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FOREIGN LANGUAGE IN ENGINEERING EDUCATION: TECHNICAL TERMS WITH SOMATIC WORDS

Keywords: English language, engineering education, technical translation, somatic words.

The article is devoted to the place of foreign languages in engineering education, its difficulties during translation into different languages at the example of somatic words.

Ключевые слова: английский язык, инженерная педагогика, технический перевод, соматические слова.

В статье рассмотрены роль и место иностранного языка в инженерной педагогике, трудности связанные при переводе технических текстов на примере использования соматических единиц.

Engineering Pedagogy is a part of professional pedagogics. The aim of Engineering Pedagogy is the training of engineering specialists; it is characterized by specific aims, principles, content, organization forms, methods and teaching aids. Nature, objects and subjects are determined by all of these aspects. Place of foreign language in engineering education program is very important in the modern world of transition to bilingualism. The employer of 21 century is need of not only engineer, capable to think independently and to have certain engineering knowledge, but he needs the specialist who has communication skills in foreign language and can find and analyze the information.

One of the most burning problems of high education according to the statute "The National Doctrine of Education in Russian Federation up to 2025" is the training of competitive specialist. One of the most important tasks of Russian Universities is not only providing future specialists with professional knowledge but also establishing his ability to represent them on the global labor market, the ability to solve the forming problems at any time and in different situations [1].

Nowadays a special attention is paid to teaching not only engineering specialists but also to the study of foreign languages. Knowledge of foreign language in the aspect of professional communication provides professional coordination of specialists in definite field of the science and technology, helps to avoid mistakes and misunderstandings appeared because of poor translation [2]. But in modern world there are a number of debating points in learning foreign languages. Textbooks offered today often don't provide those materials which is necessary for the students of technological Universities.

The aim of the research is determination of translation peculiarities of technical terms, expressed by somatic units in the field of different engineering sciences.

The object of study is the texts of engineering in-line documentation.

The subject of the study is translation methods of engineering in-line documentation.

Study of different terms in two languages is one of the most important moments in learning foreign language. The same term can have completely different meanings and characterize various technical properties.

That's why during study of foreign language students and instructor without engineering education have some difficulties with the phrases, sentences and group of words having different meanings in two languages. One of such groups is somatic units.

Somatic comes from the word soma, "body." Something somatic refers to the physical body, as opposed to the mind or spirit: *The doctor thought my ailments were all in my head, but it turned out to be a somatic illness.* This group of words is usually found in bioengineering, machinery, mechanics and other engineering sciences.

Somatic items are common to all families of languages. Tools, special instruments for work, the first machines, produced by the ancestors of modern various language speakers, living in different territories caused certain associations, psychological contacts between different parts of human and animal body and other ideas. It was the reason of the meanings transfer, pointed out in different languages [3].

The research is devoted to the analysis of three languages: Tatar, English and Russian. The Tatar language (татар теле, татарча, tatar tele, tatarça), or more specifically Kazan Tatar, is a Turkic language spoken by the Tatars of historical Kazan Khanate, including modern Tatarstan and Bashkortostan. It should not be confused with the Crimean Tatar language, to which it is remotely related. [4]. But as the engineering terms in Tatar language usually are borrowed from Russian the following article is devoted to the comparison of technical vocabulary of Russian and English languages.

There are a lot of engineering terms in all languages. In order to show the difference between the languages somatic words in the field of composite materials were analyzed in the research. This group can be divided into several subgroups:

1. Technical term, formed from the somatic word: *headless (баишсыз) tire* -прямобортная шина, *left-hand (сул кул) twine* - нить S-крутки [4], *inside curing arm (кул) -* вулканизационный дорн, *leg(аяк) reactor* - петлевой реактор, *index finger (бармак) -* стрелка, *pot eye (күз) -* направляющее кольцо, *bullet-shaped nose(борын) -* пулевидный наконечник сопла, *three-wing (канат) stirrer* - трёхлопастная мешалка, *knuckle (бармак буыны) area* площадь перехода (в армированных пластиках в секциях различной

геометрии в области намотки волокна), *skin (mupe) packaging* - герметичная упаковка формованием плёнки на изделии[5].

