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Teaching medical discourse in higher education: An introduction

1 Introduction

1.1 Medicine: An art and a science

Since the existence of human society, medicine has always occupied a prominent place in all cultures and periods because it represents a common concern for all human beings: their health and lives. Medicine is a science, i. e. an area of knowledge (of body systems, their diseases and treatments) and an art, i. e. the application of that knowledge to medical praxis. The science is the evidential basis for solving clinical problems, and the art is the application of this medical knowledge combined with intuition and clinical judgment to determine which is the best diagnosis for each patient. It is precisely because it includes both theory and practice that Taavitsainen (2011) convincingly argues that medicine has a special position among the sciences. It has its place among other learned university disciplines and occupations that involve technical skills and practical applications, but it is also important in everyday life because regimens of health and medical advice concern everybody. This is why medicine has never before played such an important, absorbing and fundamental function in society, and why the delivery of high-quality, affordable access to health care is at the top of the political agenda in most parts of the world.

1.2 Emergence of English for medical purposes

The existence and rise of English for Medical Purposes (EMP) owes much, of course, to the late twentieth-century emergence of English as the foremost international language of science in general and of medicine in particular

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(see Taavitsainen 2006; Ferguson 2013 for the history of languages in medicine). The development and dominance of *English* in medical research is well documented in a number of publications (e. g., Giannoni 2008; Gunnarsson 2009; Boyack et al. 2013; Ioannidis 2014; Van Noorden 2014). Proof of this development is abundant, but we will cite just two aspects here. The first is the growing number of medical journals published annually in English worldwide, and the second is the recent appearance of non-medical journals devoted to the (linguistic, sociolinguistic, socio-historical, etc.) study of English-medium medical discourse or of journals that, among other articles, publish papers dealing with EMP-related issues.

1.2.1 Medical research and English-medium publications

A few telling figures: by the end of the 1980s, some two million medical papers were published by about 25,000 medical journals, 15,000 of which – all Anglo-American – were considered "serious" journals. By the year 2000, over five million medical papers were published annually (Cooter 2000). This hyperinflation of information is mostly due to the fact that each discipline is subject to a subdivision every ten years, which in turn leads to the creation of new specialized journals (Régent 2000). If we add to this figure the 500 or so journals in nursing and dentistry, the final figure is ten million health-related papers published each year, over 80 % of them being written in English. It should be kept in mind that many medical journals that used to be published in national languages have recently switched to English as their language of publication. This is the case of the *Croatian Medical Journal*, the *Mexican Medical Journal*, the *Saratov Journal of Medical Scientific Research* (Russia) that is supported by Springer, and many other medical journals in a variety of countries (Argentina, Bosnia and Herzegovina, China, Finland, Germany, Iran, Japan, Spain, Sweden, etc.). Incidentally, this linguistic shift is also quite frequent in other "soft" and "hard" disciplines.

Not only "conventional" but also alternative medicine medical journals (Brodin and Danell 2005) are steadily on the increase. Indeed, complementary and alternative medical therapies (CAM) have attracted increased international attention from the media, the medical community, government agencies and the public (see Salager-Meyer et al. 2006). Surveys carried out in the USA and elsewhere suggest that CAM is popular throughout the industrialized world (Eisenberg et al. 1998), and the number of CAM papers published both in CAM journals and in conventional medical journals such as *The Journal of the American Medical Association, The British Medical Journal* and the *Annals of Internal Medicine*, is growing at a very fast rate (Brodin and Danell 2005).

Moreover, online publishing has facilitated rapid and sustained growth in the volume of medical literature. According to Ben Goldacre (quoted by Weber 2010), a British medical writer, a general practitioner would need 600 hours a month to read all the relevant literature ... And a month has only 720 hours! According to Richard Smith (2010), former editor of the *British Medical Journal* and now editor of *Cases Journal*, 40 % of doctors read between 1 and 10 % of all the medical information they are bombarded with, a further 40 % read between 11 and 50 %, and a shocking 8 % read less than 1%. When asked how their information supply makes them feel, a sample of 41 doctors gave negative answers, with "impossible" and "overwhelming" heading the list of adjectives used (Johnson 2010).

