

Medical English textbooks for Italian university students. Do they meet the Miur educational instructions about scientific English learning? Three works under investigation

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1. Introduction

The ever increasing diffusion of English as the language of communication and scientific literature worldwide has made EMP (English for Medical Purposes) learning an integral part of medical students' syllabuses. In medical English courses, teachers generally make use of textbooks which through a variety of activities usually involve all linguistic skills and provide students with the necessary means to communicate effectively and properly in their professional field. If we agree that a basic knowledge of general English should be assumed when undertaking any EMP course, then it follows that this specialist learning requires familiarity with a) specialised lexis and b) the morphosyntactic structure of scientific discourse. Specialized communication in English, especially the written variety, prioritises linguistic phenomena such as nominalization and premodification more frequently than general English does.

Medical English textbooks for undergraduates are thus designed to develop the four skills of reading, speaking, listening and writing in a way that encourages students to acquire linguistic competences in both specialized oral and written communication. However, the space and significance attributed to each skill in coursebooks will vary according to the specific volume in question as specific authors show preferences for one skill over others.

With regard to scientific English and the learning/teaching process in Italian medical faculties, the following instruction can be

read in the Ministerial Decree, 16 March, 2007 enacted by the Italian Ministry for Education, University and Research (MIUR):

I laureati nei corsi di laurea magistrale in medicina e chirurgia dovranno avere acquisito:

la capacità di effettuare criticamente la lettura di articoli scientifici derivante dalla conoscenza dell'inglese scientifico che consenta loro la comprensione della letteratura internazionale e l'aggiornamento (http://cnsu2007.miur.it/media/297/dm16marzo07_nuove_classi_magistrale.pdf).¹

Thus, under MIUR's instructions what Italian medical students must focus on first and foremost is the development of *reading* comprehension skills. The aim of this study is to determine the degree of compliance of medical English textbooks for Italian undergraduates with MIUR's overall instructions. To this end three textbooks were investigated as regards the 'weight' given to reading skills.

2. Three books under investigation

The textbooks investigated in this study are:

1. *Medical Target*, by Gorruso G. & Gorruso E., publisher Marrapese Editore, 2010;
2. *English on Call*, by Massari L. & Teriaca M. J., publisher Scienza Medica, 2009;
3. *English for Medicine*, by Bettinelli B., Carlini N., Catenaccio P., publisher Hoepli, 2005, 1st volume;
English for Medicine, by Bettinelli B., Catenaccio P., Beatty K., publisher Hoepli, 2006, 2nd volume.

¹ Medical graduates must have acquired the ability to carry out critical reading of scientific articles as a result of their knowledge of scientific English which allows them to understand international literature and updates thereof regarding the current state of medical knowledge (the translation is mine).

The initial purpose of this research was to investigate only textbooks published over the last five years, i.e. starting from 2006. However, considering that *English for Medicine* 2 (2006) represents a natural evolution of *English for Medicine* 1 (2005), it was thought only right to take both volumes into account.

Attention was paid initially to the following features:

- a) general structure of the books
- b) text genres
- c) focus on grammar and syntax
- d) exercises and activities
- e) focus on reading skills

The characteristics of the three textbooks mentioned above will now be examined.²

2.1. Medical Target

As far as *Medical Target* is concerned, important information emerges from the book's Preface where it is stated that thanks to its flexibility and methodological approach, the volume (440 pages) can be adapted to any university course in the medical-scientific field.

² In order to carry out the research for this study three other books on medical English and scientific English were found, that is *English for the Medical Profession - Manuale per studenti e professionisti*, by John M., 2006; *Inglese per medici*, by Ribes R. & Ros P. R., 2010; *Inglese Scientifico - Manuale d'uso*, by Losano R., 2006. They were not included in this study as they are not textbooks on medical English but rather guides on how to approach medical discourse in its various aspects. For example, useful tips and suggestions are provided, especially in the first two books, on how to prepare an oral presentation or write a letter to submit a paper to an international journal.

With regard to its general layout, *Medical Target* contains two multiple choice entry tests, a science test (50 questions), and a grammar test (60 questions).

