Bulletin of the *Transilvania* University of Braşov
Series VII: Social Sciences • Law • Vol. 7 (56) No. 2 - 2014

TEACHING ENGLISH FOR MEDICAL PURPOSES

Ecaterina PAVEL[1]

Abstract: *The question of teaching English for Medical Purposes has been significantly researched over the last few years. English is today's* lingua franca *of medical international communication, the same as Greek and Latin were in the past; therefore, it is an essential prerequisite for a medical career, all the more so as a large number of Romanian medical professionals intend to emigrate to English-speaking countries. Consequently, teaching medical English should be adapted in order to meet the specific academic and professional needs of the Romanian students. This paper is focused on the key issues in course design and my intention is to bring forth the insights gained from my professional experience developing the curriculum for Medical English.*

Key words: *ESP, Medical English, medical terminology*

1. Introduction

There are two fields where the English language has come into prominence: information technology and medicine. IT is a relatively new field and English has been the fundamental language throughout its entire development. In medicine, however, English became widely used during the second half of the 20th century. Nowadays, the number of English language publications has profusely increased and 80% of all the journals indexed in Scopus are published in English [9]. English is also the official language of many international conferences and a growing number of national journals. Moreover, many healthcare professionals work overseas in Anglophone states to extend their practice. And if doctors are convinced of its importance, medical students have also begun to be aware of it.

In 2011 I started to develop a content-based syllabus for a 28 week course of English for Medical Purposes. The course was held at the Faculty of Medicine of *Transilvania* University of Bra□ov. Designing the educational program for three different sub-specializations (Medicine, Registered nurses and Balneo-physio-kinetotherapy), comprising very heterogeneous groups, was a challenge for everything that teaching ESP (English for Special Purposes) implies.

2. Needs

Taking as a point of departure Streven's definition of ESP, theorists Dudley-Evans and St John postulated a different interpretation, offering a modified perspective on the absolute and variable characteristics of ESP, as follows:

[1] *Transilvania* University of Braşov, Romania.

I. Absolute Characteristics

- ESP is defined to meet specific needs of the learner;

- ESP makes use of the underlying methodology and activities of the discipline it serves;

- ESP is centred on the language (grammar, lexis, register), skills, discourse and genres appropriate to these activities.

II. Variable Characteristics

- ESP may be related to or designed for specific disciplines;

- ESP may use, in specific teaching situations, a different methodology from that of general English;

- ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level;

- ESP is generally designed for intermediate or advanced students;

- Most ESP courses assume some basic knowledge of the language system, but it can be used with beginners [1].

Taking into account all these aspects, my priority was to determine the needs of the target groups. Most of the students were highly motivated to learn General and Medical English, for all the reasons mentioned above. However, the main impediment consisted in the level differences of language proficiency. Since the Faculty of Medicine is one of the very few to use an admission exam in order to select its students, they all possessed a basic knowledge of Romanian medical terminology, which is very similar to English, as they both derive mostly from Greek and Latin. However, there were significant variations in the language level; most of the students could recognize meaning, but not produce it, they lacked fluency and they had problems pronouncing different medical terms.

According to Yogman and Kaylani [8], there should be a minimum proficiency level required for students taking part in content-related activities. This is a very good observation since the major problem I came across was the fact that English was the only foreign language studied at that time at the Faculty of Medicine. Some of the students had never studied English, they were struggling to catch up with general language proficiency and they found even the basic notions to be overwhelming. Others had graduated from colleges with English language curricula and had an advanced level of language proficiency. Therefore, there were beginners mixed with a majority of pre-intermediate and intermediate, and a few advanced students.

These problems were partly solved during the following two years, by the creation of German, French and Spanish classes, so that the students who had never studied English could continue specializing in the foreign language that they had learnt. There is, still, a dilemma regarding these students: since English is the present language of medical communication, these students will not have real access to a great amount of medical information or will not be able to participate at/understand conferences held in English etc. Moreover, I think that the Faculty of Medicine should also benefit from the system implemented at other faculties of *Transilvania* University, through which pre-intermediate and upper-intermediate classes are formed automatically, based on the students' proficiency level.

