programming University.

Conclusions and prospects for further research. Proficiency in Technical English is an essential prerequisite for specialists in any field of Information Technology. Particular attention in the process of language acquisition should be given to the development and enrichment of students' lexical repertoire, as well as to the study and systematization of terminological vocabulary. The formation of lexical competence primarily occurs through the analysis and comprehension of authentic professionally oriented texts in the original language. The research demonstrates that third- and fourth-year IT students tend to prefer reading concise, information-dense analytical articles and current news materials. The experimental findings confirm that terminological vocabulary is more effectively assimilated through communicative situations rather than through translation exercises.

To enhance the lexical competence of future programmers, it is advisable to employ visual aids, such as mind maps, and to encourage activities involving the interpretation of terms, identification of synonyms and antonyms, formation of derivatives, and, most importantly, the active use of newly acquired lexical units in real communicative contexts.

The application of innovative and interactive teaching methods significantly facilitates the acquisition of professional vocabulary in the field of Information Technology, ensuring both the communicative orientation and the professionalization of the learning process. Within the framework of English for Specific Purposes (ESP), the integration of online resources – including websites, mobile applications, technical dictionaries, professional forums, podcasts, online courses, and educational video channels – enables the fullest realization of learner-centered education. These resources effectively motivate and stimulate students, enhance lexical retention, and foster the conscious and creative use of professional language in authentic communication.

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**УДОСКОНАЛЕННЯ ТЕРМІНОЛОГІЧНОЇ ЛЕКСИКИ СТУДЕНТІВ ІТ
СПЕЦІАЛЬНОСТЕЙ У ПРОЦЕСІ ВИВЧЕННЯ АНГЛІЙСЬКОЇ МОВИ**

Людмила МОРОЗ

кандидат філологічних наук, доцент,
професор, завідувач кафедри іноземних мов
Рівненського державного гуманітарного університету,
м. Рівне, Україна
ORCID: 0000-0002-2750-8694,
e-mail: kafedrarshu@ukr.net

Наталія ДАНІЛОВА

старший викладач кафедри іноземних мов
Рівненського державного гуманітарного університету
м. Рівне, Україна
ORCID: 0000-0002-9916-4106
e-mail: kafedrarshu@ukr.net

Наталія МІЧУДА

старший викладач кафедри іноземних мов
Рівненського державного гуманітарного університету,
м. Рівне, Україна
ORCID: 0000-0001-7936-7996,
e-mail: kafedrarshu@ukr.net

Владислав КОВАЛЮК

старший викладач кафедри іноземних мов
Рівненського державного гуманітарного університету,
м. Рівне, Україна
ORCID: 0000-0001-6419-7197
e-mail: ftalazol72@gmail.com

Анотація. У статті розглядаються шляхи розвитку англomовної компетентності студентів IT спеціальностей, яка є невід'ємним компонентом професійно спрямованої комунікативної компетентності в рамках університетського курсу ESP (англійська мова за професійним спрямуванням). Проаналізовано інноваційні та інтерактивні методи навчання, такі як студентська проектна робота у формі постерів та усних презентацій, рольові ігри, конференції. Обґрунтовано, що комплекс таких навчальних методик надає студентам-інформатикам можливість ефективніше опанувати професійну лексику. Автори систематизують та аналізують англomовні онлайн-ресурси, які розкривають ключові питання інформаційних технологій. Також показано, що такі ресурси сприяють ефективному вивченню англійської лексики спеціалізованого призначення, оскільки вони мотивують та стимулюють здобувачів запам'ятовувати лексичний матеріал, а також допомагають підвищити рівень розуміння професійної мови.

Зазначається, що формування лексичної компетенції базується на вивченні автентичних професійно орієнтованих текстів. Такі тексти вважаються не лише основним джерелом для формування професійного термінологічного словника студентів, але й ключовим засобом розвитку їхніх професійних навичок та підвищення культури термінологічного спілкування, і особливу увагу в процесі засвоєння мови слід приділяти розвитку та збагаченню лексичного репертуару студентів, а також вивченню та систематизації термінологічної лексики.

Автори наголошують на важливості розуміння потенційних значень термінів, на просто перекладати їх. Для досягнення цього здобувачі повинні звертатися до тлумачних словників англійської мови, вивчати визначення, синоніми, антоніми, моделі словотворення та поширені словосполучення, в яких функціонує термін. На нашу думку, вивчення лексичної системи англійської мови є ключем до вільного володіння нею; проте не менш важливо активно використовувати набуті лексичні одиниці в реальному спілкуванні.

Ключові слова: ESP (англійська мова за професійним спрямуванням), лексична компетенція, англійська лексика спеціалізованого призначення, студенти IT спеціальностей, онлайн-ресурси.

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