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COMMUNICATION FOR MEDICINE: STATE-OF-THE-ART

Abstract

This study looks at “clinical communication” (CC), which is usually researched and taught with the fluent English speaker in mind, and also at English for Medical Purposes (EMP), where the presumption is that learners are less than fluent speakers. Our hope is to acquaint teachers and researchers of both CC and EMP of the value of understanding each others’ work. The paper discusses the quality of evidence that CC teaching is effective. It looks at the move away from a skills-based approach (CC as a set of behaviours), towards a more integrated concept, most recently visualising it as part of professional development. The role of the Evidence-based Medicine (EBM) movement is considered, as is the risk in published research of language use which is misleading to the point of fraud. CC across cultures is also addressed. Within EMP, the study considers the impact of research into the RA, and the increasing use of software to e.g. construct wordlists relevant to Medicine, and for use in class. It also looks at available teaching materials, often of poor value, though with significant exceptions. Finally, the dominance at present of the Anglophone world is discussed briefly.

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Key words

medical English, clinical communication, English for medical purposes, medical communication, English for specific purposes.

1. INTRODUCTION

It is very generally accepted that doctors need to be able to communicate well with patients, colleagues and the general public. It is also generally accepted that, because of the international status of English and the fact that it opens the door for medical students and doctors to research, much of which is published in English, a good command of the language is important. This is the case even in countries where English is not widely spoken in the general population.

The first of these points has led to the teaching of “clinical communication” (CC) to students and doctors who already have fluent English, while the second has led to the development of English for Medical Purposes (EMP), under the umbrella of English for Specific Purposes. These disciplines have, as their ultimate shared goal, improved patient safety, and both therefore are concerned centrally with identifying educational value. There is a third strand of research which is largely part of the discipline of Applied Linguistics and which tends, broadly, to be more concerned with identifying such things as discourse patterns at a level of detail which is certainly of value but may, sometimes, have limited surrender value for the EMP/CC practitioner. We do not discuss this in what follows. We are very aware that, for most EMP practitioners, much of the research into CC is likely to be unfamiliar, and for this reason we look in more detail at this. From experience, however, the introduction of “EMP” to students with fluent English, and of “CC” to students with very limited English, can be extraordinarily illuminating for students/doctors and invigorating for teachers, who can find themselves working in new and effective ways.

There were reported to be 2,800 Medical Schools in the world in 2016 (Hrabalová & Leng, 2016) and it seems likely that English is, these days, the medium of instruction (or at least a medium of instruction) at around half of these. The picture is one of considerable complexity, however. There are some countries (UK, USA, etc.) where English is straightforwardly the language of choice of the majority of people. In such settings, aspects of (the English) language are taught under the label of “communication skills” or “clinical communication” (CC). In many settings English is also a fluently spoken second choice and a principal medium of instruction at tertiary level (India, Singapore, Hong Kong, etc.) and there are other settings where it is not widely spoken in the community and one may assume that students will have limited command of the language.

In addition, there are now many Medical Schools where there are two or more streams – one, where the medium of instruction is the predominant local language, and another, for international students, where it is English, or sometimes English among other languages. Then there are many settings where it is recognised that the ability, say, to read research or make presentations in English is important, though the language of communication with colleagues and patients on a day-to-day basis is almost always Italian, or Rumanian, or Japanese, etc. And finally, large numbers of doctors qualified in their own countries, through English-

medium or non-English-medium courses, seek employment in countries where an excellent command of English is essential, but where in addition there will be many patients who do not themselves have excellent English. The result is that it is very difficult to say what the language needs of medical students and doctors are, and difficult to synthesise the work undertaken in this area.

In this study, we allow ourselves a very rough-and-ready distinction between the type of CC support typical of a country like the UK, where native-like mastery of English is taken for granted, and the type of support typical of a setting where it is not, and where the English teacher will regard themselves as teaching English for Academic Purposes (EAP), or English for Medical Purposes (EMP). A similar distinction is made by Ferguson (2013), who concentrates on the latter, and offers a review. This present review concentrates on CC, and we begin with this. We then move to EAP/EMP. The distinction is very imperfect, but it reflects the fact that, for example, EAP/EMP papers published in core language/ESP journals too rarely reference the CC literature, and papers in core Medical Education journals, for example, too rarely reference EAP/EMP literature. It should also be mentioned that the number of researchers engaged broadly in CC and who are confident discussing language is growing, though it remains fairly small (see many of the authors represented in Hoekje & Tipton, 2011; Harvey [e.g. Harvey, 2013], Sarangi and Roberts [separately and together: e.g. Roberts & Sarangi, 2005]). Sarangi also set up and edits the journal *Communication and Medicine*.