A full analysis of the skills they require the students to attain in order for the exercises to be answered correctly would take up too much space, so only a few illustrations will be given. In the science test we can read, for instance:

1. Which of the following is the definition for aphagia?
 - a) extreme thirst
 - b) inability to hear
 - c) inability to swallow
 - d) loss of hair
 - e) pain free

or

2. Korotkoff sounds are evaluated when
 - a) counting the apical heartbeat
 - b) determining the blood pressure
 - c) performing ultrasonography
 - d) counting the respirations
 - e) evaluating the pulse

In both cases, taken as representative samples of the multiple choice science test, a student may know the meaning of all terms perfectly well (some of them also by virtue of their similarity with Italian words, e.g. “ultrasonography”, “respirations”, “inability”), just as s/he may know the meaning of “thirst”, “swallow”, “loss”, etc., but not know what “aphagia” means, thus not being able to answer the question, in that it requires specialist knowledge of digestive system diseases. The same happens with the multiple choice question about Korotkoff sounds, a kind of question which requires knowledge in the specific branch of clinical methodology, that students (almost always 1st year students) are unlikely to be able to supply unless they know the answer thanks to their own personal culture.

In the grammar test there is a wide variety of grammar topics ranging from the simplest to the most complex ones.

Two examples are:

1. She never took a taxi even though she.....afford it.
 - a) should
 - b) can
 - c) could
 - d) would
2. When I.....you on Saturday evening, I.....you back your moped.
 - a) will see / will give
 - b) am seeing you / give
 - c) see / will give
 - d) will see / give

Some questions also require knowledge of idiomatic expressions, as in the following cases:

1. I can't explain it. I'm completely
 - a) unbalanced
 - b) losing my marbles
 - c) at a loss
 - d) stump

Others involve knowledge of phrasal verbs:

2. Did you know that Peter has.....yoga recently?
 - a) taken out
 - b) taken up
 - c) taken over
 - d) taken off

The authors probably took it for granted that teachers adopting the book in question would choose the questions (especially those in the science test) according to the year of attendance of the students and to the linguistic and professional knowledge they are expected to have. To all events and purposes, these entry tests provide teachers with readily accessible aids to check students' initial levels of linguistic knowledge.

Medical Target is conceived for a 100-hour course and its purpose is to satisfy the needs of all kinds of students, including those who have never studied English at all, in that it starts from the present tense of “to be” and “to have” and gradually proceeds towards more complex structures where grammar and syntax are always studied in context.

The terminology encompasses all branches of medicine and thanks to its flexibility can also be adopted for undergraduates attending three-year degree courses in the healthcare professions.

The volume is divided into 17 units, each containing grammar topics according to the rules included in passages or dialogues.

Each chapter starts with two proverbs where names of parts of the body are often involved, for example:

- The eyes are the window of the soul.
- The pen is the tongue of the hand.

Then there are grammar boxes containing explanations about the use of a grammar element which is predominant in the proverbs (in the examples given above, the definite article “the”).

Afterwards what is offered is a dialogue or a passage on common medical topics like “appendicitis”, “types of headache” or “infectious diseases”, and so on. However, nothing is said about the authenticity of the texts given, nor is there any reference to possible sources, so there is good reason to suspect that the texts have been created *ad hoc*. Published only a few months ago, the work stands out, of course, for the topicality of the medical matters included, e.g. a unit completely dedicated to H1N1 influenza, the history of which is also traced. Topics like this offer the opportunity to debate current

medical matters and learn the corresponding terminology (e.g. “swine”, “zoonotic swine flu”, “pandemy”/ “pandemic”, and so on).

As far as exercise activities are concerned, together with some traditional types such as reading comprehension exercises, gapfills and multiple choice tests, widely used in most textbooks, the authors have also provided learners with different kinds of learning aids such as crossword puzzles and word-search schemes. In the latter, students have to identify a given grammar category, e.g. adverbs, either “down” or “across” in the scheme. Matching exercises on medical topics are also very frequent, varying according to the assumed progress in learning medical concepts. To give a few examples, schemes range from matching names of parts of the human body or medical equipment with their corresponding definitions, to more complex schemes where names of diseases must be matched to the parts of the body affected and to the drugs used for treatment, on the basis of notions which were dealt with in the previous sections. To be able to face up to an exercise like this, students are required, firstly, to have assimilated knowledge about specific medical concepts, and, secondly, to know the corresponding specific terminology in English.

The book also contains a list of all the irregular verbs included in the units, a list of prefixes and suffixes in scientific lexicon, both in English and in Italian, and a list of acronyms as well.

