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Grzegorz A. KLEPARSKI

University of Rzeszów

gak@univ.rzeszow.pl

Anna BORKOWSKA

The Podhale State Higher Vocational School

anna.borkowska@ppwsz.edu.pl

ON NAMING STRATEGIES IN THE FIELD OF SKELETAL STRUCTURE AND BODY PARTS IN MEDICAL AND GENERAL ENGLISH

Abstract: The major objective set to this paper is to investigate how students' academic interests determine and delimit the scope of lexical items to be mastered in *ESP* instructions. Naturally, teaching specialist language requires, on one hand, full-scale awareness of a specific field of knowledge, and on the other, a constant willingness to search for pragmatic techniques that enhance teaching and learning processes. Here, we provide insight into several lexical fields in medical English, namely **BODY PARTS**, **SKELETAL STRUCTURE** and **DISEASES** to examine their usefulness in actual pedagogical practice. Certainly, synonymous pairs of words, be it technical or standard English terms, constitute one of the most viable categories in a medicine-couched English classroom. Much in the same vein, issues of etymology play an eminent role in identifying the affinities existing between lexical items. Note that etymological issues necessitate both comprehensive knowledge of medicine-related subjects and broadly understood willingness to face the fact that medical students are likely to know more on the subject instructed than their *ESP* practitioners. In a similar manner, various groupings and relationships between lexical items show that the medical technoelect, in particular, is linked to various dimensions, some of which determine the limited use of medical science words. For instance, the tabooed lexical items in the field **BODY PARTS** are crucial here from the point of view of language instruction, and the existence and use of those words involve checks of political correctness, both in and out of the classroom environment. Rather unsurprisingly, tabooed lexical items are by all means the most intriguing and desirable ones for many learners, though not for teachers.

Key words: *ESP*, lexical field, medical English

Introduction

What has come to be known as *English for Specific Purposes (ESP)* is a sphere of English teaching that requires, on the one hand, a competent instructor and – on the other hand – specialist knowledge of a well-defined discipline, and this all needs to be found in one person. However, one could start with the question of whether this point of view is at all feasible, defensible and realistic when teachers are all trained to teach *General English (GE)*. Secondly, the question to be asked is that of whether one can speak of such a world of difference between *GE* and *ESP*. There is clear evidence that the answers to the questions rely solely on a teacher's attitude and willingness to undertake self-development which, in many cases, is not directly connected with didactic problems and purposes. To be more precise, *ESP* instructors, in principle, are claimed to be “practitioners” who are obliged to become familiarised with a specialised field of academic knowledge (see, among others, Dudley-Evans and St John 1998:13). As stressed by Goonetillike (1989:45), the gist of the theory is that *ESP* specialists are to “know English as well as the subject of the students”, and they are distinguished from the rest of language instructors by having comprehensive knowledge, which is said to go well beyond a common pedagogical training program. By way of example, an instructor who has been assigned to teach, say, emergency medical technicians, is primarily assumed to understand the difference between *AR (artificial respiration)* and *CPR (cardiopulmonary resuscitation)* or at least they should, and it is justifiable to be aware of the existence of the ESI Triage System.¹ All this amounts to saying that practitioners' specialist language is of unquestionable importance in an *ESP* environment and, in this regard, it surely seems to be a classroom variable adopted on the grounds of students' needs and technolct *per se* (Dudley-Evans and St John 1998:126).²

Vocabulary in ESP instruction: Technical and General English synonyms

With this in mind, one may address the following question: *How do students' academic interests determine and delimit the scope of vocabulary to be mastered?* To start with, technical sets of lexical items are the key cornerstone for the choice of teaching materials, and it is fairly evident that a high priority is given to the entirety of field-specific terms as they constitute the core of *ESP* instruction matter. As suggested by Mackay and Mountford (1978:4):

¹ The purpose of the system is to assign victims of accidents to a particular ESI level; from ESI 1 – the most critically injured to ESI 5 – slightly injured (see, among others, Evans and Salcido 2011:16).

² As suggested by the authors, a prerequisite for constructing an *ESP* course is “needs analysis” which basically identifies the “what and how of a course” (Dudley-Evans and St John 1998:126).

The only practical way in which we can understand the notion of specialist language is a restricted repertoire of words and expressions selected from the whole language because that restricted repertoire covers every requirement within a well-defined context, task or vocation.

