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TERMINOLOGICAL COLLOCATIONS AS AN ESP COURSE COMPONENT

LEARNERS DON'T LEARN WHAT TEACHERS TEACH!

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ABSTRACT²

The paper considers terminological collocations as a course component in an English-for-Specific-Purposes (ESP) course designed for students of architecture, civil engineering and geodesy. The course is structured with a new perspective on a scientific text seen as a network of concepts and relations. Hence, the reading comprehension section of each unit, being a major target situation need for the respective ESP learners, is closely related to the subsequent terminology section where learners are assisted in understanding the concepts and conceptual relations in scientific discourse by analysing and internalising terminological definitions and terminological collocations. Special attention is paid to terminological verb collocations which are missing in the above mentioned course materials. They are first discussed within the framework of general verb collocations. The two major approaches to verb collocations (frequency-based and phraseological) are briefly reviewed. A comparison is then made between general and terminological verb collocations, emphasizing the difference in the behavior of the collocator (verb) which in most general collocations undergoes semantic transformation by delexicalization or acquiring a figurative meaning whereas in terminological collocations it always performs the function of involving the entity designated by the term in a conceptual scene. Such a functional approach to specialized verb collocations presupposes a

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lexico-conceptual analysis by making use of their actantial structure, i.e. interpreting them as concept combinations which can be subjected to some categorization thus identifying conceptual groups with the corresponding term sets. Finally, some types of tasks on terminological verb collocations are proposed. In conclusion, it is recommended that in a second edition of the coursebook the number and variety of tasks on terminological collocations, and on terminological verb collocations in particular, should be increased in view of their relevance for comprehending specialised discourse.

1. Introduction

Collocations in both Language for general purposes (LGP) and Language for specific purposes (LSP) have always played a major role in understanding and producing general-language and special-language text. Collocations in special languages have long been recognized as a major problem in both teaching LSP and technical translation. Acquiring terminological units (terms and terminological collocations) belonging to a special domain has proved to be a specific need of ESP learners. Therefore, terminology in general and terminological collocations in particular should be an important component of any ESP course.

The *aim* of this presentation is to propose a methodology for analyzing and using terminological collocations in a task-based, i.e. meaning-focused ESP course for students of architecture, civil engineering and geodesy.

2. Content and Structure of the Course

The course book [1] is based on the functional terminological approach, proposed by Prof. Dr. B. Alexiev, leader of the project team [2]. It is an eclectic approach, which is a combination of:

- **concept-based approaches**, aiming to introduce students to the main ways in which essential scientific concepts, e.g. properties and shapes, location, structure, measurement and process are expressed in scientific English;
- **function-based approaches**, focusing on the main communicative functions, e.g. describing shapes, component parts, function, purpose, making definitions, etc. of scientific English;
- **genre-based approaches**, concerned with discourse structure of a particular genre in scientific English (e.g. research article, academic textbook, technical manual, etc.).

The functional terminological approach proposes:

"...teaching of scientific text with a focus on its function as a source of information and specialised knowledge organised in a network of scientific concepts by means of terminology and genre specifics" [3].

The network of scientific terms and their relationships are identified through the application of the basic principles of terminology [4].

The course book comprises 16 units: 1 Intro/general + 15 thematic units. Of the latter, 3 units are devoted to each of the five degree courses offered at UACEG (Architecture, Geodesy, Structural Engineering, Hydraulic Engineering and Transportation Engineering).

UNIT STRUCTURE – SECTIONS:

1. Starter – General question/s on a topic to be discussed.
2. Reading comprehension – skimming/scanning tasks on a thematic text.
3. Terminology – term-definition and term-translation matching.
4. Use of Language – tasks on communicative functions in the text.
5. Viewing activity – gap filling while video watching and Q-answering.
6. Grammar focus (for learners of lower English proficiency level).
7. Situational English – communicative situation tasks.
8. Translation – terminology-assisted and non-assisted translation tasks.
9. Writing – summarizing and essay writing.

The 3rd section, actually, is the place where we feel the absence of tasks on collocations, as it is proved that our brain tends to store language in chunks, rather than individual words, and especially on V-T/T-V collocations, which give a more complete picture of the scene [5] [6]. We should point out here that in some of the terminological and translation exercises we have some collocations presented as multi-word terms, but definitely no VCs.

