

ON THE UNITS OF SPECIALISED MEANING USED IN PROFESSIONAL COMMUNICATION

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0. Introduction

It is well known that the professions involving terminology are many and varied, and that each one of them requires terminology in order to perform its different tasks. Thus, technical scientific writers (be they specialists or linguistic mediators) need terminology to produce their texts adequately, and documentalists in order to construct comprehensive thesauruses and to contribute to efficient information access.

It is indisputable that all of these groups need training in terminology to carry out their respective functions adequately, and so today many courses are given in terminology training aimed at different professional groups and many of these courses focus the knowledge they teach on the practical skills that it is hoped the learners will acquire.

However, even if many of the terminology training programmes which are widely offered have this practical focus on the performance of tasks, there are very few which have decided whether the base unit of the terminology training should be the terminological unit *strictu sensu* in all professional situations. It is taken as given that to train in a terminology means starting from a terminological core, which is presumed to be cognitively perceived, professionally required and used operatively by whichever professional group.

A first analysis of our training of translators on the one hand, and terminologists on the other, reveals that this is not so obvious as it might seem at first sight. An experimental trial conducted subsequently across four groups (specialists, documentalists, specialised translators and terminologists) shows that our first impressions do not seem to be mistaken. In fact, different professional groups do not only have different terminological needs as a result of the tasks they perform, but their training needs are also conditioned by their objectives and level of knowledge of specialised themes and professional language, as well as by those needs pertaining to the relevant types of units.

This situation has led us to attempt to find out and hopefully establish the different relationships existing between specific professional groups and the specialised terminological units they employ.

In this report we propose to present the results of our research and to outline an initial proposal regarding the types of relevant terminological units correlating to different professional profiles.

1. Starting points

The assumptions upon which we have based the focus of the experimental trial are founded upon the communicative approach to terminology stated in Cabré (1999) that considers its base unit to be

- a) a multidisciplinary object, cognitive, linguistic and communicative
- b) an object which is employed in specialised texts.

From the point of view of knowledge, we consider that specialised texts contain *Units of Specialised Knowledge (UCE¹)* which act as vehicles for specialised knowledge. These units, which form part of the units of general knowledge, formally include a whole range of units, from one simple lexical item up to a group of phrases, as well as linguistic units and non linguistic units.

From a linguistic point of view, we assume that this UCE have a specialised meaning which are varied in terms of their nature, structure and grammatical class. Thus, we will call *Units of Specialised Meaning (USE)* all the signs found in specialised texts which are used in a specialised sense. Within USE we have units of different grammatical classes. Between them, nouns are the most prototypical item of terminological units.

From the communicative point of view, the object of the analysis is communicative situations where UCE become *Units of Specialised Communication (UCOME)* and they can also be of a linguistic or non-linguistic nature².

Finally, from a functional point of view, we consider that not all the *Units of Specialised Knowledge (UCE)*, *Units of Specialised Meaning (USE)* and the *Units of Specialised Communication (UCOME)* that are contained within specialised texts are relevant for each and every professional activity. As a result, the relevance of a unit depends upon the professional activity being carried out; a specialised text may well contain units which are thematically relevant but which from a functional standpoint are not.

2. Professional groups and professional needs

a) Description of the experimental trial

In order to demonstrate that texts contain many units with relevant specialised meaning which are not units of terminology, and that these units vary according to their professional function, we carried out an experimental trial. This consisted of giving the same medical text to four different professional groups and asking them to extract from it relevant specialised units relating to a specific professional activity.

¹ In this paper we use acronyms in Spanish.

² For more information you can see Cabré (1998/1999 and 2001).

We selected four groups of users; specialists, documentalists, specialised translators and terminologists as being closely involved with the four activities below:

- The transmission of specialised knowledge ————— Specialists (doctors)
- The indexing of specialised texts ————— Documentalists
- The translation of specialised texts ————— Specialised translators
- The production of specialised dictionaries ————— Terminologists

Each group contained three participants who took part in the experimental trial.

The corpus of extracted units was taken from the reference work *Medecina Interna* by Farreras i Rozman (1997). Specifically, the participants reviewed the text “Enfermedades infecciosas por *Rickettsia*” comprising 10,069 forms. It is a text written for specialists or students who are specialising in this field and is itself highly specialised.

