УДК 811.111'374.822(083.72)

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BILINGUAL TERMINOLOGY DICTIONARIES – THE DEVELOPMENT OF PROFESSIONAL FOREIGN LANGUAGE COMMUNICATIVE COMPETENCE

Keywords: bilingual terminology dictionary; professional foreign language communicative competence; foreign language acquisition.

The paper sets general guidelines for modernizing professional education at non-linguistic institutions within the competence approach and foreign-language training paradigm including the use of bilingual terminology dictionaries, which results in developing professional competencies.

Ключевые слова: двуязычный терминологический словарь, профессиональная иноязычная коммуникативная компетенция; овладение иностранным языком.

В работе представлены общие рекомендации по модернизации профессионального образования в неязыковых вузах в рамках компетентностного подхода в процессе обучения иностранным языкам с использованием двуязычных терминологических словарей, развивающих профессиональные компетенции.

I. INTRODUCTION

In 2012 Moscow Automobile and Road Construction State Technical University (MADI) launched the University Strategic Development Program. Its main goal implies integration of the university into international educational and research area and interaction of Russian transport with the world transport system. The achievement of the goal requires the improvement of foreign language training of various groups of learners: undergraduates and postgraduates during their studies at the university within bachelor and master programs as well as lecturers and researchers as an element of their lifelong learning. The level of their professional foreign language communicative competence especially of English should be high enough for their communication in education, in international academic mobility programs and in professional practice. Terminology is the core of the professional foreign language communicative competence. The optimal number and the way of terms selection for some specialities still remain a problem. For that reason under MADI Strategic Development Program there have been developed four English-Russian and Russian-English terminology glossaries on the main specialities of the University.

II. FOREIGN LANGUAGE ACQUISITION AS THE BASIS OF PROFESSIONAL FOREIGN LANGUAGE COMMUNICATIVE COMPETENCE

The globalisation process has affected all the spheres of our life including the world of education, work and culture. Joining the World Trade Organization, as well as signing the Bologna Declaration contribute to the development of academic and professional mobility. As the English language has achieved a genuinely global status, that expands the scope of professional foreign language communication.

Globalisation directly influences industry's needs. As David Crystal said: "Technology lies at the heart of the globalisation process…" [1]. With this, the need arises for rather high level of foreign language communicative competence for future engineers.

The fundamental component of the professional foreign language communicative competence is the so-called foreign language sub-competence. The notion presupposes both adequate knowledge of terms and general rules applying to the given language, as well as the ability to use technical terms during professional communication.

Apparently in technical texts key-words are terms. Technical terms are of great importance in the process of professional communication. Thus the amount of four thousand general and terminology lexical units are required by the State educational standard of higher education [2] in comparison with the previous Curricula that have stated the amount of about 2000 lexical units, even without mentioning terms [3,4]. Communication skills including the ability to use special terminology correctly are also the key points highlighted by the current Basic Curriculum for Bachelor`s degree at non-linguistic institutions for Higher Learning [5]. Such skills are also essential for any engineer carrying out professional practice.

As we can see, the professional terms in a foreign language are an indispensible part of engineer`s communicative skills necessary for reading, listening, speaking, writing, and translation. However, under a system of multilevel education the place and time for work with terms depend on many factors.

The existing variety of professional communication needs in engineering education determines the diversity of lifelong learning, which is understood as the direction of its future development including a precise diversification of educational programs. In its turn it creates conditions for the complete satisfaction of various needs in training based on the choice of educational methods during the educational process with unlimited possible combinations of educational programs [6].

Learning the terminology during the process of foreign language learning on graduate and postgraduate levels is considered to be effective enough and even necessary. Thus students should be prepared, in particular, to read and translate authentic scientific and technical literature, to make reports of a various nature. Most often it is student`s self-study work and it is clear that such work necessitates the precise training content

diversity by selecting terminology of a special field of science.

III. CONCEPT

The existing practice of technical institutions in Russia presupposes compiling a list of professionally oriented terms on the basis of authentic technical texts. Thus the lists include both special and general technical terms. Numerous authors stress the importance of terms selection on the basis of terms logic and semantic value for a particular technical field as well as on their own working experience. Currently, there is a great need for much more precise terms selection for various engineering branches on graduate and postgraduate levels.