Significant improvements have been made, however, in the system of language teaching at the Faculty of Medicine: the number of courses and seminars has increased, as well as the number of groups, which means fewer students per group.

In 2011, there were even more than 60 students in a group (which made it almost impossible for teachers to design a suitable syllabus). Now, each group has at most 25

students. At first, the logistics of organizing the English classes was challenging, so I created two groups for each specialization: a pre-intermediate and an upper-intermediate one, in order to reduce the gaps and be able to work effectively with the students (now I only re-group the students according to their proficiency level, without doubling my work).

3. Objectives

After splitting the groups, I established some realistic goals for the English classes. Consequently, the main objective was to prepare students for the examination of the patient, for writing a case-report and for oral communication in English. In other words, I tried to create some real-life situations where English was used, focusing on "a special set of vocabulary" [5] which constitutes the medical jargon.

In order to achieve this objective, I aimed at:

- developing language skills through discussions and debates around general themes, easily accessible;
- introducing medical terminology with emphasis on pronunciation, by underlining the differences between Romanian and English terms and expressions;
- simulating communication with the patient in a simple manner (Q/A, advice) focusing on linguistic correctness;
- students being able to read and understand a medical text in English in the same amount of time it would have taken them to read and understand the corresponding Romanian text, to search, prioritize and present information;
- performing a general examination, taking a medical history etc.

I had to adapt, of course, these objectives to the level of the groups. For the pre-intermediate group, I focused on General English teaching during the 1st year, in order to develop the students' ability to use the language of everyday informal talk, to understand a written text and to improve their listening comprehension. During the 2nd year, I aimed at enhancing their ability to communicate in a medical environment, the ability to use the common medical jargon.

With the upper-intermediate group, Medical English was taught first from the perspective of medicine and health care and secondly, by aiming at reinforcing vocabulary acquisition, grammar and structure, by means of more difficult tasks related to medical practice, pharmacology, anatomy and physiology, pathology, treatment etc. One major disadvantage was the fact that English was taught only during the 1st and 2nd years, therefore I could not adapt my classes in order to keep up with the medical curriculum and to establish a natural parallel advancement of language and medical knowledge. For instance, Pathology is studied only during the 3rd year, but I had to introduce specific notions and diagnosis practice before.

4. Methods and materials

Once I set the goals, I took the next step - searching and selecting teaching material. Were there any textbooks available? Actually, do ESP textbooks really exist? This is an important question Johns addresses: *ESP teachers find themselves in a situation where they are expected to produce a course that exactly matches the needs of a group of learners, but are expected to do so with no, or very limited, preparation time* [4].

The simplest solution seemed to be that of finding an existing method, available on the market, traditionally based on the use of a textbook and/or multimedia resources. But such a method is designed by its authors to meet at a given time predefined targets. There are few Romanian textbooks

on Medical English and they meet only partially the needs of medical students or are designed for a longer term educational program. There are also a few titles edited by British and American publishing houses, but they do not address the specific needs of Romanian learners.

The presence on the market of teaching methods that have been proven, team work, access to authentic documents such as brochures for patients, medical questionnaires, records and information sheets used in the English-speaking hospitals, team work, websites, TV shows or movies for medical purposes represent good resources for designing a course.

I was interested in creating a"task-based" [7] syllabus, in an attempt to focus on communication and on activities which reflect as much as possible the practice of medical professionals. Students in the pre-intermediate classes were given key vocabulary or grammatical constructs prior to the performing of the task. In upper-intermediate classes, students were responsible for selecting the appropriate language for any given context themselves. This type of learning allowed students to improve both their medical knowledge and language skills in practical situations of communication, but required, in order to be effective, a balance between formal factors (code complexity), content (cognitive complexity) and the purpose of communication. *The challenge for a task-based pedagogy is to choose, sequence and implement tasks in ways that will combine a focus on meaning with a focus on form* [2].