One aspiration for the field must be, we would argue, to confirm that the clumsy divide into “CC” and “EMP” is a barrier to progress.

2. CLINICAL COMMUNICATION

2.1. Speaking and listening

Almost all the work which is usually collected under the label of CC consists of research into the nature and conduct of the doctor-patient relationship, on the understanding that “patient-centredness” is central to good clinical care. The issues raised in this context closely echo those which centre around “student-centred learning” and for that matter “customer focused sales” and similar concepts.

Within medicine, the influence of Michael Balint’s work in the 1950s, still continuing, is considerable (see The Balint Society website). From the early 1970s, the UK Royal College of General Practitioners (RCGP) developed and advocated the triaxial model of the consultation, one which recognised that any meeting between doctor and patient had a *clinical*, a *social*, and a *psychological* dimension – self-evidently to differing degrees in differing circumstances (Royal College of General Practitioners, 1972). Thus, a lorry-driver who has a first episode of epilepsy (clinical issue) may suffer social consequences (he loses his job because he cannot

drive) and loses confidence generally (psychological issue). More recently there has been a considerable amount of effort undertaken in Shared Decision-Making (SDM), with the idea being that doctor and patient should agree together on the most appropriate way forward (in direct contrast to what is implied in the common English phrase, that a patient is “under doctor’s orders”). A major figure here is Elwyn (e.g. Elwyn et al., 2012). It is worth observing, however, that Légaré et al. (2018) (in a group including Elwyn, as it happens), undertook a Systematic Review of the evidence that interventions increase SDM and concluded it was “very low”. Note that this latter paper is part of the Cochrane Database, which is at the heart of the Evidence-based Medicine (EBM) movement. The high standard of empirical evidence required by EBM, coupled here with the nebulous outcome – measuring “SDM”, in effect – makes this conclusion very likely indeed.

In research terms a lot of the early work into CC is broadly psychological in its approach. The main focus throughout the 1970s and 80s was on “process-outcome research”, looking at correlations between particular “skills”, such as “asking open questions”, and achieving outcomes such as “patient satisfaction”, “recall” and (something of a holy grail) improved health outcomes. Ley (e.g. Ley, 1988, which pulls together a range of empirical studies) has been very influential here, particularly in setting the tone for a skills-based and empirical approach to research and teaching (see also Stewart & Roter, 1989). As a result, it has become commonplace to claim that there is evidence that good CC matters (see e.g. the “Toronto consensus statement” [Kurtz, Silverman, & Draper, 2005; Silverman, Kurtz, & Draper, 2013; and Simpson et al., 1991]).

Of particular note is the work of Silverman and Kurtz, represented immediately above, who campaigned tirelessly for CC, and whose work is very widely used in medical schools around the world. It is – coincidentally – of substantial value to the teacher of EMP, in that the essence of the approach consists of a very long list (it’s full of category mixes, but these don’t really matter) of “skills” which can be treated by the EMP teacher as language functions. Thus, for the EMP teacher “using open questions” becomes “What language items fulfil the function of asking open questions?” However, the basis of a skills-based approach has been criticised, e.g. by Salmon and Young (2005), who argue that “[t]he widespread use of the term ‘communication skills’ emphasises processes at a skill level at the expense of those at levels of cognition, emotion, and value”, and Skelton (2008), who argues that the point is not mechanically using a list of skills, but deploying them differently with different patients. “Success” on this basis comes with the insight to know what skills to deploy when.

The problem, as language teachers are likely to see it, is that a great deal of research effort has gone into demonstrating (this is the Toronto consensus statement, Simpson et al., 1991: 1386) that “[communication] skills can be [...] reliably taught and assessed”. This amounts to little more than a claim that teaching works: it is odd that it should be necessary to say this, but it seems it is,

when set against the often-expressed idea that some people are “naturally” good at communicating, others are not, and that’s that.