It stands out that specialist language is of paramount importance in profession-oriented courses, and – in a number of cases – the selected choice of lexical items is somewhat parallel to technical terms, and those words may oftentimes be identified by standard English words that are assumed to be of great communicative value in real-life contexts. In the following, we shall concentrate on three exemplary disciplines, that is architecture, tourism and medicine. Thus, for instance, an architecture student is expected to use the lexical item *fenestration* instead of such nouns as *window* or *louver* meaning ‘shutter’ or ‘blind’ accordingly. Rather unsurprisingly, *ESP* teaching provides multiple pairs of technical words that are by and large synonymous with those employed in *GE*. *Table 1*. below provides a number of representative cases:

| Technical words | Standard English words |
|------------------------|-------------------------------|
| <i>pilotis</i> | <i>supports</i> |
| <i>parti</i> | <i>concept, scheme</i> |
| <i>charette</i> | <i>meeting</i> |
| <i>massing</i> | <i>shape</i> |
| <i>truss</i> | <i>framework</i> |
| <i>contractor</i> | <i>builder</i> |

Table 1. Technical and standard words in architecture.

The didactic account of the comparison discussed here defines the process of associating more complicated technical words with their standard English equivalents that have been stored in long-term memory, and this – needless to say – enhances general vocabulary learning. Interestingly enough, the significance of synonyms in language teaching has long been emphasised since the appearance of the *Grammar Translation Method* in which synonymous pairs of words were provided and analysed with reference to literary passages (Larsen-Freeman and Anderson 2011:41). We maintain that this classic technique ought to be effectively adopted in *ESP* instructions in numerous ways. In actual teaching practice, synonyms-directed teaching stimuli lead directly to effective and meaningful learning. By way of further illustration, in the sphere of tourism a set of the following simple and complex lexical items may be identified³, as given in *Table 2*:

³ Like any other, the division into simple and complex words is valid, especially when a practitioner wishes to gradually introduce technical items and rank them in terms of simplicity and complexity.

| Types of words | Technical words | General English words |
|----------------|------------------|-------------------------|
| simple | <i>host</i> | <i>organiser</i> |
| | <i>tariff</i> | <i>fare</i> |
| | <i>voucher</i> | <i>coupon</i> |
| | <i>itinerary</i> | <i>plan of the trip</i> |
| complex | <i>en route</i> | <i>on the way</i> |

Table 2. Technical and standard words in tourism.

In search of lexical fields in medical English

Now we shall focus on the sphere of medicine-wise embodied language by means of the lexical fields that will be labelled **DISEASES**, **SKELETAL STRUCTURE** and **BODY PARTS**, to name but a few subfields that may be distinguished in the targeted sphere. The concept of a lexical field introduced almost a century ago by Trier (1931) and developed further by, among others, Weisgerber (1951), is frequently held to be efficient in specifying relationships between particular words (see, Kleparski 2002:44 and Kleparski and Borkowska (in print)), and this approach is believed to increase considerably the potential of language learning processes. One may say that the lexical fields singled out above, as well as their constitutive components, are among the most widely used categories that are identified in various medicine-related professions.

In actual teaching practice, the analysis of current medical course books has supplied us with ample evidence that the affinity between technical and standard English words plays a strategic role in language teaching, regardless of medical specialist types.⁴ We hope to be able to provide some evidence that the application of synonym-oriented instruction may provide an efficient technique that can be employed in mastering the relevant vocabulary.

As in many other spheres of human knowledge, medical specialists may be expected to be familiar with technical words as well as the corresponding lay terms, so to speak. Take, for example, the noun *rubeola* coupled with its standard English equivalent *measles* which can be found in the vocabulary of most intermediate learners of English, very much like a number of other nouns related to illnesses, such as *insomnia* / *sleeplessness*, *influenza* / *flu*, *varicella* / *chickenpox* or *arrhythmia* / *palpations*.⁵ Here, it should be of no surprise that the conceptual

⁴ The results of the research have proven that the authors of textbooks for medical professionals, such as doctors, nurses, physiotherapists and emergency medical technicians, highlight the importance of jargon as well as standard English. See among others, *English for Physiotherapy*, authored by J. Ciecierska (2011), *English for Health Sciences*, written by M. Milner (2006) or *English in Medicine*, authored by E.H. Glendinning and B.A.S. Holmstrom (2007).

⁵ See, among others, Glendinning and Howard (2008).

sphere of **DISEASES**, which the listed nouns are related to, highlights the prominence of the etymology of a great number of technical words which, in the main, stem from Greek and Latin, as shown in *Table 3a* and *Table 3b* below:

| Technical words | General English words |
|----------------------------|---------------------------|
| <i>varicella</i> | <i>chickenpox</i> |
| <i>morbilli / rubeola</i> | <i>measles</i> |
| <i>insomnia</i> | <i>sleeplessness</i> |
| <i>sclerosis multiplex</i> | <i>multiple sclerosis</i> |

Table 3a. The field **DISEASES** – technical and general Latin-based lexical items.

| Technical words | General English words |
|----------------------|-----------------------|
| <i>poliomyelitis</i> | <i>polio</i> |
| <i>tetanus</i> | <i>lockjaw</i> |
| <i>gonorrhoea</i> | <i>clap</i> |
| <i>pharyngitis</i> | <i>sore throat</i> |

Table 3b. The field **DISEASES** – technical and general Greek-based lexical items.