Much emphasis is placed in this volume on grammar structures, and, above all, verb tenses. Grammar topics are always illustrated extensively through long explanations and schemes, and many exercises are provided for their application.

2.2. *English on Call*

The second book, *English on Call*, 2009, (447 pages) is an updated version of the 2003 *English on Duty*. The volume is divided into twelve chapters. As the authors themselves state in the Preface, the work is aimed at students of all linguistic levels since the difficulties encountered in the chapters gradually become more complex.

The medical issues included are addressed to all healthcare professionals, as they concern many and various professional specializations, e.g. general medicine, speech therapy, psychiatry, dental hygiene, nursing care, ophthalmology, audiometric techniques, rehabilitation physiotherapy, and so on. The broad range of specialties which are the focus of attention in the book makes it particularly rich in clinical terminology used in each specific professional field.

The chapters start with stories about patients and related health problems, or doctor-patient dialogues, accompanied by a (true/false) reading comprehension test, multiple choice exercises, different types of gapfills (e.g. gaps to be filled with words from a list or with derivatives from the infinitive of a verb), error correction exercises, and sometimes exercises about synonyms and antonyms.

Each chapter contains an explanation of the grammar rules encountered in the texts with examples. Moreover, each chapter of *English on Call* is dedicated to the description of a body system, starting from the nervous system and ending with the lymphatic one, with a specific focus on anatomical terminology. Several diseases affecting the specific body system are dealt with.

Finally, the book contains an appendix providing students with a glossary, a list of irregular verbs, a list of common regular verbs and phrasal verbs used in medical English, a diagram of the human body, names of hospital departments, and listening and reading comprehension keys.

Here too, no reference is made to the authenticity of the texts.

2.3. *English for Medicine (1st volume) and English for Medicine (2nd volume)*

The third volume examined is *English for Medicine*, a work divided into two volumes belonging to the series *Domain Specific English*. The volumes (116 pages the 1st volume, 168 the 2nd) are addressed to all those attending healthcare degree courses. The texts contained in the volumes show different levels of linguistic difficulty in keeping with the *Common European Framework of Reference for Languages*, with those of the 1st volume ranging from A2 to B1, and those of the 2nd from B1 to B2.

The seven chapters in the first volume and the nine in the second follow the same structure. Each chapter is made up of a paragraph introducing a topic, an introductory focus on grammar rules, followed by a warm-up activity and a series of texts with exercises, focus on grammar, and activities aimed at the acquisition and/or reinforcement of both terminological and morphosyntactical features, as well as the medical topics dealt with in the texts. The two volumes are designed to provide students with both the means and materials which allow them to learn the linguistic features of scientific discourse, and draw their attention to aspects linked to the discipline, thus placing emphasis on the important role that linguistic competences and specialized knowledge will play in students' future profession.

The texts in *English for Medicine* are authentic texts, though sometimes abridged or adapted. Their content ranges from topics about genetics to pharmacology, from forensic science to developmental disorders (1st volume), and from occupational diseases or alternative medicine to medicine and ethics (2nd volume). The authors have borne in mind the different genres characterising specialized medical discourse, ranging from highly specialized texts to popular texts and manuals. Particular attention is paid to the characteristics of scientific research articles, which are illustrated in a concise and effective way (e.g. structure of scientific research articles, their stylistic features, tense, nominalization, sentence length, etc.).

As far as attention to grammar topics is concerned, the two volumes of "English for Medicine" draw students' attention to the various morphosyntactical aspects of the English language (e.g. word formation processes), and each chapter includes grammar boxes containing several examples which illustrate the rules included in the texts. Full explanation of grammar rules and additional examples can be found at the end of the book in a series of grammar tables, followed by materials for activities.

They also attempt to satisfy medical students' needs by trying to understand the actual difficulties that Italian University students of

medicine, as well as all healthcare students, may encounter when dealing with scientific discourse in English.

This is particularly true as regards the attention devoted to the syntactic aspects of medical English. In the first volume, for example, there is much focus on the explanation of word order as far as adjectives are concerned. One of the questions most frequently asked by students is, in fact, about what position adjectives must adopt with respect to a noun when there are many of them (usually three or more).