However, there have been some robust studies demonstrating sustained change following teaching (e.g. Fallowfield, Jenkins, Farewell, & Solis-Trapala, 2003), and within the broad area of doctor-patient interaction, a significant body of work exists in the field of Breaking Bad News (BBN). This is particularly associated with areas such as cancer, where the bad news may be very serious indeed, but there is a recognition, echoed in the title of the best review to date of the field (Fallowfield & Jenkins, 2004, on “sad, bad and difficult news”), that news of terminal illness is not the only “bad news” which healthcare professionals deliver. Most people, certainly by the time they reach middle age, have personal horror stories of this being done badly, or stories of overwhelming gratitude that it was done well, and it hardly needs stressing that this matters.

Skills-based, process-outcome research is reported here because it has huge contemporary influence, but qualitative work has existed alongside it – though it is of interest to note here that two of the most cited literature reviews (Aspegren, 1999; Ong, de Haes, Hoos, & Lammes, 1995) have little or nothing to say about it. The paradigm of medicine, and of psychology, is quite properly focused on empirical, cause and effect studies, and therefore qualitative work is sometimes not fully regarded as research in its own right. However, important qualitative work exists. Of these, the most valuable are perhaps still Mishler (1984), for the level of insight, and the initial, powerful distinction between the “Lifeworld” of the patient and the medical world of the doctor.

In terms of general descriptive work, the original seminal study by Byrne and Long (1976) remains influential, though at some removes, and the basic structure of the consultation which they adduced has found echoes in a great deal of work subsequently. Roter’s Interaction Analysis System (RIAS) is currently the best known, and most influential, particularly in the US (see e.g. Roter & Hall, 2006; Roter & Larson, 2002). These systems are themselves echoed distantly in the work of genre analysts, particularly in the concept of move structure analysis. In addition, a few studies using concordancing programmes have been published of doctor-patient consultations (Skelton & Hobbs, 1999). Beyond this, the internet as a potential corpus database for understanding what patients in particular have to say is beginning to be recognised (see e.g. Baker, Brookes, & Evans, 2019, and Harvey, 2013 in a study of patient feedback, and Seale, Ziebland, & Charteris-Black, 2006 on online support groups). Note that more broadly Boulton and Cobb (2017) consider the use made of corpora studies in language learning generally.

The growing analysis of things other than doctor-patient communication, indicated above, is one part of a changing focus. The doctor-patient consultation remains overwhelmingly what matters, and the conceptualisation of “communication” as a set of skills, in the sense in which Silverman and Kurtz use this phrase, remains current. But there is a growing sense of a contrary view, one which more clearly

recognises the fact that communication ought to be considered in context, as an integral and therefore integrated part of a doctor's job.

More recently, therefore, there has been a recognition that patient safety depends on health professionals communicating successfully with each other, as well as with their patients. The wider background is perhaps most clearly illustrated within the UK context, where there are two relevant tragedies to consider. The first is the failure to identify and stop the very poor clinical outcomes for children with serious heart conditions at Bristol Royal Infirmary (BRI) a generation ago, and the subsequent enquiry (known as "The Kennedy Report"). This concluded there was a need to "broaden the notion of clinical competence" (Kennedy, 2001) to include "communication" as part of this wider concept. The second was the much more recent failure of Mid Staffordshire Hospital (strictly, Mid Staffordshire NHS Foundation Trust) and the subsequent enquiry, known as "The Francis Report". This concluded there was a great deal wrong with the "culture" of the hospital trust, that there was "a culture of doing the Trust's business, not the patient's business" (Francis, 2013).

Some of the issues here have been formalised, and some have not. For example, a key clinical skill for communicating between professionals is the ability to hand a patient over from one professional to another. Health professionals are now encouraged to use SBAR: the acronym stands for Situation, Background, Assessment, Recommendation (see NHS Institute for Innovation and Improvement website, 2017, where there are detailed examples). The steps are well-defined, and the system has a high degree of acceptability. To date, however, it is based on common sense rather than robust research.

The need for health professionals to maintain a highly effective level of interaction, particularly under stressful situations, is regarded as key in the increased use of hi-fi simulations. This kind of training, which involves a group of students working on a simulated ward (typically, a dummy is wired up to instruments in a bed), was inspired by the aviation industry, where simulating and dealing with crises has been part of pilot training for many years. As in aviation, communication is one of the key variables in safely resolving a crisis and is recognised as such. From a language point of view, the encouraging feature of this approach is the recognition that language – "real language" – is used in a complex context and can best be practised successfully within this complex context.