It is well known that the use of the main terms of a certain field of science during the educational process reduces training time and increases its efficiency. In this case under the notion of the main terms or minimum we mean a set of communicative means required for adequate professional communication which provide a certain level of language proficiency according to the curriculum parameters [7]. Lexical minimum in its turn refers to lexical units to be learnt for a certain period of training time. [7]

In lexicography the notion of term may be defined from different points of view. Most generally, the term refers to a word or phrase denoting the concept of special fields of knowledge or activity. [8]

Although the significance of special terminology dictionaries is generally recognized, there is a great demand for modern learning terminology bilingual dictionaries for various technical subjects. These dictionaries are also necessary in the process of foreign language training in technical colleges.

Traditionally terminology dictionaries include up to several thousands of terms and are used in reading and translation of scientific and technical texts. Unfortunately, such a large number of general technical terms and their insufficient representation in the dictionary, make it impossible to use the terms effectively during student`s work. In this case the use of learning bilingual terminology dictionaries with the restricted number of terms of a certain field of science is to improve student`s independent work through the rational structure and optimum choice of terms.

At the same time there is still quite opposite opinions concerning the number of terms selected, the principles of terms selection and the way of their representation in a dictionary. Thus the thorough analysis of lexicological works shows that the minimum number of special technical terms is about 160 lexical units (ranging from 144 to 180). [9] Therefore, we can conclude that learning terminology dictionary volume of 400 terms will adequately meet the needs of the students on graduate and postgraduate levels.

There is no agreement on the best way of terms selection in lexicography. Therefore, the key terms have to be defined with the help of the following approaches: empirical, statistical, sociolinguistic and linguistic [7]. Thus the empirical approach is based predominantly on working experience of a particular teacher. Statistical approach deals with frequency of terms occurrence in scientific and technical texts. Linguistic approach takes into account the semantic value of terms, compatibility of lexical units, their derivational value etc. Sociolinguistic approach considers the learner-user needs in his or her professional activity. Unfortunately, all the above mentioned methods have proved to be insufficient enough for special purposes.

To compile a new dictionary for special purposes one has to look through a vast number of technical texts including periodicals. Instead this may be done in close and productive cooperation with specialists and in a more advanced way. Such cooperation could lead to a succession of related works. Thus, the most promising approach to the problem of terms selection is the so-called integrated approach – the effective synthesis of all the existing methods.

The main purpose of learning bilingual terminology dictionary for special purposes is to provide necessary assistance to engineering students in the process of their independent work. In this case, the restricted amount of selected terms serves as a basis for student`s communicative skills, as well as for further professional practice.

IV. DICTIONARY

The dictionaries developed under MADI Strategic Development Program serve mostly the needs of Russian speakers. At the same time their unique structure makes it useful for English-speaking specialists as well to some extent. So it is possible to speak about two target groups of users.

In accordance with established tradition of lexicography, let us turn to the macro- and microstructure of the dictionaries under review.

A. Macrostructure

Macrostructures of the relates to thesaurus-like or ideographic organization of the containing words and word combinations, i.e. words and word combinations are grouped together according to similarity of meaning, that make up the core of the terminology of a specific area of activity. It should be noted that this arrangement is well known to be efficient enough in the process of professional education because it helps to increase students` vocabulary as well as their professional knowledge by showing them words related to a particular direction. Thus, adequate translation of terms should result in adequate translation of the whole text, and in this case this dictionary would be invaluable.

To demonstrate such word arrangement we would like you to pay attention to the given example of the dictionary titled “Transportation tunnels” which contains 9 sections:

- Types of tunnels - *Виды тоннелей*
- Engineering investigations - *Инженерные изыскания*
- Tunnel plan, profile and cross-sections - *План, продольный профиль и поперечные сечения тоннеля*
- Tunnel structures - *Конструкции тоннелей*
- Loads and construction methods - *Нагрузки и методы расчета конструкций*

- Construction technology - *Технология строительства*
- Construction equipment - *Тоннелестроительное оборудование*
- Organization of tunnel construction - *Организация строительства тоннелей*
- Tunnel operational and maintenance facilities -*Эксплуатационные устройства и оборудование тоннеля*

In addition to the above mentioned - Thematic section of the dictionary two indexes - Russian-English and English-Russian are given at the end of the dictionary. These parts with the help of their transparent structures containing the system of various cross-references provide the quickest way to the required term, and its illustrative representation in the appendixes.

