

## TECHNOLOGY FOR DEVELOPING READING COMPETENCE OF NON-PHILOLOGICAL UNIVERSITY STUDENTS (ON THE EXAMPLE OF PHYSICS SPECIALIZATIONS)

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**Annotation:** This article highlights the technology of developing foreign language reading competence among students of non-philological fields, particularly those specializing in physics. Reading competence plays a crucial role in understanding scientific texts, interpreting terminology, working with international academic sources, and fostering independent learning. The article discusses a step-by-step technological approach, reading strategies, and the use of modern information technologies in this process.

**Keywords:** reading competence, physics specialization, non-philological students, reading strategies, terminology, educational technologies.

### **Nofilologik OTM talabalari o‘qish kompetensiyasini rivojlantirish texnologiyasi**

**Annotatsiya:** Ushbu maqolada nofilologik yo‘nalishlarda, xususan, fizika yo‘nalishida tahsil olayotgan talabalarning xorijiy tilni o‘qish kompetensiyasini rivojlantirish texnologiyasi yoritiladi. Xorijiy tilni o‘qish ko‘nikmasi fizika bo‘yicha ilmiy matnlarni tushunish, terminlarni to‘g‘ri talqin qilish, xalqaro ilmiy manbalar bilan ishlash va mustaqil ta’lim olish jarayonida muhim rol o‘ynaydi. Maqolada bosqichma-bosqich texnologik yondashuv, o‘qish strategiyalari va zamonaviy axborot texnologiyalaridan foydalanish yo‘llari ko‘rib chiqiladi.

**Kalit so‘zlar:** o‘qish kompetensiyasi, fizika yo‘nalishi, nofilologik yo‘nalish talabalari, o‘qish strategiyalari, terminologiya, ta’lim texnologiyalari.

## ТЕХНОЛОГИЯ РАЗВИТИЯ КОМПЕТЕНЦИИ ЧТЕНИЯ У СТУДЕНТОВ НЕЯЗЫКОВЫХ ВУЗОВ

(На примере физико-технических специальностей)

**Аннотация:** В данной статье освещается технология развития компетенции чтения на иностранном языке у студентов неязыковых направлений, в частности, обучающихся по физическим специальностям. Навык чтения на иностранном языке играет важную роль в понимании научных текстов по физике, правильной интерпретации терминологии, работе с международными научными источниками, а также в процессе самостоятельного обучения. В статье рассматривается поэтапный технологический подход, стратегии чтения и способы использования современных информационных технологий в образовательном процессе.

**Ключевые слова:** компетенция чтения, физическое направление, студенты неязыковых специальностей, стратегии чтения, терминология, образовательные технологии.

### Introduction

In the modern globalized world, foreign language teaching is becoming increasingly important not only in philological but also in non-philological fields. For students specializing in **physics**, the development of foreign language reading competence allows them to deepen their professional knowledge, work with international scientific articles and technical documents, and stay informed about current scientific achievements. Reading competence in a foreign language also helps to develop scientific thinking and research skills.

### The Concept and Importance of Reading Competence

Reading competence is the ability to understand, analyze, and extract the main ideas from foreign language texts, interpret scientific terminology correctly, and apply the information in professional activities. For physics students, this competence is essential for:

- Understanding international scientific articles;
- Comparing their research results with foreign sources;
- Being informed about the latest scientific discoveries;
- Developing reading skills based on professionally oriented texts.

### Specific Characteristics of Physics Students

Physics students mainly focus on natural sciences and mathematics. Therefore, their foreign language vocabulary is often limited to general topics, and understanding scientific terminology may cause difficulties. Thus, the technology for developing reading competence must take into account the following aspects:

- Relying on physics-related terms and concepts;
- Gradually teaching complex grammatical structures;
- Using scientific texts during practical classes.

### Stages of the Technology for Developing Reading Competence (Example of Physics Specializations)

#### Stage 1: Motivational Preparation

Explaining the importance of foreign languages in the field of physics (e.g., working with resources like CERN, NASA, IOP);

Using simplified scientific-popular articles (e.g., “The Structure of the Atom,” “Newton’s Laws in Everyday Life”).

#### Stage 2: Formation of Linguistic Base

Creating a glossary of physics-related terms (mass, velocity, quantum, force, etc.);

Teaching grammatical structures (passive voice, conditional sentences, relative clauses) through physics texts;

Assigning students to compile their own terminology glossaries.

#### Stage 3: Introducing Reading Strategies

The following strategies are effective for reading physics texts:

Skimming – getting the general idea of an article (focusing on titles, abstracts, conclusions);

Scanning – searching for specific data, formulas, or experimental results;

Intensive reading – analyzing complex grammar and terminology;

Extensive reading – regularly reading longer scientific texts (e.g., articles from *Physics Today*).

#### Stage 4: Profession-Oriented Reading Tasks

Providing students with authentic physics materials (scientific articles, technical documentation, lab reports);

Assigning tasks to identify key ideas, problems, and solutions;

Conducting group work activities such as text analysis, presentations, and translation exercises.

#### Stage 5: Independent Reading and Reflection

Students independently choose and read texts related to their specialization and prepare short written reports;

They present their findings and evaluate their reading strategies.

### Use of Modern Technologies

The following tools are effective in developing reading competence for physics students:

Online dictionaries (Multitran, Cambridge, Oxford Physics Dictionary);

Scientific article databases (ScienceDirect, Springer, IOPscience);

Interactive platforms (Quizlet – for terminology; Moodle – for organizing lessons);

Video lectures (YouTube scientific lectures, TED Talks – for integrating listening and reading skills).

### Expected Outcomes

Implementing this technology leads to the following outcomes:

Improved comprehension of foreign-language physics texts;

Expanded knowledge of professional terminology;

Developed skills of independent information search;

Enhanced ability to use foreign language resources in professional contexts.

## Conclusion

For physics students in non-philological universities, the development of foreign language reading competence is a key factor in professional growth and scientific development. A step-by-step technological approach, reliance on professional terminology, and the use of modern information technologies significantly increase the effectiveness of this process.

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