Cook et al. (2013) provide a systematic review, concluding that a number of aspects of such training are effective – notably, for our purposes, that it works best when "cognitive interactivity" is involved (cf. Salmon and Young's [2005] comments above) (see also McGaghie, Issenberg, Petrusa, & Scalese, 2010; Motola, Devine, Chung, Sullivan, & Issenberg, 2013; and a Systematic Review for acute care by Armenia et al., 2008). Note that Motola et al. (2013) is part of the AMEE (Association of Medical Education in Europe) series of "best evidence practical guides".

2.2. Reading and writing

Aspects of reading and writing, curiously, tend not to be considered as aspects of CC. Reading is normally considered, if the label “reading” is used at all, on undergraduate medical programmes, as a part of EBM. Although actually undertaking EBM studies requires a very good grasp of statistics and an understanding of methodologies for clinical trials, anyone involved in teaching reading or writing for Medicine should have a very basic familiarity with what it is, and with the ethos behind it (see website for The Centre of Evidence-Based Medicine). Language issues in reading insofar as these are a focus of attention are largely taken for granted, purely as the medium which allows students to assess the quality of research presented in a study. Similarly with writing: a great many health professionals (this is particularly true of doctors) are expected to undertake and write up research, and there is a recognition that to do so successfully entails an ability to handle the component parts of a research article – but once again, issues specifically of language are taken for granted.

An important figure here is Greenhalgh (2019), whose *How to read a paper: The basics of evidence-based medicine* is regarded as a key statement and is of value to students and qualified doctors of any language background. A general understanding that research papers have distinctive structures can be found these days in most “Instructions to authors” sections of academic journals. They often include advice on what information goes in which section, in what might be considered a kind of pre-theoretical genre analysis (interestingly, Hodges, Kuper, and Reeves, 2008 in a paper designed to introduce “discourse analysis” cite as their sole reference to “genre analysis” a nursing study from 2006 [Ford-Sumner, 2006]). We would suggest that this is an area where linguists could make a real and interesting contribution, both as teachers and researchers.

More broadly, the sense that authors may try to achieve by rhetorical ends what they cannot achieve by the strength of research alone is evident in a significant paper by Richard Horton (then as now, editor of *The Lancet*) (Horton, 1995) by the decision (Docherty & Smith, 1999) to move towards structured discussions, set out in an editorial to the *BMJ*, of which Smith was then editor. The first paragraph summarises the rationale exceptionally well, and in terms that will be music to the ears of genre analysts and anyone familiar with reading theory:

Structure is the most difficult part of writing, no matter whether you are writing a novel, a play, a poem, a government report, or a scientific paper. If the structure is right then the rest can follow fairly easily, but no amount of clever language can compensate for a weak structure. Structure is important so that readers don't become lost. They should know where they've come from, where they are, and where they are headed. A strong structure also allows readers to know where to look for particular information and makes it more likely that all important information will be included. (Docherty & Smith, 1999: 1224)

Smith's subsequent book, *The Trouble with Medical Journals* (2006), is an invigorating and sometimes polemical attack on the current system of publication in medicine, and the risk of inaccurate – and at worst fraudulent – work appearing and having influence. No-one involved in reading for EMP/CC should be unaware of this. The original *Lancet* paper which precipitated the crisis over the MMR vaccine is an instructive and ambiguous example. This paper (Wakefield et al., 1998) was later retracted, but is still available – labelled “Retracted” – on *The Lancet* website. It was widely held to suggest a link between the vaccine and autism but is worth introducing to capable students (maybe at postgraduate level, and for those with strong English) as an exercise in the need for careful reading. There is an excellent scrutiny of the paper and its impact, particularly as regards hedging, in Kolodziejcki (2014). She argues, surely correctly, that

[...] the very practices of scientific publishing, specifically the tradition of hedging, help to create a scientifically acceptable text but also leave discursive gaps. These gaps allow for alternate interpretations as scientific texts pass from technical to public contexts. (Kolodziejcki, 2014: 165)

In addition, new genres and sub-genres of writing are being developed and used, and familiar ones are being explored: referral letters, for example (see the review by Tobin-Schnittger, O'Doherty, O'Connor, & O'Regan, 2018 which concludes – as such reviews tend to – that there are advantages and disadvantages: but it is an interesting study which draws the reader's attention to a range of papers in the field), and electronic records (Zhong et al., 2018). This latter is a study of suicidal intent amongst pregnant women: it discusses the need for both natural language processing and diagnostic codes. Most recently, in a study which draws reassuringly on work reported in healthcare journals, Ramos-Bossinia and Sánchez (2020: 69) found, perhaps counter-intuitively, that “medical terms are commonly used in cancer forums”. The background, here and elsewhere, is to some extent a matter of health literacy (i.e. of how much patients understand about healthcare matters), and may be assumed to anticipate or follow on from such studies as Adolphs, Brown, Carter, Crawford, & Sahota (2004), and on the idea that health literacy among those who use online forums may be greater than that of patients in general (see in particular Kim & Xie, 2017).