Etymological enquiry reveals that the names of diseases are of different origins, but – at the same time – it also entails that medical students may take great advantage of the groupings proposed in the foregoing; certainly, medical students may be expected to identify those ancient languages in the lexical sphere inherent to their academic interests. Also, *ESP* instructors should bear in mind that knowledge of etymological roots may help them analyse and prepare vocabulary sets in the manner that will both encourage medical students to retrieve subject-based information and relate it to specific standard English words. In this context, pathology – among other examples that may be given – viewed as one of the curriculum subjects, provides insight into human body disorders, the names of which – as it turns out – are frequently of either Latin or Greek origin. This may provide some support for the view that language instructors must work in collaboration with other lecturers or at least raise over-all awareness of academic programs in order to design successful language input.⁶

As emphasised by one of the current authorities in *ESP* teaching, it is more than likely to happen that students will know more about a certain field than their instructors, who are claimed to be an authority in the academic environment, and instructors are “not in the position of being ‘the primary knower’ of carrier content” (Dudley-Evans and St. John 1998:13). Although this may sound controversial for most conventional language instructors, it is asserted that the hallmark of *ESP* instructions is the subservient role of the teacher. In other words, one may say that

⁶ The concept of ‘team teaching’ has been discussed, among others, by Dudley-Evans and St John (1998:45-48).

practitioners should in no way consider it either awkward or shameful to seek and take advantage of students' advice in professional matters at times.

With this in mind, *ESP* vocabulary instruction becomes fundamental since practitioners are eager to develop methodological skills in entirely new contexts, but also – as an additional stimulus – they are professionally challenged by students' (more) thorough knowledge of the subject they are expected to teach. One may add at this point that learner-centeredness seems appropriate at all stages of *ESP* instruction, on condition that teachers acknowledge that students may – as a matter of course – be better-educated in a particular discipline of science, at least in the capacity of their mother tongue. In consequence, this may enable teachers to motivate and inspire students to be actively involved open-mindedly in the process of teaching and learning (Hutchinson and Waters 1987:8).

What we argue for here is supported by our analysis of the lexical field **SKELETAL STRUCTURE**; by no means is a typical *GE* teacher in a position to enumerate the bones in the human body, either in his native language, less still in English. Students may prove to be of assistance here and provide the teacher with useful suggestions about the subject in their native language and this, in turn, exerts the influence of practitioners' own language research to present the lexical elements of the technolect in the most pragmatic fashion. Naturally, the lexical field **SKELETAL STRUCTURE** may be approached from different angles. Among others, as in the case of the field **DISEASES**, most constitutive lexical elements present here derive from Latin, yet, again English offers standard equivalents⁷ which are illustrated in *Table 4*.

| Medical terms derived from Latin | General English terms |
|----------------------------------|-----------------------|
| <i>clavicle</i> | <i>collarbone</i> |
| <i>cranium</i> | <i>skull</i> |
| <i>maxilla</i> | <i>lower jaw</i> |
| <i>mandible</i> | <i>upper jaw</i> |
| <i>humerus</i> | <i>arm</i> |
| <i>radius</i> <i>ulna</i> | <i>forearm</i> |
| <i>patella</i> | <i>knee cap</i> |
| <i>pelvis</i> | <i>hip bone</i> |
| <i>tibia</i> <i>fibula</i> | <i>shin bone</i> |
| <i>scapula</i> | <i>shoulder blade</i> |
| <i>vertebral column</i> | <i>back bone</i> |
| <i>coccyx</i> | <i>tailbone</i> |
| <i>femur</i> | <i>thigh bone</i> |

Table 4. The microfield **SKELETAL STRUCTURE** – technical and general English terms.

⁷ The distinction between technical and standard English **SKELETAL STRUCTURE** terms is found, among others, in *English for Medicine*, authored by Ciecierska and Jenike (2007).