3. Definition of the Concept ‘Collocation’

The New Shorter Oxford English Dictionary [7] gives the following definition of *collocation*, used in the domain of linguistics:

Juxtaposition or association of a particular word with other particular words, a group of words so associated.

This definition is too restricted in meaning revealing neither statistical nor semantic or syntactic features characterizing the relationship between the two “juxtaposed” words.

Firth, who coined the term *collocation*, defines it as “the company words keep.” In his [8] he assumed that part of the meaning of a word derives from the words with which it co-occurs:

Meaning by collocation is an abstraction at the syntagmatic level and is not directly concerned with the conceptual or idea approach to the meaning of words.

This definition emphasizes the syntagmatic (i.e. horizontal semantic) relations between the collocation components. In other words, a collocation in that view is not a free combination of words preserving their semantics but rather a combination of interdependent lexical items, where the base usually determines the collocator.

A more lexicographic view, mainly concerned with collocation extraction from text corpora, is proposed by Barch in [9]: “collocations are lexically and/or pragmatically constrained recurrent co-occurrences of at least two lexical items which are in a direct syntactic relation with each other”.

One can get a clearer picture of the different views on collocations, determined by the particular purpose for their investigation, by considering the main approaches to that phenomenon.

4. Approaches to Collocations

Two basic approaches to collocations can be distinguished: (a) the Frequency-Based Approach and (b) the Phraseological Approach.

The frequency-based approach is used mainly by researchers who are concerned with the computational analysis of collocations. One of the major representatives of that approach, Sinclair, defines collocations as “the occurrence of two or more words within a short space of each other in a text” [10]. For him short space or “span” is optimized by four words to the left and right of the investigated word, which he calls “node” and the words that form collocation with it – “collocates”. Sinclair uses “word” in the sense of a “lexeme” and thus sees collocations as relationships between lexemes. He also makes a distinction between collocations and idioms on the basis of meaning, which introduces a semantic element in his approach.

The phraseological approach is characterized by a strong semantic element. Cowie is one of the most prominent representatives of that approach. He distinguishes between “free collocations” and “restricted collocations”. The former can enter into combinations with a wide range of lexical items. He gives an example with the verb *hire* which can collocate with an innumerable number of items such as *staff, clerks, worker*, etc. On the other hand, in the restricted collocations at least one element has a figurative or de-lexical meaning, and at least one element is used in its literal sense, so that the whole combination is transparent as in ‘*explode a myth*’, where ‘*explode*’ has a figurative meaning, or ‘*take a decision*’, where ‘*take*’ has a de-lexical meaning (i.e. little lexical meaning). The de-lexical pattern is composed of a grammaticalized verb, often *have, make, take, give, or do*. Another criterion is commutability (or substitutability) i.e. “an arbitrary limitation of choice at one or more points” [11], but with lexical variation being possible in at least one element. Cowie illustrates this with examples such as *run a deficit, abandon a principle, or champion a cause*, in which the object noun limits the choice of verb to one or two.

5. Comparison Between General And Terminological Collocations

In terminology the *base* component of the collocation is the respective term usually represented in a noun form. Since in most cases the possible *collocator* (the word with which the term collocates) can be a verb, an adjective or a noun, we propose the following structural classification of terminological collocations [12]:

1. Verb terminological collocations such as *blow/pour/rinse asphalt or asphalt softens/hardens/cool*s.
2. Adjectival terminological collocations such as *aerated/prestressed/reinforced concrete*.
3. Nominal terminological collocations such as *concrete durability/foundation/slab*.

As regards the characteristics that general and terminological collocations share, one common feature is the occurrence of low-valence and high-valence bases in both types. For

example, the term ‘pile’ in construction collocates predominantly with the verb ‘drive’ whereas the term ‘steel’ collocates with a large number of verbs such as ‘melt’, ‘cast’, ‘roll’, etc. The same applies to general collocations with a low-valence base (e.g. ‘take precaution’) and a high-valence base (e.g. ‘give/offer/provide/reject/ etc. advice’).