As far as attention to the development of the four linguistic skills is concerned, the volumes focus on the development of reading comprehension skills, considering reading activity, as Prof. Iamartino reminds us in the Introduction to the books, to be an active and dynamic act, founded on processes of predicting, and which, within specialized language texts, may have different levels of specialization and may be tackled following different strategies (skimming, scanning, detailed reading, note-taking, etc.). Afterwards, the books focus on the development of listening skills, and finally speaking and writing skills.

Finally, the books also offer students an online service which provides them with the keys to the exercises and the activities contained in the volumes. Moreover, the 2nd volume contains an audio CD for listening comprehension exercises and for the transcription of texts.

3. Reading skills coverage in the three textbooks

To what extent do the three books under investigation develop reading skills? When writing a textbook for medical studies, do authors bear in mind MIUR recommendations about its development? In answer these question, the investigation of frequency (expressed as a percentage) of reading activities included in the three books was analysed. It was calculated on the basis of the number of reading activities divided by the number of all activities contained in each book.

As shown in Table 1, the highest percentage was achieved by *English on Call*, with 64.5%, followed by *Medical Target* with 15.5% and *English for Medicine*, 14% (vol. 1+2). It is important to

dwell on *English on Call* and *English for Medicine* in order to give some figures which better illustrate the results obtained.

With regard to *English on Call* (12 units) the first 7 chapters contain mixed activities (reading, listening, speaking, writing and grammar), and frequency of reading activities amounts to 36.4%, while in Chapters 8-12 there are only reading activities (102, even without grammar exercises).

As far as *English for Medicine* is concerned, the two volumes were first analysed separately, and afterwards together (as a whole). The first volume scored 17.2% (with 21 reading activities out of 122 activities), the second scored 11.3% (with 18 reading activities out of 159 activities). However, in the second volume (9 units) the last three chapters (7-9) focus on the development of speaking, listening and writing skills. In fact, when only the first six chapters of the volume are taken into account, the frequency of reading activities (18 out of 106) is higher, 17%, i.e. almost the same result as the first volume.

The histogram in Table 1 shows the results from the comparison between the three textbooks chosen for this study.

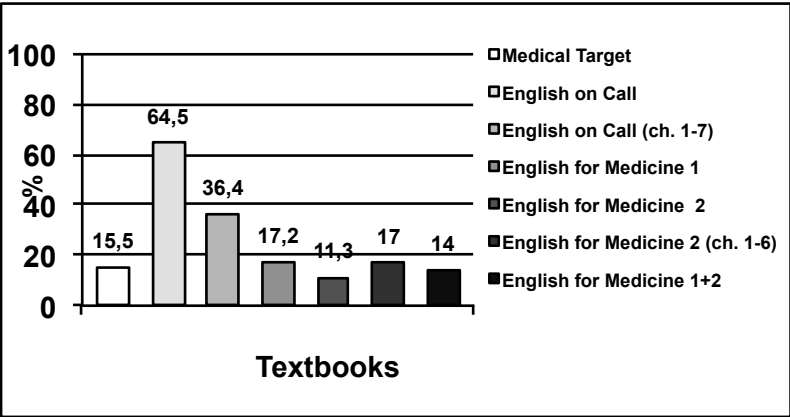


Table 1: Frequency (%) of reading activities in the textbooks under investigation

What can be deduced from the histogram is that *English on Call* is certainly the richest work of the three textbooks as regards reading activities though all of them comply with the MIUR instruction about the development of reading skills.

4. Concluding remarks

The research carried out in this paper about the focus on reading skills in three medical English textbooks can easily be extended to the other linguistic skills, i.e. speaking, listening and writing. If medical students want to be able to communicate in their professional field in the English language, regardless of what their future specialty will be, it becomes important for them to be competent in all four linguistic skills, and not only in reading. Italy is becoming an increasingly multilingual country, therefore medical students will most probably deal with foreign patients and have to interact with them, as well as having to understand an international conference, write a case report or draw up a clinical record if they work abroad, etc.

Hopefully, this paper will contribute to giving a general overview of both the way a person who decides to write a medical English textbook for Italian undergraduates works, and the difficulties which must necessarily be faced in dealing with such an arduous undertaking, since it is a very hard task to produce a work with sufficient flexibility to allow it to be adapted to the different realities in Italian universities, e.g. the different number of credits and hours dedicated to specialized English teaching according to the specific faculty.

References

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