1.2.2 Research and publications on medical discourse

English for Medical Purposes, as well as English for Specific Purposes (ESP), has been, at its core, a practitioners' movement the aim of which was to establish, through careful research, the needs and relevant discourse features for a targeted group of students. EMP teachers-cum-researchers, like the great majority of ESP practitioners, have to find out what their learners need to be able to read, write, say and/or understand in the specialized discourse of their field of expertise. In this respect, perhaps the most useful needs analysis checklist for non-Anglophone doctors is that of Allwright and Allwright (1977). (For those interested in the five key roles of the ESP/EMP practitioner, see Dudley-Evans and St. John 1998.)

In 1983 a group of ESP practitioners met at an ESP Conference for the Arab World run by John Swales. A sub-group discovered by chance a mutual involvement in English for the Health Sciences, and two British linguists, Nigel Bruce and Liz Nakhoul (now Howell), who then worked at the University of Kuwait, volunteered to establish an information network (Nigel Bruce, personal communication). This is how the first EMP journal, the *EMP Newsletter*, was launched at the University of Kuwait. Needless to say, the *Newsletter* was warmly and positively received by all the applied linguists and English language practitioners who, one way or another, were involved in EMP. The journal maintained two volumes a year and was distributed free of charge across 60 countries to about 450 subscribers. Very sadly, though, Operation Desert Storm in 1990 wiped out Nigel's and Liz's work in the Arab world, and the *EMP Newsletter* ceased publication. As a consequence, those interested in and conducting research on medical discourse had to look for new outlets for their publications. *Social Science and Medicine* and *Communication and Medicine* are two such outlets. *Social Science and Medicine* provides an international and interdisciplinary forum for the dissemination of social science research

on health, whereas *Communication and Medicine* is a journal of health care, ethics and society targeted at an interdisciplinary audience of healthcare professionals, researchers and students in the medical, social and human sciences. Moreover, journals such as *The Annual Review of Applied Linguistics, English for Specific Purposes, Ibérica* (based in Spain), *ASp* (based in France), *Historical Pragmatics*, and the *Journal of English for Academic Purposes* – all devoted to the analysis of scientific discourse – occasionally publish articles on linguistic, diachronic, socio-historical and cross-linguistic issues related to oral and/or written medical discourse. The e-journal *Panace@* should also be mentioned here. It is an interdisciplinary journal of healthcare, ethics and society that was launched in September 2000 and is entirely devoted to the discussion of issues related to the translation, history and development of medical language. It is written in Spanish, but accepts papers written in any language.

Lastly, the fact that the second edition of the *Encyclopedia for Language and Linguistics* (Brown 2006) features a special section entitled "Medicine and language" which, for the first time, brings together several perspectives on this relatively new research area, is proof of the applied linguistic community's growing awareness of the importance of the analysis of medical discourse.

The bulk of EMP research is published in international (mostly Anglo-American) journals (for an overview see Gotti and Salager-Meyer 2006, Gotti et al. 2015), but there is also local, on-site EMP research that is either unpublished, written in languages other than English in the form of MA theses and PhD dissertations, and/or research articles published in English and in other languages (e. g. French, Spanish, Portuguese) in local/national/regional journals, such as the *The Especialist* (Brazilian-based), *Approach* (Cuban-based) and the *Asian ESP Journal*. As Johns (2012: 18) puts it: "There is much more happening in ESP than one would assume from examining international journals." That same remark applies equally to EMP.

Early EMP research was concerned with teaching issues. Indeed, in the early 1980s many studies were oriented towards solving problems of a pedagogical nature because, by then, needs assessment was considered fundamental to EMP curriculum design. Most of that research tended to be descriptive, involving statistical (quantitative) analyses of the grammar and lexis of medical discourse (e. g. Salager-Meyer 1983, Salager-Meyer 1985a) because at that time specialized language was primarily understood as the grammar and vocabulary that are specific to a given context (a kind of analysis commonly referred to as "register analysis"). Hence needs assessment focused almost exclusively on sentence patterns and key vocabulary. Course design studies became very popular, and a variety of short or intensive EMP courses saw the light around the world (especially in the Middle East and Latin America), although we have few detailed accounts of such courses, at least in the international literature, because many of them were locally produced.