One major difference lies in the behavior of the collocator which in most general collocations undergoes semantic transformation by delexicalization or acquiring a figurative meaning, e.g. ‘make an investment’, ‘pay attention’. In terminological collocations it always performs the function of involving the entity designated by the term in a conceptual scene.

6. Actantial Analysis of Terminological Verb Collocations

The mention of “conceptual scene” presupposes a functional approach to analyzing one type of terminological collocations, namely terminological verb collocations which we have chosen to exemplify the analytical procedures for identifying that type of collocations. Modern terminologists rely on two main types of analysis: conceptual analysis and lexico-semantic analysis. That type of analysis actually reveals the hierarchical relationships (hyponymy and meronymy) between terms thus yielding subordinate and coordinate terms to the head ones. Once the conceptual analysis has been performed, the next step is carrying out the lexico-semantic analysis for identifying terminological verb collocations.

Some terminologists have made use of the so-called lexical functions proposed by Mel’čuk [13] in his Meaning-Text Theory, to formalize the relationships head terms enter with their collocators [14]. Our terminological investigation into a narrow domain [15, 16] has shown that a domain-specific analysis of terminological data can rely on the general principles of Mel’čuk’s Explanatory and Combinatorial Lexicology (the lexicological component of the Meaning-Text Theory) but without involving the standard lexical functions because the specificity of a particular terminological system may require the postulation of new specific lexical functions that have not been considered in that model.

Instead, we proposed analysis of the actantial structure of a head term for identifying verb collocations in line with what Fillmore and Atkins [17] call ‘frame elements’, a frame understood in this context as a conceptual scene. That scene can be represented as an actantial structure which gives the position of actants and explains them in terms of actantial roles. For example, by applying the actantial analysis to verb collocations with the term ‘concrete’ two types of *activities* can be captured, namely, *self-running natural processes* during *concrete* manufacturing (*concrete bleeds, cures, sets, hardens, etc.*) and *actions* performed on *concrete* (*concrete is placed, compacted, leveled, etc.*). As a result of this analysis, a new actantial structure typical of the particular specialized discourse (special domain) may be discovered. Moreover, terminological collocations can be subjected to some categorization/classification (e.g. *steel: melted, cast, rolled – stages* in steel production) thus identifying conceptual groups with the corresponding term sets in a source and target language.

This kind of interpretation of terminological collocations enables us to construct the most appropriate tasks for teaching collocations for productive vocabulary.

7. Examples with Proposed Tasks for TVCs

Ex. 1. The odd-one out – spot the verb V that does not go with the given term T – from Unit 10 pp157, 158 Reading comprehension – as part of the terminology section

place, install , pour, lay	concrete	or
	concrete	sets, solidifies/hardens, extrudes , cures,
season , cast, press, extrude	plastics	
fell, saw, season, solidify	timber	

Second variant of this exercise – spot the T that does not go with the V:

cast concrete
 timber
 steel
 plastics

- **additional activity: make a correct collocation with the odd-one out, e.g. *plastics***
 can be **extruded** (*steel* also but it is not in our text); *building insulation* can be **installed**

Ex. 2. Fill in the gaps with the correct form of the verbs from the list below (and then translate the text?) (a type of cloze test where students have to choose the correct collocate – in this case the **V**, to form the terminological collocations in the text) – from Unit 1, p. 22/ ex. 8B – second paragraph

install (x 2) spread backfill construct pour fill cure

(**Note!** For lower levels verbs can be given in the form they are used in the text, but this will be a hint for their place in the text)

The typical suburban dwelling normally begins with the excavation of the soil, to a depth below the frost line. A concrete footing; to provide support for the foundation walls and the weight of the house over a wider area. At this point, the water supply lines and sewer drains can Once the concrete sufficiently; forms to the shape of the foundation walls, and with concrete. The shape will vary according to the design of the house and the exterior finish. Forms are removed when the concrete cures; then the damp proofing and the foundation

The typical suburban dwelling normally begins with the excavation of the soil, to a depth below the frost line. A concrete footing **is poured**; to provide support for the foundation walls and **spread** the weight of the house over a wider area. At this point, the water supply lines and sewer drains can **be installed**. Once the concrete **has cured** sufficiently; forms **are constructed** to the shape of the foundation walls, and **filled** with concrete. The shape will vary according to the design of the house and the exterior finish. Forms are removed when the concrete cures; then the damp proofing **is installed** and the foundation **is backfilled**.