b) Quantitative presentation of results

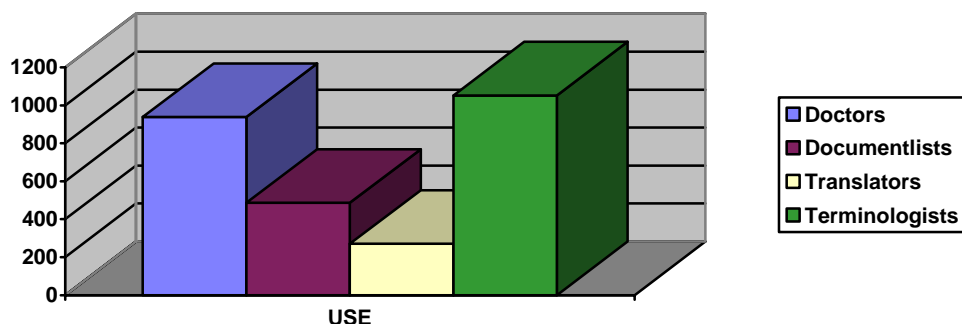
In order to make the analysis of the results easier, we have grouped the statistics according to the following four categories:

1. Units selected by each professional group
2. Units selected by all the professional groups
3. Units selected by only some of the professional groups
4. Units selected by only one professional group.

1. Units selected by each professional group

The overall statistics from all four groups of participants demonstrate a considerable diversity both in the number and type of USE selected.

Concerning the number of USE selected, it is clear that the different groups’ selections do not coincide. The translators and documentalists indicated fewer units and the doctors and terminologists selected more. This observation supports the theory that from the functional point of view, the USE (and consequently the terminological items) of an environment or of a theme are not pre-established but rather vary in accordance with the user’s professional needs.



Concerning the types of USE selected, we can note a range of possibilities, from considering only USE of noun class to selecting a broad diversity of USE in terms of their nature, structure and grammatical class. In general, the terminologists, followed by the specialists, have marked a greater and more varied number of units whereas the documentalists and the translators have indicated fewer. This is demonstrated in the table below:

	doctors		documentalists		translators		terminologists	
	Number	%	Number	%	Number	%	Number	%
noun	824	87,84	426	87,65	211	78,14	900	85,56
verbs	17	1,81	0	0	1	0,37	49	4,65
adjectives	28	2,98	5	1,02	27	10	35	3,32
adverbs	5	0,53	0	0	2	0,74	4	0,37
abbreviations	13	1,38	12	2,46	5	1,85	12	1,13
symbols	6	0,63	3	0,61	0	0	6	0,56
scientific names in Latin	44	4,69	22	4,52	0	0	45	4,27
proper nouns	0	0	18	3,70	1	0,37	0	0
phrases	1	0,10	0	0	23	8,51	1	0,09
total	938	100	486	100	270	100	1052	100

2. Units selected by all the professional groups

The group of USE selected by all four groups is very small. In fact, of the 1,268 different items, only 119 were shared by all four groups. We note that these shared units were all **noun units** and that the noun class is classically considered to be the class of terminological items. There were no other coincidences across all four groups as far as items of other grammatical classes were concerned:

	doctors, documentalists, translators, terminologists
noun monoword units	59
noun multiword units	57
abbreviations	3
total	119

3. Units selected by only some of the professional groups

The statistics also show that there are USE which, whilst not having been selected by all four professional groups, were shared by two groups:

	doctors & document.	doctors & translators	doctors & terminol.	document. & translators	document. & terminol.	Transl. & terminol.
simples nouns	6	1	100	1	7	5
multiword nouns	9	4	207	4	8	3
verbs	0	0	13	0	0	0
adjectives	1	2	10	1	0	1
adverbs	0	0	4	0	0	0
abbreviations	0	0	1	0	0	0
symbols	0	0	3	0	0	0
scientific names in Latin	2	0	18	0	0	0
total	18	7	356	6	15	9

In this table, what stands out is the insignificance of the majority of coincidences across pairs of professional groups with the exception of the pair doctors/terminologists. This is explained by) their common interest in selecting units which transmit specialised knowledge due to the fact that they work using concepts, in the case of the specialists, or via meanings in the case of the terminologists.

We also find some units shared by three groups, those of doctors/documentalists/translators and doctors/translators/terminologists. We did not record any units selected only by the group doctors/documentalists/translators or by the documentalists/translators/terminologists. The following statistics also reinforce the similarity (in a quantitative sense) between the selections of doctors/terminologists, most noticeably in the *UT*³:

	doctors, documentalists & terminologists	doctors, terminologists & translators
simples nouns	124	0
multiwords nouns	116	23

³ Acronym in Spanish corresponding to terminological unit or TU.

verbs	0	0
adjectives	1	2
adverbs	0	0
abbreviations	9	0
symbols	3	0
scientific names	18	0
total	271	25

4. Units selected by only one professional group.

In contrast to the low level of coincidences between the professional groups, we find that there are many USE that have been selected by only one group. These units are quite varied in terms of their nature, structure and grammatical class:

	doctors	documentalists	translators	terminologists
simples nouns	32	11	11	48
multiwords nouns	70	20	14	117
verbs	3	0	1	34
adjectives	5	3	13	10
adverbs	1	0	1	0
abbreviations	1	0	0	0
phrases	1	2	23	1
symbols	0	0	0	0
scientific names	1	3	0	3
proper names	0	18	1	0
total	113	57	65	213

