



## Methods of teaching physics-students to read professional oriented texts in English

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### ABSTRACT

One of the main tasks at physics faculties is to prepare students to use knowledge of a foreign language in their future professional activity. Therefore, it is necessary to take into account professional specifics in teaching a foreign language. This article highlights the methods of teaching physics-students to read professional oriented texts in English.

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## Fizika yo'nalish talabalariga ingliz tilida sohaviy matnlarni o'qishni o'rgatish usullari

### ANNOTATSIYA

**Kalit so'zlar:**

zamonaviy mutaxassis,  
fizika,  
kommunikativ  
kompetentsiya,  
sohaviy matnlar,  
o'qish ko'nikmalarini  
egallash.

Fizika fakultetlarining asosiy vazifalaridan biri talabalarni chet tilida olgan bilimlarini kelajakdagi kasbiy faoliyatida qo'llashga tayyorlashdir. Shuning uchun chet tilini o'qitishda kasbiy xususiyatlarni hisobga olish zarur. Ushbu maqolada fizika talabalariga ingliz tilidagi sohaviy matnlarni o'qishni o'rgatish usullari yoritilgan.

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# Методика обучения студентов-физиков чтению профессионально-ориентированных текстов на английском языке

## АННОТАЦИЯ

### *Ключевые слова:*

современный специалист, физика, коммуникативная компетентность, профессионально ориентированные тексты, овладение навыками чтения.

Одной из основных задач на физических факультетах является подготовка студентов к использованию знаний иностранного языка в будущей профессиональной деятельности. Поэтому при обучении иностранному языку необходимо учитывать профессиональную специфику. В данной статье освещаются методы обучения студентов-физиков чтению текстов профессионального профиля на английском языке.

## INTRODUCTION

The current requirements for modern specialists include the ability to work with information in a foreign language, evaluate foreign-language sources critically, and make informed decisions in real life negotiations. The requirements for developing communicative competence has become an essential component of the future professional activity of a specialist in physics faculties of the universities.

According to the concept of modernization of educational system in our country, the main goal of higher education is to prepare a qualified specialist of the appropriate level and profile, competitive, competent, and capable of working effectively at the level of world standards, ready for continuous professional growth, social and professional mobility. Therefore, it is necessary to take into account professional specifics and professionally oriented language in teaching a foreign language focused on the implementation of the tasks of the future professional activity of graduates.

## MATERIALS AND METHODS

One of the main tasks at physics faculties of the universities is to prepare students to use knowledge of a foreign language in their future professional activities, namely, teaching a future specialist to read and understand (without a dictionary) the content of texts in their specialty. It should be noted that in the system of professionally oriented teaching of a foreign language to students of physics faculties, foreign language teachers need to use reading scientific and technical texts in a certain field of knowledge. According to the point of view of S.K. Folomkina (2005), reading is included in the sphere of human communicative and social activity and provides one of the forms of verbal communication. Reading plays an extremely important role, as it opens the future specialist access to leading sources of information. Reading is also one of the main means of meeting the cognitive needs of students. Cognitive interest in mastering reading skills among physics students is associated with future professional activities. Therefore, in selecting textual material, it is considered appropriate to take into account its profile orientation, the ability to arouse professional interest and provide a cognitive effect.

The process of teaching reading texts in the specialty should be purposefully carried out based on specially selected texts that meet the criteria of authenticity, professional orientation and promote the creation of positive motivation for learning. Teaching the interpretation of professional texts in a foreign language is a multifaceted process associated

with the formation of a whole range of skills and abilities of a technical, educational-informational, speech, educational-intellectual, intellectual, assimilative, accommodative, innovative and educational-organizational nature. The whole set of skills is necessary for the successful implementation of professional activities.

Currently, one of the main tasks of teaching a foreign language is the formation of the ability to read authentic texts in the specialty and extract the necessary information from them. The competence of a modern specialist implies the ability to obtain professionally significant information from texts written in a foreign language, primarily in English. Graduates of physics faculties are required being competent in the foreign language mainly for a deeper mastery of the specialty and for practical use in professional activities. Thus, physics students should be able to read scientific texts in their specialty in English. Therefore, one of the tasks of teaching English in physics faculty is to develop students' language skills to work with authentic sources in their specialty.

