

Lexicographic Approaches to ESP/EST Vocabulary Teaching

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Résumé: *L'approche proposée a comme but la présentation de quelques méthodes d'enseignement du vocabulaire de l'anglais comme langue de spécialité par l'utilisation de dictionnaires spécialisés.*

Mots-clés: *l'anglais spécialisé, vocabulaire, dictionnaire, équivalence.*

The domain of LSP teaching has witnessed constant changes along the years due to the powerful impact of the technical and scientific development worldwide. This fact concerns primarily the level of vocabulary since words are a mirror to society, the same as dictionaries which “[...] are a reflection of the people that produced and consumed them.” (Stavans 2005, <http://accurapid.com/journal/32dictionaries.htm>).

Less discussed in the literature, the teaching of ESP/EST vocabulary raises problems concerning the acquisition of specialized words by students of both an intermediate and advanced level of English as a secondary language. The present paper focuses primarily upon a subcategorization of ESP/EST vocabulary according to the degrees of difficulty in understanding it and the role that a semantic analysis of dictionary definitions can have in facilitating learning. Illustrations concern Romanian learners of English as a second language.

a. In teaching ESP/EST lack of specialization of both students and teachers can be compensated by adequate curriculum designs and lesson planning that are not necessarily characteristic to general language classrooms: “Because the teacher is obligated to prepare the students for the real world, there are new realms of knowledge and skills that must be dealt with and individuals from target discourse communities (e.g. subject specialists) who must be consulted” (Johns 2006: 687). Among the methods used in ESP teaching, Johns includes the learner-centered, genre-based and task-based approaches. Options for one or the other depend on the specific features of the pedagogical context and the text typology established on the basis of both lexical and semantic analysis.

b. Students should be taught technical and scientific vocabulary by being provided a hierarchy of words as Robinson 1991 suggests (see Viel, http://esp-world.7p.com/Articles_1/vocabulary.html).

The first group is made up of ultra specialized vocabulary belonging either to the scientific or technical field. The words have a restrictive usage among specialists and do not carry any semantic ambiguity. Therefore the use of specialized dictionaries is of paramount importance since both students and teachers may not be quite familiar with the phenomena presented and the terminology implied. Such compound words as *belly helve* (met) *ciocan cu parghie actionata la mijloc*), *butt-joint riveting* (OM) *nituire cu eclise*) have their equivalents provided by scientific and technical dictionaries (Dima, Deleanu, Sorcaru 2009) but they would not be understood by students unless they had at least some connection with the domain either from a theoretical or practical point of view. Such examples should be generally dealt with by advanced students training for various specializations.

The second group consists of general scientific and technical words common to most fields: “One should not overlook that the vocabulary pertaining to this second category is not necessarily a simple and basic scientific and technological one, but may also be extremely complex. Granted, part of this vocabulary may be basic- for instance to refer to simple hand-held tools or to users instructions- but may also be more elaborate: in industry there are plenty of transverse activities which are common to several industrial domains, fields and situations and which require language (and vocabulary) proficiency that is far from basic” (Robinson 1991 in Viel (http://esp-world.7p.com/Articles_1/vocabulary.html)).

The degree of difficulty in acquiring more elaborate words is not so high due to their possibility of being used in different fields, fact which might facilitate understanding and usage, e. g. *die bed* (met, mas-un) *placa de baza a matritei*; *die-block* (mas-un) *matrita nedemontabila*; *die case* (met, plast, mas-un) *inel pentru fixarea filierei*, *die hammer* (met) *ciocan de matritare*. In our opinion thematic specialized dictionaries are also of great help especially when words enter such collocational patterns as the ones presented above.