3. Synthesis and evaluation of results

The statistics generated by the selections of the four professional groups reinforces the idea that each group is using its own criteria in the selection of units, and that this diversity of criteria implies a wide variety of units in terms of the following parameters:

- a. Nature of unit
- b. Grammatical class
- c. Structure of unit
- d. Number of units selected
- e. Variation
- f. Frequency of use

a. Nature of unit

Analysis of the selections show that three of the groups, doctors, documentalists and terminologists, selected different types of units, both **linguistic** and **non-linguistic units**. The translators on the other hand indicated only linguistic units as relevant in the preparation of translations because non-linguistic units such as symbols and Latin scientific names do not usually present problems to the translator.

In contrast to the rest of the participants, the documentalists also indicated **proper nouns** as useful units. In the indexing of a text they are valuable because they permit a more precise definition of potential searches.

b. Grammatical class

All the groups of users analysed selected linguistic units from a variety of grammatical classes. From this it can be stated that the group of units of specialised meaning in specialised texts is irreconcilable with the idea put forward by the classical theory of terminology which postulates the term, which by its grammatical characteristics is always a noun unit, as the only unit of note.

Whilst the documentalists selected a vast majority of noun units (they also selected a small quantity of adjectives), the other three groups considered other grammatical classes as relevant, including nouns, verbs, adjectives and adverbials. However, it is possible to observe from the tables above that, on the one hand the predominant category is that of nouns, and on the other that the percentages for each grammatical class vary considerably from one professional group to another.

It follows then that the statistics show a lack of an overall pattern in relation to the number of units selected from a specific grammatical class. To give an example, we can cite the case of verb units. The documentalists were the most systematic because they did not select any. The terminologists were the group which indicated most units as being relevant, both lexical and phrase USE (49 units, 4.65%). The doctors only selected a few (17 units, 1.81%) of which not all coincided with the lexicographer's selections, and finally the translators only selected one which did not form part of any specialised base as it was a verbal phrase unit whose syntactic nucleus was not specialised.

c. Structure of the unit

Regarding the structure of the USE selected by the different groups, we can see that the documentalists indicated only lexical units. In contrast, the other three groups indicated syntactic units, phrase units and various typical specialised combinations as being relevant, in addition to lexical units.

Moreover, when it came to lexical, noun USE, the documentalists tended to select multiword units of terminology, as the ones most able to help a precise definition in potential searches of a document.

It is also important to note that at times the translators only selected certain parts of multiword units of terminology. In general we are speaking here of non-specialised units that are integrated within more complex syntactic units. These selections are justified because the translators' selections are conditioned by what elements might prove problematic during a translation and this is of course highly subjective.

Besides USE, the translators and the doctors also selected some non-fixed discursive phrases. These units convey specialised knowledge and fall outside the boundaries of lexical or phraseology.

d. Number of units selected

The results obtained point to a wide diversity in the quantitative criteria employed in the selection of units. Some groups were in general very exhaustive in their selections whilst others were very restrictive.

The doctors and the terminologists selected all the units which conveyed specialised knowledge. Their selections were both quantitatively, and in terms of type, very similar even if their objectives and the use to which they would put the units subsequently were very different.

In contrast, the documentalists, in only selecting units which identified the information contained in the text, considered very few units to be relevant. It is possible to define the units they selected as those which appeared most frequently and/or those which appeared in key places in the document such as in the title, in a subtitle, in the summary in a diagram or in the conclusions.

Finally, the number of units selected by translators will always be very subjective, depending as it does to a large extent on the translator's level of knowledge of the text and on their personal experience of translating texts on the subject in question. The translators who took part in the trial, being experienced in translating medical texts, selected very few units: a mere 20% of the number selected by the terminologists.

e. Variation

From an analysis of the results of the selections we can see that all the groups have, for some units, selected examples showing variation. Their selections are telling in that again the most thorough were the terminologists whereas the documentalists only selected variants of the most frequently appearing units.

The translators also considered various variants of discursive units to be relevant as these may well offer elements in the preparation of a translation, in clarifying the meaning of certain units as well as in suggesting alternatives.

f. Frequency of use

Frequency of use is not a parameter which affects the selections of either specialists or of translators. Neither is it a factor in the generic selections of terminologists, though it could well be so in the context of a selection with a specific terminological application in mind. However, it is one of the basic parameters to decide whether a unit is important or not in the indexing of a text so that for a text editor the most frequently occurring noun USE in a text are usually those which are relevant in the identification of the text's content.