3. PROFESSIONALISM AND PROFESSIONAL DEVELOPMENT

The shift towards a more integrated conceptualisation of the role of language centres in part on the current interest in “professionalism”, or “professional development”.

We turn now to look at some areas of overlap – areas, that is, where the CC/EMP division is thankfully less clear.

In recent years, the concept of “humanistic” medicine, as it is often known in North America, has shifted the focus of attention as far as the traditionally “non-clinical” aspects of medicine are concerned. A previous recognition that being a good doctor consisted of clinical competence, but also good communication and a sound ethical base and an understanding of psychology and sociology as applied to healthcare, has to some extent been superseded by a more integrated understanding. Recognising that the patient, or for that matter the professional colleague with whom you are communicating, is another human being helps to make it clear that what matters is one’s ability to recognise that *this* particular person is best spoken to in *this* way, while that person is not. And that good communication is therefore a matter of bringing to bear one’s own mature understanding of how to engage with someone else.

The best-known statement on humanistic medicine and professional development is perhaps Stern & Papadakis (2006), and there are a number of studies, particularly by Hafferty (see in particular Hafferty, 2018, a commentary on two curated issues of *Academic Medicine*), and Hodges et al. (2019) on assessment, which bring out the potentially profound nature of this shift of emphasis. The complexity of the issues here is best summed up by Castellani, Schimpf, and Hafferty (2013) (in a group including Hafferty), who speak of it, in fact, as a “complexity science”. The relevant context in the case of these leading figures is North American: in the US, “Project Professionalism” was set up by the American Board of Internal Medicine (2001) and has had a significant influence since. The key drivers in the UK, sadly, were perhaps the fallout from the Kennedy Report and Francis Report (*loc cit* for both) and the dark figure of the mass-murderer Harold Shipman looming over all.

From the linguist’s point of view, what is of particular interest here is the way in which a broad-based “professionalism” agenda fits in with what might be seen as a sociolinguist’s view of the world. There is, in other words, a great deal of research with a broader sociological basis, which is neither CC as we have characterised it nor is it quite EMP as this is normally thought of, that is, as an endeavour conducted by specialist language teachers with students wanting to improve their English. Such studies often (to quote Roberts & Sarangi, 2005) look at how “language constructs professional practice”. Language, one might say, is what enables the good doctor to present themselves as they would wish to be perceived and also to reflect on who it is they are (see e.g. Skelton, Wislin, & Ward, 2019).

Much of this work derives from, and draws its methodologies from, aspects of language study, particularly some form of discourse analysis, as the comprehensive reference list to the paper by Roberts and Sarangi (2005) just mentioned makes clear. There remains, however, the tricky issue of assessment.

There is a sense, however, that professional development is difficult, and perhaps impossible, to know about. How do we know what someone else is thinking? How can we tell if someone is unprofessional or a mass murderer, if they

seem perfectly capable of being likeable? This returns us to the argument about treating communication as skills, rather than involving (Salmon & Young, 2005) cognition, emotion and values. This makes assessment in particular of these issues extremely hard (Hodges et al., 2019; Veen, Skelton, & de la Croix, 2020). Note in this context that Wette and Hawken (2016) offer insight into the viewpoints of medical and language specialists in assessment.

4. CROSS-CULTURAL STUDIES

A key area for all linguists is how to create the appropriate impact in a cross-cultural environment – how, in other words, to develop communicative competence (Hymes, 1972).

The difficulty for international medical graduates (IMGs), for example, is that it is all very well to talk blithely of selecting the communicatively appropriate phrase (“Hi Mary” to a friend, perhaps not to the Medical Director) from a range of options. But, this implies a fairly profound knowledge both of language resources and when to deploy them. IMGs may not have this richness at their disposal. Successfully creating rapport is hard across cultures (see Yates, Dahm, Roger, & Cartmill, 2016: 107 – they argue, uncontentiously, that “rapport – or its absence – has very real clinical consequences”).

