

THE SPECIALIZED WEBSITES AS A MEANS OF DEVELOPING THE PROFESSIONAL LANGUAGE COMPETENCE OF FUTURE ENGINEERS

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Анотація.

Стаття розглядає важливість вивчення англійської мови для технічних студентів у контексті сучасного високотехнологічного світу. Досліджені труднощі, з якими стикаються студенти у вивченні мови; описані переваги використання спеціалізованих веб-сайтів як ефективного інструменту для покращення мовленнєвих навичок та професійного розвитку майбутніх інженерів; поданий перелік професійних сайтів, які допомагають студентам засвоювати термінологію, вивчати новітні технології та розвивати навички критичного мислення.

Ключові слова: англійська мова, автентичні джерела, спеціалізовані веб-сайти, студенти технічних спеціальностей, фахові тексти, професійні іншомовна компетентність, професійне спілкування.

Abstract.

The article examines the importance of learning the English language for technical students in the context of the modern high-tech world. The author explored the difficulties encountered by students in language learning; described the advantages of using technical and engineering websites as an effective tool for improving language skills and the professional development of future engineers; compiled a list of professional websites that assist students in mastering terminology, learning cutting-edge technologies, and developing critical thinking skills.

Keywords: English authentic sources, engineering websites, technical students, professional texts, professional language competence, professional communication.

Introduction

In today's high-tech world, the role of the English language is crucial, serving as the primary language for international communication among professionals in all fields, especially in technical domains. Proficiency in English becomes a defining condition for the professional growth of future specialists and a significant requirement for positions in Ukrainian and international high-tech companies.

Despite the mandatory study of the English language by students in all Ukrainian higher education institutions, the overall level of foreign language proficiency remains unsatisfactory. Research by A. Aron and N. Nadrah identified the main difficulties faced by students in technical institutions, including insufficient vocabulary (87.50% of respondents) and challenges in translating grammatical constructions (62.50%) [1].

To successfully master professional foreign language competence for all participants in the educational process, it is recommended to use not only standard textbooks but also to utilize authentic professional sources in textual format, enabling work with real communicative samples. Powerful tools for learning English and simultaneously acquainting oneself with technical and engineering concepts include the use of materials from specialized websites.

The aim of the article is to study and analyze the impact of using specialized websites on the development of professional foreign language competence in students of technical specialties. The research is focused on determining the advantages of using such resources in the preparation of future professionals and identifying opportunities for improving the educational process and developing students' soft skills.

Research results

Websites, in a broad sense, are interactive platforms that provide users with access to various materials, information, and resources. In the case of specialized engineering websites, this interactivity may include articles, technical reviews, instructions, and documentation for engineering products. They become a source of authentic materials reflecting the real world of science and technology, and their use positively influences the development of professional foreign language competence and the expansion of students' professional vocabulary.

The list of such sites can be extensive, and the choice of specific resources may depend on individual interests and needs. Here is a list of several well-known and useful websites for students in technical and engineering specialties:

- **Autodesk University** (<https://www.autodesk.com/autodesk-university/>): Educational materials and resources from Autodesk, aimed at users of their design and engineering programs.
- **Civil Engineering Portal** (<https://www.engineeringcivil.com/>): A portal specializing in civil engineering, with articles and resources.
- **Engineering.com** (<https://www.engineering.com/>): A site offering news, articles, and video materials from various engineering fields.
- **Engineering Toolbox** (<https://www.engineeringtoolbox.com/>): An online resource for engineers containing tables, diagrams, and other useful data for various technical fields.
- **GitHub** (<https://www.github.com/>): A platform for version control, collaboration, and teamwork on projects.
- **IEEE Xplore** (<https://www.ieeexplore.ieee.org/>): The digital library of the Institute of Electrical and Electronics Engineers, containing scientific articles, conferences, and other materials.
- **Kaggle** (<https://www.kaggle.com/>): A platform for data analysis and machine learning, where users can participate in challenges and projects.
- **MIT OpenCourseWare** (<https://www.ocw.mit.edu/>): Open courses from the Massachusetts Institute of Technology, including lectures and materials on technical specialties.
- **NASA** (<https://www.nasa.gov/>): The official website of the National Aeronautics and Space Administration.
- **National Instruments** (<https://www.ni.com/>): A specialized resource for engineers providing tools and solutions for measurements and automation.
- **Stack Overflow** (<https://www.stackoverflow.com/>): One of the largest communities of programmers and developers, where one can ask or answer technical questions.

Working with these sources has several advantages:

1. *Mastery of specific terminology.* Websites with technical and engineering orientation allow students to learn and master specific terminology used in their future professions. Knowledge of professional terms and expressions enables students to confidently communicate in a professional environment and effectively understand technical materials.
2. *Tracking current trends in a specific field.* Materials on technical websites often reflect the latest technological and engineering developments. Students, by browsing such resources, can keep track of innovations in their field, familiarize themselves with new approaches and research methods.
3. *Development of critical thinking skill.*: Analyzing technical and engineering materials helps students develop critical thinking skills. They learn to evaluate information, identify key concepts, and express their own opinions on technical issues.
4. *Soft skills development.* Soft skills, or personal qualities and social skills that affect the effectiveness of interaction with other people and success in various areas of life, are developed by using foreign professional websites. Students, by using these resources, develop soft skills such as adaptability, problem-solving, self-management, interpersonal skills, and continuous learning. In addition, future engineers also acquire skills in navigating English-language content on various sites.

The forms of working with these sources can be diverse (annotations, round tables, discussions, presentations, etc.), depending on the complexity of the material, the overall level of students, and the goals of the instructor in a particular class [2].

Conclusion

Therefore, learning English through technical and engineering websites is an effective tool for students in technical specialties. This contributes to the development of professional foreign language competence in future engineers and enhances their soft skills. This approach will allow students to acquire essential knowledge and skills necessary for a successful career in technical and engineering fields.

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