On the basis of the data given in the table above one may conclude that in many cases we are justified to speak of a one-to-one correspondence. For instance, the noun *scapula* is semantically interchangeable with the complex noun *shoulder blade*, and the noun *femur* may be replaced by the general English *thigh bone*. There are other distributional patterns, too; not infrequently general English medical terms may be replaced by more than one Latin-based technolect term. For instance, the concept of *forearm* is defined jointly by the two bone-related names, that is *radius* and *ulna*, while what is known as *shin bone* may be viewed as the sum of two elements termed *tibia* and *fibula* in anatomical description. Also, other subcategories in the sphere **BODY PARTS** are frequently specified by sets of bones, for instance *hand* or *foot*, as shown in the figures below:

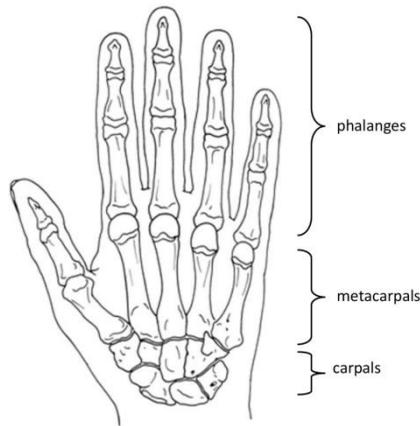


Figure 1. Technical terms for bones of the hand.⁸

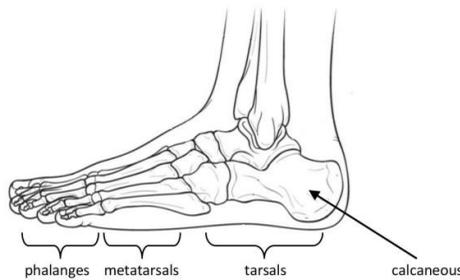


Figure 2. Technical terms for bones of the foot.⁹

⁸ Illustration by A. B.

⁹ Illustration by A. B.

The *nomen omen* skeletal illustrations of the two microfields seem to suggest that the terminological items related to certain parts of the body that are normally introduced at the very early stages of English language instruction have become compound formations. It seems worthwhile to mention that, as in the case of **DISEASES**, the lexical items that in anatomic extralinguistic reality serve to refer to such **BODY PARTS** as *hand* and *foot*, as a rule, have general English equivalents. When one takes a closer look at *hand*, one needs to point out that what is termed as *phalanges* refer to *finger bones*, *metacarpals* are synonymous with *palm bones*, while *carpals* correlate with *wrist bones* (Figure 1). Similarly, *foot* viewed as a body part, is customarily described by *phalanges* as *toe bones*, *tarsals* – *ankle bones*, *metatarsals* and their general English equivalents, namely *foot bones*, and – last but not least – *calcaneous* commonly identified as *heel bones* (Figure 2).

The conclusions to be drawn here are that various linguistic labels specify one and the same body part; however, very frequently the label with a different reference exists as well, and so, for example, *phalanges* in the medical technoelect serve to categorise both *finger bones* and *toe bones*. This linguistic observation may be of much significance for course designers since the subcategories within lexical fields that are identified in terms of synonymous pairs of words are normally more easily absorbed, remembered and revised. The existence of varying reference certainly supports the view that *ESP* instructions not only ought to care about the process of teaching itself, but should also pay due attention to building such possible relationships between lexical items in order to enhance and optimise the process of learning.

As a matter of fact, the lexical macrofield **BODY PARTS** can be split in various ways with the resultant varying lexical patterns. For example, some specialist terms related to various specific body parts have merely one equivalent in general English, for instance *coxa* – *hip*, *cubitum* – *elbow*, *pollux* – *thumb* or *areola* – *nipple*. In other cases, one may speak about the existence of more than one word in general English, for example consider such groups of words as *axilla* – *armpit* or *underarm*; *thorax* – *chest* or *trunk*; *abdomen* – *stomach* and *belly*. Also, some technical lexical items, as in the case of *phalanges*, come to define two different anatomical elements, such as *digits*, which is used to refer to the constitutive elements of two different extremities, that is fingers and toes. Note that the terms *limbs* or *extremities* in medical English refer either to arms or legs only if they are pre-modified by such directional qualifiers as *superior limbs* / *superior extremities* – *arms*, *inferior limbs* / *inferior extremities* – *legs* or *upper limbs* / *extremities* or *lower limbs* / *extremities*.