A Medical English teacher might feel uncomfortable with his/her "lack of skills in medicine". But the technical terms cause no problem for students. The teacher must be an expert in Medical English, not in Medicine. And, as Pauline Webber states, *the teacher is at an advantage linguistically anyway and the learners will in fact probably feel more relaxed at speaking in front of a teacher who is just a language expert and not a subject specialist, too, who might become an overdominant figure in the class*. […]*The teacher may admit ignorance of the specialist discipline, but must never give the impression that the subject itself is uninteresting or unimportant* [6].

In order to design the syllabi, I also cooperated with a GP, a resident doctor and some of my students. This was quite difficult, because of time constraints, but their feed-back helped me come up with a number of typical situations characterizing language usage and use in the medical field.

4.1. Focus on grammar and lexicon

Medical terminology derives from a significant lexicon of Latin or Greek origin, but the scientific development and new discoveries determine the permanent renewal or enrichment of the medical vocabulary. There is also a medical-specific grammar, as the language of medicine must produce accurate and unambiguous communication. Among the characteristics of Medical English, I would mention:

- Tenses:

Present Simple is most commonly used when describing processes, functions, mechanisms, diseases:

The posterior part of a vertebra forms a vertebral arch and this consists of two pedicles, two laminae and seven processes.

The stomach secretes protein-digesting enzymes called proteases and strong acids to aid in food digestion.

Tuberculosis typically attacks the lungs, but can also affect other parts of the body.

Present Simple is also used when asking questions about present illnesses, about habits etc. (*Do you smoke? Do you have*

any other symptoms? Do you have any breathing difficulty?)

Past Tense is used especially when taking a medical history, when referring to childhood/adult diseases, previous hospitalization, the onset of a symptom etc:

When did you first notice the pain?

When did you last see a doctor for this condition?

Did you have any serious illness when you were a child?

Did you carry your child full term?

Present Perfect is also used when asking about / describing the onset of an illness, but also to refer to (recent) discoveries/researches/ medical procedures etc:

How long have you been suffering from headaches?

Studies have shown that the overall population levels of bacteria are unchanged.

- **Passive Voice** is frequently used, because the form is impersonal and objective:

Poor hand hygiene by hospital staff has been associated with the spread of resistant organisms.

Athlete's foot is treated with topical antifungal medication in most cases.

- The use of **modal verbs** is significant for hedging, which represents the expression of judiciousness and possibility and plays a major role by allowing medical professionals to formulate statements with appropriate accuracy and caution, expressing possibility rather than certainty and prudence rather than overconfidence [3]:

Severe cases may require oral drugs (those taken by mouth).

Significant nail clubbing may also occur.

- the extensive use of acronyms and abbreviations:

AAA - apply to affected area;

DOA - dead on arrival.

Sometimes, the same abbreviation could stand for different terms, therefore the teacher should draw students' attention on the distinctions and the specific uses of these abbreviations. E.g. AA could stand for *Alcoholics Anonymous*, *aortic arch* or *amino acid*.

- the large number of nouns with irregular plural forms. These are nouns of Latin and Greek origin.

The Latin nouns form the plurals in English according mostly to Latin declensions:

- a → ae: *lamina → laminae*;
- us → i: *fungus → fungi*;
- um →a: *bacterium → bacteria*;
- ex/ix → ices: *matrix → matrices*;
  index→indices;
- is →es: *testis → testes*;
- us →era/ora: *viscus → viscera*;
- us →us: *meatus → meatus*;
- ies → ies: *species → species*;
- us → +es: *virus → viruses*;

Another set of irregular plurals derive from Greek words:

- on → a: *criterion → criteria*;
- ma → mata: *neuroma → neuromata*.