Managing this kind of difficulty – knowing how to cope in areas where we know we cannot really cope – is a difficult thing to do, and to teach. It is probably the case that most teachers of EFL, deliberately or otherwise, encourage students to learn and practise friendly but fairly formal language – language which is very unlikely to cause offence in other words – which is no doubt the best strategy.

More generally, there is a risk that what is regarded as culturally appropriate in one research setting (and the overwhelming amount of research has been done in the Anglophone west) may not be regarded as suitable elsewhere. To take an extreme example, an understanding of when and how it is appropriate to tell someone they are going to die is – to put it mildly – culturally specific.

It is unfortunate therefore that studies in this area are not more frequent. Liu and Corbett (2012) offer a thoughtful book-length study. Hoekje and Tipton (2011) offer a series of studies with substantial insight, focusing particularly on IMGs in the USA, but with a number of chapters specifically on issues in other parts of the world. Hoekje (2007) reports on a study on the problems of IMGs with standard medical discourse; and Yates et al. (2016) offer insight into the Australian context. There is also substantial interest, incidentally, in the issue of culture and differential attainment, particularly as it concerns groups from different cultural backgrounds, e.g. international students and IMGs. A detailed discussion is beyond the range of this review, but Roberts, Sarangi, Southgate, Wakeford, and Wass (2000) give a flavour of the problem as it was perceived some twenty years ago from a linguistic point of view – and as it is still perceived. For more recent work,

see in particular Katherine Woolf, e.g. Woolf, Rich, Viney, Needleman, & Griffin (2016), and her *BMJ* editorial (Woolf, 2020).

5. EMP/EAP

If CC is very heavily orientated towards spoken language, particularly in the doctor-patient consultation, EMP is heavily orientated towards the written word. There are good reasons for this – for many EMP students, the ability to access literature in English is by far the most important competence they need, and after all, why learn to consult in English if the vast majority of your patients have Russian as a first language? However, there are also bad reasons: after all, if you have a medical school with an international stream, then areas such as listening to lectures (not to mention giving lectures in English, as far as staff are concerned), participating in tutorials and so on are also of considerable importance. It is also the case that a sizeable majority of training programmes for healthcare professionals across the world includes obligatory ESP classes, and many of these professions – nursing, for example – do not need to access research in English but need to be able to use English as a lingua franca once qualified. The emphasis in these programmes should rarely be on the written word. Beyond that, it is worth considering – though people seldom do – that while the field of EAP/EMP may have an important but limited contribution to make, this is not true of Language for Academic and Medical Purposes (LAP/LMP). In other words, the linguist has a great deal to offer a medical student whatever the medium of instruction. Quite simply, French medical students studying in French need to know how to listen to lectures, to read and take notes, make a presentation – and for that matter, talk to a patient – all of which require a linguist's expertise.

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5.1. Genre analysis and the research article (RA)

There is, of course, no shortage of ESP work on the RA, all deriving from work by Swales. Swales & Feak (1994) is a standard text for use in class, for example. Yet, as we have argued above, the concept of Genre Analysis (GA) is almost unknown within Academic Medicine. In fairness, there are very few studies within EMP specifically of the structure of the RA in medicine (Nwogu, 1997 is the most extensive, while an unpublished PhD thesis [Davis, 2015] extended Nwogu's work, combining Swales's [1990] framework, interviews with subject experts and corpus linguistic techniques). However, there is a broad similarity here across the sciences, and it is not clear how much more mileage there is in this specific issue. Of more interest is to look at and explore other genres and sub-genres, such as research grant writing (e.g. Stenglin & Cléirigh, 2020) and other professions, such as nursing,

where research and research programmes in nursing (e.g. PhD or Doctor of Nursing Science [DNS]) have seen a significant growth in the last decade.

Two obvious areas for possible enrichment here have been hinted at. One is the link between the ESP tradition of GA on the one hand, and the CC tradition of reading and writing with an EBM perspective on the other.

And the second possibility is to be aware of the link – a constant worry in medicine – between research writing, rhetoric and fraud. The contemporary linguistic concept of *stance* (that is, the relationship between a speaker or writer and the propositions mentioned) is of significance here. There is research on the relationship between writers and their texts on the use of reporting verbs (e.g. Thompson & Yiyun, 1991). However, “stance” is a much more far-reaching term than this tradition implies: the collection of papers in Englebretson (2007) provides background.