As a consequence, tailor-made, in-house EMP textbooks based on local research results and using authentic materials – another central factor in designing ESP/EMP teaching materials (Allwright and Allwright 1977; Robinson 1991; Hyland 2002) – appeared on the market. Such textbooks encompassed various skills, genres and medical situations, e. g. English for doctor-patient communication, for speaking at medical conferences (Carnet 2002), for writing reports and journal articles (cf. Ferguson 2013 for a review of EMP courses and textbooks). In some cases, EMP textbooks were designed for courses of a highly specific nature, such as Salager-Meyer's (1985b) on *reading* English-medium medical research articles, a textbook specifically designed for Spanish-speaking medical researchers and medical students, especially those in the clinical phase of their training. In the 1980s, in Latin America and other "peripheral" countries (Canagarajah 2002), *reading* indeed featured prominently among the needs of EMP students. But exploratory and course-design/program description papers based on these early register studies became scarcer, and EMP research started to become more empirical, addressing generic and/or socio-pragmatic and historical aspects of medical discourse (Nwogu 1997; Vihla 1999; Gotti 2001; Taavitsainen and Pahta 2004; Fløttum 2006; Magnet and Carnet 2006; Pahta 2006; Mungra 2007; Giannoni 2012; Maci 2012; Salager-Meyer et al. 2013, to name just a few).

More recently, the focus of research on the teaching of medical discourse has broadened so as to include issues concerning the improvement of the production and dissemination of scientific information in public health and the linguistic preparation of medical researchers. Greater emphasis has thus been put on the methods of scientific *writing* and *publishing* and on the adoption of appropriate discursive practices to be used in the dissemination of information for the protection of public health (Carnet et al. 2010; de Castro 2014, among others).

It is very important to bear in mind that the findings of the above mentioned EMP research have been translated into pedagogical practice, an assertion that leads us to the presentation of the content of this special issue of *Language Learning in Higher Education* on the teaching of medical discourse in Higher Education.

2 Contents of the special issue

As was seen in the previous section, in the last few years, the research on medical discourse devoted to pedagogical issues has been more limited (at least in terms of publications) than that concerning other (more discourse/text-oriented) aspects of EMP. In order to fill this gap, we decided to promote

this project concerning the publication of interesting and relevant work carried out on the teaching of foreign languages in medical schools around the world as an integral part of universities' preparation of future medical staff and health-care practitioners.

The main topics covered by the papers that make up this issue are: curriculum design, teaching approaches, materials development, medical and healthcare terminology, medical discourse, and communication in medicine and healthcare. All these aspects have met the interest of the various contributors to this special issue, as their papers testify.

2.1 Curriculum design

The topic of curriculum design is dealt with by Herlinda Vekemans. Her article describes the organization of a two-semester course in medical English organized by the Language Institute of the University of Leuven on behalf of the local Faculty of Medicine within a wider framework of online Continuous Medical Education. The article first outlines the main course concept and goes on to provide an overview of the academic context, the learners involved, the materials used, and the actual shape of the course. Classroom practice and assessment are then described. The experience discussed was found rewarding by both students and teacher. In particular, students have had the opportunity to experience authentic language at work in a context they immediately recognized as typical of their future workplace.

2.2 Teaching approaches

Various papers discuss different approaches that can be adopted to teach EMP. Ladislav Václavík is in favour of a shift from a textbook-based teaching to an open-source, worksheet-grounded teaching style. His objective is to remove the teacher from the spotlight and bring students into focus: not only as individuals striving for achievement, but also as members of working groups, emphasising their need for cooperation. According to Václavík, the move towards a student-centred approach favours success, appropriacy, personalisation, pleasure, results, interesting and flexible content, support, intrinsic motivation, co-operation and student control. This new approach implies a change in the teacher's role with a broadening of his tasks: informant, manager, monitor, model, counsellor, facilitator and friend. Moreover, this methodological conception stands on three main building blocks: creativity, collaborative learning and motivation.