In modern methodology of teaching foreign languages, reading is recognized as one of the fundamental skills. Reading as a speech activity is always purposeful; its goal is to extract information contained in the texts. In addition, based on a readable text, it is possible to teach other types of speech activity: speaking, listening, writing in the target language. Thus, teachers of foreign languages in higher education face with the urgent task of developing methods for teaching reading that meet modern requirements.

The analysis of scientific and scientific-methodical literature, the study of the experience of teachers of the department of foreign languages, the questioning of physics students led to the conclusion that the main factors stimulating cognitive interest in mastering reading skills are regional richness and professional orientation of educational material, emotional coloring of texts, variety of topics and genres, authenticity of textual material, communicative orientation of tasks. In this case, language teachers need to create positive motivation among students, help them to work with reading texts and choose the appropriate strategy, determine the levels of understanding available to students and form higher ones.

According to leading experts in the methodology of teaching a foreign language, learning reading and understanding texts in the specialty at physics faculties should be carried out purposefully. Working with text requires from the reader, first of all, knowledge of the language itself, which includes knowledge of vocabulary, rules and models for the generation of lexical units, knowledge of idiomatic expressions, grammar rules (morphology and syntax), spelling rules, knowledge of lexical and syntactic means of text coherence, etc. In addition, it is necessary to have a general idea of how the means of the language are used. Obviously, for understanding the text, knowledge of terminology is of particular importance: both general scientific terms and specific terms related to physics. Texts related to special literature, as well as texts of periodical articles containing terminological vocabulary, have a number of specific lexical and grammatical features that must be taken into account in reading. Students independently find texts in their specialty, read them and translate them, and the role of the teacher is to control reading comprehension and check the accuracy of the translation. Unfortunately, students do not master effective methods of working with the original texts and do not learn to read texts in their specialty that contain terminological vocabulary and special phraseology. In this regard, the question arises about the criteria for selecting texts for home reading. Traditionally, in the literature it is recommended to adhere to such criteria

as the relevance of the material, the thematic proximity of the subject to life experience and the interests of students, the presence of different points of view that give rise to discussions, etc.

Some experts believe that the formation of the skills of interpreting texts in the specialty of students should be based on professionally significant texts, the selection of which is carried out according to the following criteria:

- a) compliance of texts with the goals and objectives of preparing future physicists;
- b) compliance of the content of the texts with the future professional activity of the physics students;
- c) orientation of the selected texts to the activation of interdisciplinary connections;
- d) compliance of texts with methodological and pragmatic tasks of modern foreign language education;
- e) taking into account diversification, that is, the cultural diversity of textual material;
- f) compliance of texts with the language and speech capabilities of physics students.

We agree to the opinion of M. Stepanova (2009), who believes that there are only three main criteria for selecting reading texts in the specialty:

- ✓ authenticity;
- ✓ thematic focus corresponding to the professional interests of the student;
- ✓ to promote the creation of positive motivation.

One of the principles of text selection should be its accessibility and feasibility for the student. Thus, first-year students should not choose texts from serious scientific publications for independent reading, since they contain too many special terminologies, which may not yet be familiar to a first-year student who is just mastering the basics of his specialty.

In our opinion, when organizing home reading in the first year, it is optimal to choose articles from newspapers and magazines of a general nature and focused on the general reader. Such articles can be found in all the world's leading newspapers, such as The Daily Telegraph, The Guardian, The Washington Post, The New York Times, and others.

In the second year, teacher should provide students with more specialized texts containing a large amount of terminology. Analytical reviews and scientific articles can be used for independent reading and writing abstracts in the third and subsequent courses.

### **CONCLUSION**

In conclusion, it is worth noting that for purposeful teaching of independent reading in the specialty, a systematic approach to the selection of texts for reading should be provided by language teachers. This will naturally lead not only to mastering the skills of independent reading and increasing the level of English language proficiency, but also to strengthening the professional orientation in teaching foreign languages in a higher educational institution.

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