It is certainly the case that an astute writer is fully capable of either gaining membership of the academy by demonstrating the appropriate stance, as well as a confident grasp of the genre conventions appropriate for a specific type of research – or, sadly, of sailing extremely close to the wind with the strength of claim made, as we saw above with the MMR scandal.

5.2. EMP teaching

After a brief flurry of interest in ESP in the first decade of the century, when a handful of commercially-produced EMP titles appeared (see, in particular, Allum & McGarr, 2008, Glendinning & Holmström, 2005, and McCullagh & Wright, 2008), publishers in the English language market lost interest in ESP. As a result, there are few commercially available materials for EMP of high quality. It could certainly be argued, however, that the specificity of most EMP programmes renders commercial materials – which are generally written for a regional market and a specific context and assume generous timetabling that is rarely borne out in reality – less than useful.

Some twenty years before commercial publishers were involved, however, practitioners had been discussing and writing about the teaching of EMP. Gotti and Salager-Meyer (2016), in their useful overview of the teaching of medical discourse in higher education, refer to the first journal devoted to EMP – the *EMP Newsletter* – which was launched in the mid 1980s from the University of Kuwait by linguists Nigel Bruce and Elizabeth Howell. The focus of the bi-annual journal and much EMP research at this time (and ESP research in general) was pedagogical, focusing on the nuts and bolts of curriculum design, needs assessment and quantitative analyses of lexis and grammar. Notwithstanding the fact that some research into EMP developed to become more empirical, more focused on generic or socio-pragmatic issues, the interest in the specifics of language continued, particularly – and for obvious reasons – among teaching practitioners and, by the

turn of the century, software programmes were being used to analyse language and extract key vocabulary into lists that could then be used for materials development.

Coxhead's (2000) general Academic Word List (AWL) was the first well-known list though questions relating to the AWL's suitability for specific disciplines, such as medicine, gave rise to an examination of the AWL's coverage of medical research papers (Chen & Ge, 2007). This, in turn, led to the creation of the Medical Academic Word List (MAWL) (Wang, Liang, & Ge, 2008) and Medical Word List (Hsu, 2013). These have been joined more recently by the New Medical Academic Vocabulary List (MAVL) (Lei & Liu, 2016). The MAVL is around half the length of its predecessor, but with greater coverage.

Earlier studies in academic medical discourse (and non-academic medical discourse in general) have favoured the physician/doctor over other health professionals and this is also seen in the kinds of word lists that have been produced, where medical students, i.e. doctors in training, are the focus. Nonetheless, academic word lists have also been produced for other healthcare professionals, including pharmacology (Fraser, 2009) and for nurses (Yang, 2015). Thanks to the ready availability of corpus software, much of it free, teachers have also been encouraged to produce their own words lists, specific to the context in which they teach. Generally, there has been little interest in book-length works devoted to professions other than medicine and nursing, but Crosthwaite & Cheung (2019), who investigate the language of dentistry, is a rare, and a very good, exception.

The last two decades has seen a proliferation of studies of medical discourse, both written and spoken discourse, that fall under the umbrella of Applied Linguistics. Many are interdisciplinary in nature, drawing upon fields such as anthropology, social science and medical education, while themes of interest include public health communication, the representation of health and disease in the media, the patient voice and metaphors of health and disease. Zsófia Demjén (2020) (reviewed in this special issue) is an excellent collection of studies that illustrate the various methods used when linguistics is applied to investigate a range of healthcare contexts. We do not present a discussion of the development of relevant studies from the field of Applied Linguistics in this paper however, not only because such a discussion would require a further 9,000 words but, as has been touched upon in the introduction, while studies from the field are of interest to applied linguists or those EMP practitioners who have a background in the discipline (many EMP practitioners do not), such studies may, sometimes, have limited surrender value for the EMP/CC practitioner.

A discussion of assessment in EMP is also beyond the scope of this paper but it is worth mentioning that a few quality materials are now starting to appear for the Occupational English Test (OET), which may be useful for EMP trainers irrespective of whether the students are exam candidates. The quantity – and quality – of materials will increase as the test continues to be accepted internationally. What is of particular interest is that, unlike many in-house, local or non-commercial tests of EMP, and unlike the IELTS exam, the OET is not a test of language *specifics* but a test of

communication skills in English of healthcare and medical professionals. All four skills are assessed, with equal weighting given to each, with texts, tasks and situations reflecting as closely as possible the variety of communicative interactions that occur in a medical context in an English-speaking environment. While reading and listening tasks are not profession-specific, the speaking and writing papers are: twelve medical professions are catered for by the OET, which is a rare acknowledgement that a good command of English is increasingly required for many healthcare professions, either as a foreign or second language.