Deirdre Kantz and Ivana Marenzi address the issue of a shift in the teaching perspective of an EMP course, replacing the view of the human body as a *lexical template* with an approach to the human body as a *text template*. The former sees the human body as a template with which to associate the teaching and learning of specialized medical lexis, such as the names of body parts, body organs and related diseases. The latter, by contrast, focuses on the meanings that the body can make in daily interactions and in particular those pathological or physiological meanings that the medical student should be made aware of. The authors then describe the classroom initiatives they have promoted to prepare medical students for this cultural shift, presenting the techniques designed to develop multiliteracy skills that contribute to their medical education and training as a whole. This includes the adoption of meaning-making processes within a teamwork, peer-group approach to promote medically relevant multimodal competences.

Kirsi Wallinheimo and Kari K. Pitkänen discuss the pedagogical changes that have arisen in the teaching of medical discourse as a consequence of the adoption of new technologies. They examine in particular the use of iPads in the classroom, and consider how this influences the arrangement not only of in-class activities, tasks and discussions, but also the possibility to connect the traditional classroom to resources outside the classroom. Moreover, by exploring the positive relationship between language learning and technology, the authors investigate what else the students could do with their iPads to develop their language skills, and how language courses relying on shared technology could be further developed.

Isabel K. León Pérez and Pedro Martín-Martín focus on a teaching approach that could be adopted for a particular EMP audience: the linguistic formation of future researchers in the medical field. Their analysis starts from the consideration that in experimental disciplinary fields, such as Medicine, the need to publish in English has become almost an imperative for those researchers who seek academic promotion and international recognition. However, many of them have difficulties in writing up their papers due to a lack of familiarity with international discourse practices. In response to this situation, many higher education institutions have set up specific training courses to provide support for PhD students and scholars working in this field. Relying upon studies of research writing, the authors explore possible applications of the results of genre analysis research to the teaching and learning of EMP scholarly writing. After reviewing how researchers have conceived genre-based pedagogy in the different scholarly traditions, the paper outlines a particular view of genre-driven pedagogy and its practical application to the teaching of medical research article writing.

2.3 Materials development

The paper by Valéria Jamrichová and Katarína Zamborová concerns the issue of materials development. The aim of the article is to show which materials could be used to deal with issues related to medical ethics (specifically to organ transplants and euthanasia) within a student-centred approach. The authors resort to the Internet as an excellent provider of numerous resources for the development of teaching materials through which teachers can help their students to become more autonomous. The particular advantage of this source is that it not only enables the students to choose from a wide variety of topics, but also offers both teachers and students a chance to develop their own materials while working on students' language skills and strategies for life-long learning. Moreover, the authors show that by using Internet materials the motivation of learners to speak and express themselves in English has increased. This approach has also led to a friendly and positive working atmosphere in class, which is a key principle for applying student-centredness to the teaching of EMP.

2.4 Medical and healthcare terminology

Another issue that has attracted the attention of the contributors to this issue is the teaching of specialized terminology. This is the topic of the paper by Igone Zabala, Itziar San Martin and Mikel Lersundi. They investigate terminology learning in the health sciences as a means of contributing to the development and consolidation of the knowledge of Basque biomedical registers. In particular, the authors describe some initiatives, resources and tools that have been developed to manage, share and spread Basque medical terminology. After presenting some orthographic characteristics of the grammatical system of Basque, the paper compares them with those of the major languages (Spanish and English) that are taken as reference for the development of Basque terminology. According to the authors, these differences explain some frequent unsatisfactory results in the creation of Basque medical terms. In the last part of their contribution, the authors discuss the implications of their analysis for the design of a specific syllabus for teaching Health Communication in Basque.

2.5 Medical discourse

Several articles in this issue discuss other aspects of medical discourse and their pedagogical implications. Pascaline Faure investigates a typology of the euphemisms

that patients use for medical terms in English and French. As it is often acknowledged that lay terms used by patients during interviews can be a source of major misunderstandings, the author argues that these lay terms should be taught to future health practitioners. The euphemisms investigated here (which – according to the author – are part of "patientese") are classified according to the semantic processes by means of which they are created. For her analysis, the author uses the content of textbooks and lexicons dealing with English and French for medical purposes. Pascaline Faure also proposes pedagogical guidelines to encourage EMP teachers to incorporate the study of "patientese" into their course. The paper addresses two further issues: the probable evolution of patients' terminology towards enhanced technicality under the influence of both medical TV series and the Internet, and consequently, the plausible use of technical terms as new euphemisms.