2. Terms expressed by somatic words in English, but not somatic in Russian: *head (бау)* - верхняя или передняя часть, *left-hand (сул кул)* - с левой резьбой, *right-hand(уң кул) twist* - Z-крутка, *second-hand(кул) material* - вторичное сырьё, *spider arm(кул)* - спица дорнодержателя, *yarn guiding arm (кул)* - нитеводитель, *finger (бармак)* - рапира, *neck (муен) insert* - вставка формы, *body(гәүдә)* - каркас, *bodying* - уплотнение, загустевание, *skinny board* - катушка малой ёмкости [5];

3. Lexical items, expressed by somatic units both in English and in Russian languages: *headpiece (бау өлеше)* - головка, *hand brush (кул нумаласы)* - ручная кисть, *hand(кул) mold* - ручная прессформа, *foot (аяк)bracket* - подпятник (веретена), *knee (тез)brake* - коленный тормоз, *finger (бармак) cam* - пальчиковый кулачок, *palm (уч төбә) rest* - опора для ладоней, *neck-down (муен)* - шейка, *thread eye(күз)* - глазок нитепроводника, *ideal elastic body (гәүдә)* - идеально упругое тело, *skinning(mupe)* - образование плёнки или кожицы [5];

4. Terms, expressed by somatic words in English language giving the similarities with human body in Russian language: *head-to-head (бауика бау)* *polymer* - полимер с мономерными звеньями, соединёнными по типу "голова к голове"; *head-to-tail(бау-коерык) polymer* - полимер с мономерными звеньями, соединёнными по типу "голова - хвост"; *leg gate(аяк)* - литник в виде колена; *crow's-foot(карга тәпие) checking* - растрескивание лакокрасочного покрытия в виде птичьих следов; *shoulder-to-shoulder(эжилкәгә эжилкә) retreading* - восстановление протектора от плеча до плеча шины; *shark skin (акула тулесе)-* "акуля кожа" (дефект поверхности готовых полимерных изделий и пленки после экструзии)[5].

The analysis of engineering terms in English and in Russian showed that somatic words are used in both languages. Different terms based on somatic elements can have similarities in different aspects.

Many terms are polysemic. Polysemantic is one of the language phenomena, confirming the fact that lexical items are always dynamic and show the changes of surrounding world. But in scientific and technical texts polysemy of the words is less as technical term requires accuracy.

Nowadays in the era of rapid progress in science and technology engineer should know not only his profession but also should manage to tell and to share his ideas with other specialists from different countries. Communication language of 21st century is English. As engineering specialty requires maximum accuracy native speakers should understand common features and differences of their own language and English. Present Technological Universities should give the knowledge not only in engineering but also communicate in foreign language. The article gives small part of specific features of two languages which is necessary for the students of technical Universities.

Литература

1. Хацринова О.Ю. Подготовка конкурентоспособных специалистов-инженеров в условиях лабораторных практикумов по технологии композиционных материалов / О.Ю. Хацринова // Вестник технологического университета. – 2010. - №12. – С. 358-363
2. Валеева Н.Ш. К проблеме подготовки специалистов в области химии и технологии полимерных и композиционных материалов в условиях глобализации / Н.Ш. Валеева, Г.Б. Хасанова // Вестник технологического университета. - 2011. - №6 – С. 287-289
3. Коропенко И.В. Типологическая характеристика структуры гнезда английских и русских технических терминов // Отраслевая терминология и её структурно-типологическое описание – Воронеж: Изд-во Воронеж гос. ун-та - 1988. – С. 58.).
4. Мюллер В.К. Новый англо-русский словарь / В.К. Мюллер – Москва. Изд-во «Русский язык». – 1999.- Изд.6 - С.880
5. Левин А. Словари, глоссарии, справочники, энциклопедии. PERFECT.ru / А. Левин – 2010 (<http://www.perfekt.ru/dictionaries/index.html>)