The development of the internet has improved the availability of authentic materials which can be used to develop materials for language students, and while many sites require a subscription or are for enrolled students, the Covid-19 pandemic and the shift to online learning has seen many provide access, perhaps temporarily, for free (see <https://www.mededportal.org/> or <https://home.onlinemeded.org/>). There are some examples of doctor-patient consultation publicly available on YouTube, but not designed for EMP. Many of these are of poor quality, but not by any means all. Videos provided by University of Nottingham are also good, easy for the teacher to use as a resource, of interest to EMP teachers looking to try role-play and for OET preparation. Of course, authentic materials designed for native speaker medical students need to be adapted for use in the EMP classroom, and here, general ESP skills come into play.

Unlike EAP and Business English which emerged from the umbrella of ESP some years ago, EMP has been surprisingly slow in establishing its identity. EALTHY, the association for EMP teachers, was set up only in 2014, while the first conference dedicated to the field, the Teaching English for Healthcare Conference, was first held in 2013, nearly 40 years after the first conference on EAP in the UK took place. Unlike course content, the practical concerns of EMP teaching, e.g. needs analysis, course design or methodology, are unlikely to differ from those experienced by their fellow ESP teachers and are not specific to medicine. They are not discussed here.

Among innovations, it is interesting to see the growth of independent publishing in general, and it may be that this will be a fruitful area in future in the relatively small area (small compared to the great world of TEFL in general) which is EMP (see, for example, Whitby & Nickless, 2019, reviewed on the EALTHY website (<https://ealthy.com/>)). More general sharing of resources seems likely to increase into the future, and perhaps in particular in a post-Covid world – for example, the UK Council for Clinical Communication (see UK Council for Clinical Communication website) has a substantial amount of video materials of shared cases for teaching purposes and the like available for members. Similarly, commercial, well-designed digital training for EMP has hitherto been a niche, but a post-Covid world may well see a growth in this area.

Other areas still sound innovative, although the proposals they advocate have been around for a long time. Belcher (1994) advocated an apprenticeship style model for academic literacy, and Lee and Swales (2006) spoke of the possibility of

students creating their own corpora to help them with writing. Encouragingly, Chen and Flowerdew (2018) report on a major project which does just this. Friginal (2018) looks at a variety of ways in which corpus-based work can be made use of in the classroom.

There are two issues which should be mentioned as part of a wider context. One of these is the predominance of the Anglophone world in medical research (and for that matter, in LSP research, too), and the concerns this might raise. A leading figure in this area is Salager-Meyer, in a series of thoughtful articles (see e.g. Salager-Meyer, 2008, 2014a). Belcher (2007) offers a fascinating insight into the publication process as it pertains to what she calls “under-resourced off network scholars” – relevant reading for anyone seeking to get their work, in English, to an international audience. ElMalik and Nesi (2008) speak of the differences, specifically in medical journals, between published work from Sudanese and British writers.

Finally, there is a strong tradition of the way in which narratives in medicine have developed over time. Salager-Meyer (see Salager-Meyer 2014b and 2014c for a very brief overview) is once more a leading figure here, with a great deal of her work in fact having a diachronic focus. It is of significance for anyone with an interest either in the development of epistemology in medicine, or in the way that case reports have changed, and have also stayed the same.

6. CONCLUSION

It may be that we can expect a continuing sense of overlap between teachers and researchers in EMP/LMP and CC. It may be that the suggestion put forward here that the minutiae of genre analysis, particularly of the RA, will seem less appealing to new researchers, and that as far as teachers are concerned, they will become increasingly eager to understand the rationale of the structure of the RA (its epistemology, its roots in EBM). Perhaps also, speaking as researchers, we can hope for a better understanding of the hurdles which many individuals eager to explore the world of research must face. It may even be that we can help any of our students with an interest in research to develop; and even that we can help ourselves to develop as contributors to the field. Finally, as teachers and course writers, it may be that the published work to date – the literature, but also the online contributions – will help us to develop as teachers, and to have the interest to motivate ourselves to do new things, and to motivate our students, too.

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