4. Professional profiles

From the selections of the different groups of users and taking into account the preceding parameters, we can establish a professional profile for each of the participating groups with respect to their needs regarding a specialised text:

Profile 1 DOCTORS: USE relevant in the transmission of specialised knowledge

For doctors, relevant USE are ones which convey specialised meaning on the subject of the text and, by definition, all USE fulfil this function:

⁹₉^N_U all the units of specialised knowledge:

- ^N_U Noun lexical USE (that is to say Terminological Units)
- ^N_U Verb lexical USE
- ^N_U Adjective lexical USE
- ^N_U Adverb lexical USE
- ^N_U Symbols
- ^N_U Scientific names in Latin
- ^N_U Noun phrase USE
- ^N_U Noun collocations USE

Profile 2 DOCUMENTALISTS: USE relevant for text indexing

For documentalists, relevant USE are those which are capable of identifying the information content of a text and which allow description, indexing, organisation and information retrieval from a specific specialised text. Normally, the most frequently occurring USE possess these characteristics and are to be found in key parts of the text such as the title, summary, subtitles and conclusions:

⁹₉^N_U USE for identifying information content

⁹₉^N_U Frequently occurring USE

⁹₉^N_U Discursive distribution of units

- ^N_U Noun lexical USE (preferably polylexical terminological units)
- ^N_U Adjective lexical USE
- ^N_U Symbols
- ^N_U Scientific names in Latin
- ^N_U Proper nouns

Profile 3 SPECIALISED TRANSLATORS: USE relevant for specialised translations

The only USE of interest to translators are those which may cause difficulty during a translation, either those whose meaning is unknown or those which they imagine could be problematic in some way. For this reason they often only select segments of polylexical terminological units rather than the whole unit as frequently the context helps the translator to resolve doubts over the meaning of the unit as a whole:

⁹₉^N_U USE that might cause problems for the translator

⁹₉^N_U Context of USE usage

⁹₉^N_U Possibility of having morphologically related units

- ^N_U Noun lexical USE
- ^N_U Verb lexical USE
- ^N_U Adjective lexical USE
- ^N_U Adjective lexical USE
- ^N_U Abbreviations
- ^N_U Noun phrase USE
- ^N_U Noun collocations USE
- ^N_U Verb phrase USE
- ^N_U Adverb phrase USE

Profile 4 TERMINOLOGISTS: USE relevant for terminography

In principle, terminologists consider that all USE in a text are significant because all of them convey meaning. However, for a selection focusing on a terminologically specific type of work, the context and frequency of occurrence of USE become relevant factors that restrict the number and type of USE selected in a first analysis. It is also important for terminologists to be able to relate linguistic and non-linguistic USE:

⁹₉^N_U USM selected according to a job profile (context of unit usage, commonly occurring USM)

⁹₉^N_U Morphologically related units

- ^N_U Noun Lexical USE (or Terminological Units)
- ^N_U Verb Lexical USE
- ^N_U Adjective Lexical USE
- ^N_U Adjective Lexical USE
- ^N_U Abbreviations
- ^N_U Noun Phrase USE
- ^N_U Noun collocations USE
- ^N_U Verb Phrase USE
- ^N_U Adverb Phrase USE

5. Conclusions

The evaluation of the results of the analysis of a text conducted by four three-person groups from four different professions has served to confirm that:

- a. The users are interested in units of specialised meaning that are not restricted to terminological units. We have demonstrated that in specialised texts there are, in addition to terms, other types of units that convey specialised knowledge including not only linguistic units of various grammatical classes but also non-linguistic units, and that within the former group exist both lexical and syntactic units. These results allow us then to analyse units that do not fall within the boundaries established by classic terminological theory and consequently open up the field of analysis in terminology.
- b. Professional ends and objectives condition the relevance of a unit of specialised meaning. We have proved that for the transmission of specialised knowledge, the significant units are those which convey specialised knowledge, whilst in indexing a text those which represent the information content and allow its identification are the most relevant. In preparing a specialised translation, those units which might present problems to the translator become the most significant and finally, in the production of specialised dictionaries, relevant USE are those specialised linguistic units which are representative of a specific specialised environment.
- c. Not all the USE contained in a text are relevant for every professional activity as it is the professional activity itself which conditions the user's terminological needs with respect to the text.
- d. It is possible to draw up a profile of the specialised needs of each professional group. Accordingly, we have made a preliminary proposal regarding the most general needs of each activity studied. These profiles contain the types of USE relevant for the performance of each activity and additional information relating to these units.

Thus, the results from this experimental trial permit a more accurate orientation of terminological applications and a clearer focus in the teaching of professional languages, whilst at the same time questioning the objective uniformity of a terminological base.

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