- Word formation: many adjectives or combining forms of adjectives are derived from either Greek or Latin. Adjectives appear mostly in compounds and are joined to either nouns or verbs. Suffixes may be added to transform them into nouns as well. E.g. *brachi (short) → brachycephalia* (appearance of the skull)*; brachydactylia* (abnormal shortness of the fingers and toes)*; brachycheilia* (abnormally short lips)*; brachygnathous* (short lower jaw).

Similarly, many verbs are derived from either Greek or Latin. These verbs may be added to other root words to form words or prefixes and suffixes may be added to them to form words. E.g. *dynia (pain) → mastodynia* (breast pain)*; pleurodynia* (chest pain)*; esophagodynia* (pain in

esophagus)*; coccygodynia* (pain in and around the region of the coccyx).

Prefixes and suffixes are the most frequently used elements in the formation of Greek and Latin words. They consist of one or more syllables and show various kinds of relationships. Added to verbs, adjectives, or nouns, they modify the meaning.

E.g. *ampho-* (both): *amphogenic* (producing offspring of both sexes); *cata-* (down, according to, complete): *catabolism* (breaking down), *catalepsia* (complete seizure), *catarrh* (flowing down). The suffixes most commonly used to indicate disease are *-itis* (inflammation), *-oma* (tumor); and *-osis* (a condition, usually morbid).

The difficulty is related more to pronunciation aspects, as this terminology is almost the same in English as in Romanian. This is why different exercises aimed at improving the students' pronunciation of medical compound terms.

Regarding the medical terminology used in real-life communication, I took into consideration the main actors: doctors-nurses-patients. They are all involved in different types of interactions, which imply the use of a specific terminology, according to the purpose (taking a medical history, referring a patient to another doctor, explaining a case, giving instructions, calling in specialists etc.). Students were asked to imagine such situations (or were given a case) and they had different tasks to accomplish: to produce a conversation between a doctor/nurse and a patient by means of role-play, to perform a general examination, to fill in a case report based on the information provided by the patient, to write a referral letter, to establish a diagnosis etc. These tasks were simplified for the pre-intermediate groups, in the sense that the students were asked to produce less content in the same amount of time, but on the same real-life situations and texts, medical sheets etc.

4.2. Activities

I will present some of the tasks and activities I used; alternating the simple with the complex ones was a good teaching strategy as it kept the students motivated. A strategy which also proved to be motivating and productive was that of using visual aids, as they produce associations with the extra-linguistic reality. Visual aids could be used by arranging terms in tables, doing crossword puzzles, mind maps, labelling pictures etc.

I organized my activities so that they would develop the skills needed to understand and produce a range of medical content.

- Language focus

A wide range of exercises were used in order to achieve this purpose, such as: labelling pictures, matching (e.g. terms and definitions), categorizing (e.g. diseases, symptoms), gap filling, mind mapping, word searching (including finding synonyms, antonyms etc.), finding the correspondent medical term for a common word/syntagma etc. This last aspect was important for the students, as in a real life communication with their patients they would need to know the common term or phrase rather than the scientific one. Therefore, some activities focused on vocabulary building and recycling, by combining the everyday common word or phrase with the corresponding medical terminology (*chickenpox - varicella; measles - rubeola; mumps - epidemic parotitis etc*).

I also included here some exercises on idiomatic expressions related to health and body parts (e.g. *to have a sweet tooth, fit as a fiddle, up and about*).

- Reading comprehension

I chose fragments from medical journals such as *The Lancet* or *The New England Journal*, as they are very adequate from a scientific point of view and free from journalistic expressions of little value and difficult to understand for non-English speaking students. These exercises of text analysis elicited the use of critical thinking skills. While some questions referred directly to different passages for particular details, most questions involved the use of deductive reasoning, conclusion making, logical inference, sequential analysis, style, object and so on.

This kind of exercise was particularly helpful for the practice of academic writing in the medical field, as the students were also interested in their future contribution to research competitions, medical conferences, research projects etc.