The third category belongs to general English and includes common words which are retrieved within EST/ESP with a high frequency: “[...] as soon as an invention or a new device leaves the closed circle of scientists and technicians, gains popularity and is used in everyday life, the corresponding word passes from the category of general scientific and technological words to that of general English” (Viel, http://esp-world.7p.com/Articles_1/vocabulary.html). We provide the following examples picked up from the quoted dictionary:

e.g. 1 *addition*: *adaus*, *aduagare*, *adunare*, *insumare*; (chim, met, plast) *corp strain*, *impuritate*, *element de aliere*; (TH) *adaus*; *completare*, *adaugire*; (constr) *dependinta*, *acaret*

2 *closeness*: *avaritie*, *zgarcenie*; *izolare*; *apropiere*, *vecinatate*; (mediu, TH) *aer inchis*, *atmosfera viciata*; *densitate*, *character compact*; *exactitate*, *precizie*; *avaritie*, *zgarcenie*, *izolare*

Disambiguation can be provided by contextual analysis taking into account the local and thematic context (Dima 2010). The task-based teaching method will stimulate students to focus both on the product and operations to be performed: “The term ‘task’ focuses attention on three aspects of students’ work: (a) the products (or genres) students are to formulate, (b) the operations that are to be used to generate the product, i.e., the process, and (c) and the givens, the resources available to students in accomplishing the tasks (Doyle 1979: 163 in Johns 2006:688).

c. In what follows we shall enlarge upon and suggest that an efficient method used in facilitating the acquisition of ESP/EST collocational patterns headed by nouns would be to analyse the semantics of determiners using lexicographic definitions: “*Nominal compounds* can perform a range of functions rendered by the semantics of the words and their arrangement into the phrase-structure i.e. the system determination through pre-and post-modification which would indicate development of the discourse” (Dima 2010). As several linguists have shown (Quirk, Greenbaum, Leech, & Svartvik 1980; Berwick 2001), scientific writing has a distinctly higher proportion of complex noun phrases providing ESP texts with specialization and technicalization.

The semantic analysis of the determination system i.e. the relationship between the head and its modifiers can help the student of an intermediate and advanced level of English to better understand the scientific and technical phenomena denoted by the nominal complexes. In the noun phrases listed below the head – determiner relationship can render:

a. operating principle, e.g. *on-line computer* (autom, c, TH, ind) *calculator cuplat cu masinile din procesul tehnologic*; *film condensation* (fiz., termo) *condensare peliculara*; *blow moulder* (plast, ind chim) *masina de formare prin suflare*.

b. working substance in the operation ,e.g. : *gas refrigeration machine* (termo) *masina frigorifica cu gaz*; *water injection air hammer* (constr, hidr. OM) *ciocan pneumatic cu spalare cu apa*; *oxygen-induced chain reaction* (chim) *reactie in lant indusa de oxygen*.

c. means of operation, e.g. *automatic switching* (autom, el) *intrerupere / comutare automata*; *electronic power steering* (auto, electr) *servodirectie asistata electronic*; *injection moulding* (alim, plast) *formare prin injectie / injectare*; (met) *turnare sub presiune*; *thermodiffusion* (fiz) *difuziune termica*; *blow bending* (mec) *incovoiere cu soc*.

d. materials used ,e.g. *wooden gauge* (met, OM) *tipar/ sablon de lemn*; *leather gasket* (OM) *garnitura de etansare din piele*; *gelatinous precipitate* (chim) *precipitat gelatinos*.

e. purpose, e.g. *portable spot welder* (mas un) *masina portabila de sudare prin puncte*; *core-making department* (met) *atelier de confectionat miezuri*.

f. location, e.g., *tray column* (ind chim) *coloana cu talere*; *benchboard desk* (TH) *pupitru, tablou (si de comanda)*; *chair* (OM) *cuzinet, placa de reazam*.

g. shape or form, e.g. *rectangular wire* (mas-un, met) *sarma cu sectiune dreptunghiulara*.

As proposed by the article the main objective of teaching ESP/EST vocabulary is to develop the students' ability to identify and use the particular jargon of ESP/EST domains by reading instructions, manuals and documentation resorting to lexicographic and semantic approaches.

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