Tatiana Canziani examines the use of metaphors in medical language and notes how EMP students often face the problem of understanding and using these figures of speech when communicating with patients or reading scientific papers. As she is convinced that exposure to metaphors and practice in using them may help medical students become better communicators in clinical practice, the author recommends including the linguistic study of these aspects in L2 curricula for medical students. In particular, this study investigates the influence of two main factors: the presence of contextual clues (which may provide a richer context for comprehension), and the teaching of metaphor extension strategies to be used by medical students when facing the problem of interpreting novel metaphors.

Anna Franca Plastina examines how EMP can make its own original contribution to the issue of quality pain education. This aspect is seen as a relevant part of students' future professional needs since medical practitioners are expected to use plain language when assessing patients' pain as the gateway to diagnosis. Unfortunately, so far hardly any attention has been paid to teaching the use of plain English for specific purposes. In particular, this paper focuses on two specific learning objectives which have been set to engage EMP students in the use of what is here defined as "plain pain language": the first objective was to develop learners' understanding of how patients use plain pain language to shape their descriptive accounts of pain; the second was to practise pain assessment measurements. Plastina's study also examines specific curricular activities designed to provide EMP learners with a first-hand experience of exploring authentic descriptive accounts so as to use patients' language to assess pain, thus adopting a data-driven approach to learning. This approach is considered particularly suitable for two reasons: technologically it supports new viable opportunities of accessing linguistic data in new contexts of use, thus adhering to the ESP principle of authenticity; and methodologically it facilitates the ESP principle of learner-centredness.

2.6 Communication in medicine and healthcare

The last two articles discuss the pedagogic use of materials and data found in medical contexts for communicative and informative purposes. Davide Mazzi provides a linguistic analysis of communication strategies, focusing his attention on the web-based resources employed by the Irish Cancer Society to communicate to the public about cancer as a widespread illness. Rather than focusing on medical discourse as expert-to-expert communication, the study addresses the discursive aspects of expert-lay communication, shedding light on the salient characteristics of the booklets issued by the Irish Cancer Society, and on some particular discourse features highlighted, i. e. lexical bundles. The discourse patterns retrieved through the analysis of lexical bundles highlight their particular efficacy in the expression of empathy, and denote an overall potential application from a pedagogic perspective.

Robyn Woodward-Kron underlines the importance of the acquisition of communication skills in order to master effective healthcare communication. In particular, she posits that a patient-centred approach to medical interviewing is the foundation of successful clinical communication. Core features of patient-centred communication include foregrounding the patient as a person, taking into account the patient's preferences, contributions and psychosocial aspects, rather than excluding these aspects and focusing only on the biomedical dimension. The importance of these aspects is confirmed by the fact that clinical skills – including communication skills – tend to be assessed experientially in the form of objective structured clinical examinations. These are timed interactions, which require the medical student or trainee to interview a simulated patient, that is, an actor playing a semi-scripted, standardised patient role. Candidates can be asked to take a history, explain test results and treatments, and conduct examinations. Discourse studies have shown that these interactions can differ considerably from authentic doctor-patient interactions with simulated patients dominating the conversation, initiating topics, and closing the interaction. The centrality of communication skills training throughout medical education should therefore constitute an absolute priority in educational settings that seek to provide a good preparation of healthcare practitioners.

3 Closing remarks

The articles in this special issue about the teaching of medical discourse in higher education institutions highlight a considerable variety of themes, data and research

methods which clearly reflect the eclectic interest in this specific domain and the wide range of approaches developed for its investigation and application. Taken together, the various contributions are indicative of the multifarious methods, resources and procedures adopted by lecturers engaged in the linguistic preparation of future medical and healthcare practitioners. A caveat, though: this journal issue does not claim to be comprehensive and to offer a complete, definitive account of the way the teaching of medical discourse is practised in this vast sector of Higher Education at a global level. Rather, we hope that the articles presented here will open up interesting and relevant perspectives, provide topics for fresh discussion, and stimulate debate among all those scholars and practitioners involved in such a noble pedagogic field endeavour.

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Bionotes

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