- Listening comprehension

I designed different listening activities suitable for understanding a lecture or a discourse by means of media resources, which have many advantages: variety, contextualisation, access to new information, relation to the exterior world, stimuli for the development of written and oral skills. But the focus was on the need for a pre-activity to attract the interest of the students and for a series of tasks in order to achieve active listening. I selected different fragments from *Nursing Update* (show for registered nurses continuing education on BBC 2) and the BBC *Horizon* TV series which, in addition to clarity and intellectual accuracy, have the advantage of providing an accessible transcript on the Internet. Based on a short sequence (2-5 minutes), students had to accomplish different tasks and exercises (gap filling, matching exercises, open questions, true/false questions) or, especially for the upper-intermediate students, more creative tasks such as free discussions.

The major impediment is the insufficient technical equipment so that such activities could be undertaken on a regular basis as a constituent part of the teaching/learning process. Such activities could be done only a few times per semester and required considerable efforts on the part of the students and teachers trying to organize the equipment and provide an adequate interactive material. This is why one of the tasks consisted of doing this kind of activities as homework. For example, the students had to watch an episode of *Dr. House* serial (very popular among them) and then re-create it in the classroom, by means of role-playing. They also had to come up with different solutions or with differential diagnoses and to bring arguments for their choices.

- Communication skills

Most of the tasks involved role-play on the model of doctor / patient dialogue. It is true that the students did not have clinical experience, but this sort of exercise was very popular and proved to be efficient linguistic work. I therefore proposed to the students a consultation model (History-taking, Physical examination, Diagnosis and Treatment), after which students were also asked to write case-reports, information leaflets, referral letters etc. In order to avoid monotony, I also brought short fragments of literary works and proposed different communication/writing tasks. For instance, after reading Jenny Joseph's poem *When I am old,* the students were asked to discuss freely the process of ageing, describing it from different points of view. Students were also interested in debates on different aspects concerning the medical practice and ethics.

5. Conclusions

The problematic aspects of teaching English for Medicine came mostly from the groups' disparity in the General English

proficiency level, which was solved by splitting them into pre- and upper-intermediate. That actually meant doubling my work and wasting precious time re-organizing the students. A better solution would be the creation of pre- and upper-intermediate groups from the beginning, based on their declared level at the admission exam.

This teaching process was based on the analysis of the students' needs, which also determined the designing and delivering of the courses. When creating the syllabus, I also collaborated with health professionals and with my students for the choice of field-oriented content in the teaching materials and for the selection of appropriate classroom activities. It is a long and ongoing process, not yet finalized and hopefully it will continually improve.

The discussion in this article has given an overview of teaching English for Medical Purposes, in the hope that it will contribute to the enhancement of ESP teaching methodologies.

Other information may be obtained from the address**:** catipe@yahoo.com.

References

1. Dudley-Evans, T., St John, M.: *Developments in ESP: A multi-disciplinary approach*. Cambridge. Cambridge University Press, 1998.
2. Foster, P.: *Task-based Learning and Pedagogy*. In: ELT Journal **53** (1999) No. 1, p. 69-70.
3. Hyland, K.: *Disciplinary discourses: Social interactions in academic writing*. London. Longman, 2000.
4. Johns, T.F.: *Some problems of a worldwide profession*. In: *The ESP Teacher: Role, Development and Prospects*. *ELT Documents*, McDonough, J, French, T. (Eds), British Council, London, 1981, p. 112-132.
5. Spolsky, B.: *Sociolinguistics*. Oxford. Oxford University Press, 1998.
6. Webber, P.: *Speaking Practice in the Medical English Classroom*. In: International Review of Applied Linguistics in Language Teaching **33** (1995) No. 1, p. 64-70.
7. Willis, J.: *A Framework for Task-based Learning*. London. Longman, 1996.
8. Yogman, J., Kaylani, C.: *ESP program design for mixed level students*. In: English for Specific Purposes **15** (1996), p. 311-324.
9. http://www.researchtrends.com/issue-31-november-2012/the-language-of-future-scientific-communication/. Accessed: 20-09-2014.