According to the principle of economy which is particularly important in any dictionary, macrostructure of the dictionary under review includes only a limited amount of entries or key words.

As we have already mentioned there are approximately 400 terms of a particular field including synonyms. Again it has to be stressed that we have covered only special terms, those which serve to provide more information on a particular field that will be used during the educational course.

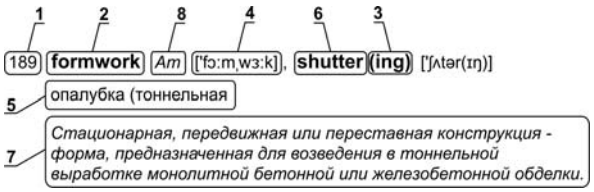
B. Microstructure

Proceeding to the consideration of the dictionary microstructure we can`t but mention its innovative arrangement. Traditionally the significance of pronunciation of terms has been underestimated in comparison with the meaning of terms regarding to the need for precise translation in engineering education. As we have already mentioned the attitude towards communicative skills has changed recently thanks to political and social changes. Thus particularly interesting in this dictionary is the use of International Phonetic Alphabet (IPA) symbols, which indicate the correct sound form, i.e. pronunciation of a particular term which is of great importance for forming foreign language acquisition.

For each entry-word a sound form and a target-language equivalent are given. For some terms synonyms, i.e. words with the same meaning, are shown after the equivalents. Therefore, it is important to underline the fact that the dictionary provides definitions in addition to the equivalents. These definitions explain the meaning of the word in clear simple language. If a word has more than one meaning, each meaning is shown by a number. Thus, the major part of the terms accompanied with a definition in italics which serves as an explanation of a particular meaning of the term within a special context.

Various lexical comments and glosses - additional information on the meaning either in source or target languages are given in italics. The aim of this section is to provide complete meaning of the lexical units for special purposes.

Let us deal with an example that illustrates the key features discussed in this section:



V. NEEDS AND PROSPECTS FOR THE FUTURE

The main purpose of predictive dictionary is to provide the information on language that will enable the user to communicate adequately. As we know, predictive dictionaries serve to help the user to produce a new way of thinking regarding further forms and meanings of the given language on the basis of the existing ones. Prediction becomes possible on the basis of the existing knowledge on the subject with the help of proper presentation and description of terms in the dictionary. Using a proper bilingual dictionary the user will receive the necessary information on the subject working with any special texts. It will make possible for the user to obtain the information on the subject. Thus the dictionary under review can be considered to be a predictive one and can be successfully used to form the language competence of a bilingual speaker.

The adopted approach and learning bilingual terminology dictionaries can be successfully used as an important training means in acquisition of lexical competence.

CONCLUSION

According to the need of modernizing professional education, especially at non-linguistic institutions within the competence approach the developed dictionary thanks to its innovative structure and efficient arrangement can be useful for various groups of learners as an element of their lifelong learning:

- Due to the fact that the dictionary has several advantages over the existing dictionaries for special purposes, it can help the user to process the existing knowledge on the subject and to master new ones. Hereby, the basic function of such a dictionary is to provide special knowledge on the subject, to activate the user`s skills and form the stable professional competencies.
- The presence of at least 400 terms in the dictionary creates the potential for effective use of such dictionaries in everyday reading and translation of scientific and technical texts.
- The dictionary can also serve as a source of a training multimedia complex aimed at forming communicative skills and professional competencies. It can also be successfully used in prediction, i.e. in production of linguistic forms or meanings which serve in the process of communication.

The synthesis of methods of education is an important element of life-long learning. Thus communication between disciplines is an important aspect that also needs further consideration. It is also an important factor in the process of creation an effective communication across disciplines, such as engineering and foreign language learning. Thus foreign languages can also contribute to the education of future engineers.

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