Obviously, the choice of lexical items discussed here is contingent upon various individual factors. Especially, it seems that the choice between medical and general English names is to a large extent determined by the nature of written and oral contexts, and – most frequently – in the field of *ESP* instruction authentic materials are based on factual articles and scientific reading passages

(Philips and Shettlesworth 1978:25-26).¹⁰ Naturally, such field-related publications are hardly ever adapted to the needs of foreign language students, neither are they aimed at gauging language skills, but rather they aspire at scientific mastery in academic discourse. In contrast, general English lexical items are typically found in course books. Moreover, the context of use of the lexical items related to the field **BODY PARTS** is pragmatic and it tends to be restricted to “a patient’s perspective”.¹¹

Also, the lexical sphere analysed here takes on a whole new dimension when the lexical field **BODY PARTS** is approached from the point of view of extralinguistically conditioned political correctness. Although most body parts have both technical as well as general English names, many elements of the field in question have their equivalents in various manifestations of informal and substandard English. Beyond doubt, the existence and the possible impact of informal, slang and vulgar terms linked to the macrofield **BODY PARTS** should be taken into consideration in the process of language instruction. One of the best cases in point are the synonymous forms for the Latin-based *abdomen*, such as *belly* and *tummy*, as well as *umbilicus* and its semantic equivalents *belly button* and *tummy button* used in informal English. The general English *head* is referred to as *skull* in medical technoelect, while the nouns *dome* and *grey matter* are restricted to the informal variety of English.

An extreme type of language informality is manifested by the layer of taboo or vulgar words. In the context of human beings and, more specifically, in the context of the human body and intimacy, which are among the most typical subjects to tabooisation, we find a variety of lexical items the sociolinguistic connotations of which are far from neutral. Naturally, it is essential to take all necessary precautions with all the slang and vulgar lexical items that are considered to be negatively loaded, vile and offensive. To visualise this, the standard English word *buttocks* is often substituted by such lexical items as *butt*, *bootie*, *tush* or *ass* in slang usage, while the plural noun *breasts* comes to be replaced by, among others, *chesticles*, *boobs*, *tits*, *titties* or *knockers*, *bosoms* in vulgar non-standard usage. In the case of the male sex, the plural neutral-sounding noun *testicles* is substituted by vulgar *balls* or *nuts*, and the bookish noun *penis* is replaced by such four-letter nouns as *bird*, *junk*, *cock* or *dick* in English slang.

In the instruction of the vocabulary organised within the limits of the macrofield **BODY PARTS** ESP teachers are required to be not only cautious and accurate, but they should also be aware of the pitfalls that may be encountered due to the negatively-loaded lexical items. Rather unsurprisingly,

¹⁰ As stressed by the authors, *ARMS (Authentic Resource Materials)* are essential in ESP teaching and their main goal is to introduce real-life didactic activities in order to motivate profession-related students to be more autonomous and self-directed in learning processes.

¹¹ See, among others, *Career Paths: Medical*, authored by Virginia Evans, Jenny Dooley and Trang M. Tran (2012).

teaching practice shows that slang and informal words are common knowledge to students, as they are of frequent occurrence both in their extra-professional conversational routine, but also – more generally – in day-to-day social encounters, Internet websites, the entertainment and film industries and most of what pop culture has to offer. Hence, slang words can hardly be avoided in the classroom or treated as “the skeleton in the closet” in a hush-hush matter. Conversely, we maintain that their non-blatant contrastively couched presence in language instruction is required if one wants to get a full grip of **BODY PARTS** as an intrinsically interrelated lexical field.

Conclusion

A contrastive approach to technical, general, informal and slang vocabulary organized within one thematic field seems crucial from the point of view of *EFL* instruction, as it implies not only coming to terms with a new group of lexical items which, taken together, enhance the knowledge of foreign lexicon, but also provides the linguistic tool with the aid of which a speaker's attitude to other human beings is verbalised. In effect, the choice of words is no longer incidental and random because practitioners working in a given field of knowledge are ready not only to point to the nuances and shades of meaning, but also, they are able to identify typical contexts in which the words are used and the sociolinguistic values they carry. In other words, one may say that once we become aware of the problems we have discussed here, the pile of faulty and incomplete puzzle fragments exemplified by the macrofield **BODY PARTS** becomes a regulated meaningful whole with its constitutive elements of varying lexical status and different axiological values.

It is fairly obvious that it takes much determination and self-development to be an effective practitioner in a given field of human knowledge, and – at the same time – one needs to have curiosity about the world of a certain discipline. The major problem we have dealt with here is the question of how students' academic interests delimit the scope of lexical items introduced in an *ESP* language course. Very frequently, specialist language is thought to be of great difficulty as the bookish-sounding technical terms related to the field of medicine derive from ancient languages. We have aspired to show that there are other factors that affect the linguistic picture of this field of knowledge, too. However, it is the task of an open-minded instructor to categorise the relevant vocabulary items into the network of lexical fields, and then form synonymous subcategories which may provide a sound foundation for introducing the vocabulary in contexts with due attention to the variety of individual limitations and differently conditioned do's and don'ts.

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