Ex. 3. Choose / Underline the correct verb / verb collocate – from Un 8 pp138-140

1. Converting / diverting saltwater to freshwater is generally too expensive to be used for industrial, agricultural or household purposes.
2. The remaining sewage is aerated and mixed / screened and settled with microorganisms to decompose organic matter.
3. Sludge from the sedimentation tanks maybe disposed of / suspended in landfills.

4. Large floating objects might *dump* / *clog* pipes.
5. Effluent from the sedimentation tank is usually disinfected with chlorine before being *decomposed* / *discharged* into receiving waters.

Ex. 4. Matching - Note! 3 main types: collocation – definition

collocation – Bg equivalent

match two parts to form a collocations (In our textbook we have this in Un 8 Situations p. 132 B – but not terminological and not V + T / T + V).

e.g. Ex. 4. Match the words in the two columns to make collocations (words that are often used together) – *after reading the text or fill in the gaps in the text* – from Un 5 pp 81, 82 / 8A Remote sensing – I've given them in matching colours for you (the audience) to see the answers

view	source of radiation
radiate	sound
provide	sensations
interpret	screen
hear	information
experience	light

8. Other Ideas for VC Tasks

1. Ask learners to underline chunks they can find in a text.
2. After they have read a text, learners can be given a set of incomplete phrases taken from the text and asked to complete them by scanning the text again. This can be done at any level.
3. To encourage student autonomy, have students do dictionary work to find certain collocations.
4. After they have seen collocations in a text, learners can be asked to find pairs of collocations arranged randomly.
5. Give students phrases in their native language and equivalent phrases in English, and ask students to match the phrases.

9. Conclusion

It is recommended that in a subsequent edition of the course book the number and variety of tasks on terminological collocations, and on terminological verb collocations in particular, should be increased in view of their relevance for comprehending specialised discourse.

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ТЕРМИНОЛОГИЧНИТЕ КОЛОКАЦИИ КАТО КОМПОНЕНТ НА КУРСА ПО СПЕЦИАЛИЗИРАН АНГЛИЙСКИ ЕЗИК

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Ключови думи: колокации, терминологични колокации, терминологични глаголни колокации, курс по специализиран английски език

РЕЗЮМЕ

Тази статия разглежда терминологичните колокации като компонент в курса по специализиран английски, предназначен за студенти по архитектура, строителство и геодезия. Курсът е структуриран в нова перспектива с поглед към научния текст, който се разглежда като мрежа от концепции и отношения. Поради това секцията за четене с разбиране във всяка урочна единица, която е основна ситуационна цел, необходима на съответните обучаващи се в специализиран английски, е тясно свързана с последващата терминологична секция, където обучаемите се подпомагат за разбирането на концепциите и концептуалните отношения в научния дискурс чрез анализиране и интернализиране на терминологичните определения и терминологичните колокации. Специално внимание се отделя на терминологичните глаголни колокации, които липсват в горепосочените курсови материали. Първоначално, те се разглеждат в контекста на общите глаголни колокации. Прави се кратък преглед на два основни подхода към глаголните колокации (фреквентно-базиран и фразеологичен). Следва съпоставка между общите и терминологичните глаголни колокации, като се подчертава разликата в поведението на колоратора (глагола), който в повечето общи колокации претърпява семантична трансформация чрез делексикализация или придобиване на фигуративен смисъл, докато при терминологичните колокации неговата функция е винаги да включва единицата, обозначена от термина, в концептуална сцена. Този функционален подход към специализираните глаголни колокации предполага лексико-концептуален анализ, като използва тяхната актантна структура, т.е. интерпретирайки ги като концептуални комбинации, които могат да бъдат подложени на някаква категоризация, като по този начин се идентифицират концептуални групи със съответните терминологични комплекси. Накрая се предлагат някои видове задачи с терминологични глаголни колокации. В заключение се препоръчва в едно следващо издание на учебника да се увеличи броят и разнообразието от задачи с терминологични колокации и по-конкретно терминологични глаголни колокации, като се има предвид тяхната значимост за разбирането на специализирания дискурс.

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