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## Terminological dictionaries in ESP training of engineer physicists

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### Abstract

The article is devoted to the actual task of creating learners' dictionaries. It defines the general objectives in creating of such dictionaries as well as the principles of their formation, namely the harmonization of concepts in different languages and the availability of definitions for a deeper understanding of the term semantics. The authors analyze English terminology of physics in terms of some of its characteristics influencing the process of assimilation by students. They distinguish terminological difference in features for IT-specialty being a new scientific field. The examples of dictionaries for physicists and IT-specialists are provided.

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**Keywords:** ESP; terminological dictionary; English terminology; harmonization of terms; definitions

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### 1. Introduction

The requirements for foreign language knowledge have changed since the accession of Russia to the Bologna process. The main problems and differences in LSP and LGP learning in the higher education institutions of Russia are related to a limited number of classroom hours, poor linguistic preparation of students in secondary schools and their heavy workload in the core subjects. Increasing requirements for the foreign language training of students of technical universities demand the elaboration and introduction of new teaching methods, taking into account changes related to the professional needs and conditions of the education. In this situation, there is an increased need for training methods related to improving the efficiency of the educational process.

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The main component in teaching LSP is its terminology, which directly determines the subject matter. Subjects of research in the field of terminology are very diverse. The topics thus studied are the origins of the terminology, theoretical issues, social aspects, and the evolution of neologisms, lexicology and lexicography, applied problems, standardization of terminology (Lotte, 1961; Rey, 1995; Sager, 1996). The contribution of terminological resources in the LSP training is mutually observed (Carriere, 2007). Confirmation of the importance of terminology lies in the establishment of international standards for information systems (ISO 704, 2009; ISO 860, 2007). It is the terminology which facilitates communication and provides information on understanding of national and foreign languages. Terminology provides compatibility of legislative, legal and regulatory documents, and so on.

In Russia like in many countries of the world, the formation of a professional linguistic personality of a future professional in the educational environment of a higher educational institution based on the bilingual principles, which are ensured by the educational subjects in the Russian and English languages in accordance with the current Federal State Educational Standards of Higher Professional Education (FSES). One of the most important practical solutions of terminology training in the context is elaboration and publishing of learners' terminological dictionaries.

## **2. General objectives of creation of learners' dictionaries for students of technical higher education universities**

The main problems and differences in ESP and EGP training in the higher education institutions of Russia are related to a limited number of classroom hours, poor linguistic preparation of students in secondary schools and their heavy workload in the core subjects.

In ESP training the specialty dictionaries containing key terms become particularly important. Commonality of language characteristics of the different sciences and availability within each of these texts of different language organization are relevant to the practice of foreign languages teaching. Professional communication, in turn, implies the existence of a professional vocabulary, in the absence of which communication would not be professional otherwise. In training students of not language specialties in higher education institutions, it is clear that, although the spoken language and literature have a place in the program of teaching, the attention here should be paid to a professionally oriented register of speech, which in turn is a set of sub-register, varying in direct thematic characteristics.

In the process of a foreign language teaching in a technical university, the focus should be paid to the semantics of the special vocabulary and its selection, which must serve the purposes of learning and mastering of a terminological lexical minimum.

In terms of terminology selection there is no consensus on what constitutes the general scientific, interdisciplinary and professional vocabulary. One way to classify the terminology can become a division into own, for a particular industry, and borrowed. There is a classification of own and borrowed vocabulary corresponding to the real or practical situation in various scientific fields (Leichic, 2007):

- basic terms for the main concepts;
- derivatives of terms designating specific or the aspect concepts;
- complex terms denoting complex concepts, consisting of the sum of basic or derivative concepts;
- basic terms denoting concepts of basic sciences of terminology system;
- borrowed terms from adjacent areas of knowledge;
- general scientific and general technical terms denoting respectively the general scientific and the general technical concepts;
- terms of general semantics which are used in many terminology systems.

When teaching professional vocabulary in non-philological higher education institution it is especially important to select linguistic material, which should serve the goals of learning and mastering of lexical minimum of terminology in the required volume. Systematic approach is the most preferred one among the generally accepted methods of language selection in the selection of terminology (Shchukin, 2007). The above classification of terminology of technical specialties corresponds to this vocabulary selection method.

A priority to authentic teaching aids written by the English speaking authors is given when selecting textbooks for students studying English language. Such teaching aids, of course, cause certain difficulties for Russian-speaking audience, which is also an argument in favor of the need to create terminological dictionaries.

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