

Gained in translation

Science at the multilingual crossroads

Welcome to the second issue of the translation section of *TWS*, which brings to you both academic and entertaining tones. In their article on a semi-bilingual language guide developed on the basis of their many years of experience as medical translators and editors, Michael and Ingrid Friedbichler introduce KWic-Web, a German-English dictionary that organises medical terminology in a modular fashion based on medical specialities and subspecialties.

Extracted from a huge corpus, the strength of this innovative approach to compiling a dictionary is that it provides 'Key Words in Context', embedding medical terms and phrases into full sentences taken from the medical literature and networking them into a semantic 'Web'. The compilation is designed to fulfil the dual purpose of supporting English language learning for native speakers of German and functioning as a bilingual medical dictionary, which, thanks to its semi-bilingual structure, also perfectly lends itself to being expanded to languages other than German. To take a glimpse of what the dictionary looks like in action, turn to page 46 for Laura Russell's review of both the print and electronic versions of KWic-Web.

One passage in the article by Friedbichler and Friedbichler caught my attention, i.e. the one suggesting that both medical researchers and health care professionals in general need to be bilingual in their respective domains. Most will agree that non-Anglophone scientists and those working in academia should be bilingual—even though I wonder whether the call for 'full' bilingualism does not place the bar a bit too high.

The case, I believe, is less clear for other health care professionals, such as the general practitioner around the corner, community-based doctors in private practice whose number one task is to treat and guide their patients and whose primary means of communication is—and will remain—their vernacular language. In view of the high administrative, technical, and social demands placed on today's office-based physicians operating in health care

systems with dwindling resources, expecting them to also master a foreign language well enough to enable them to stay abreast of the latest in their fields is asking for much. Thus, continued medical education (CME) appears to be a classic area where vernacular language should continue to have its place, calling on industry and professional organisations to make as much CME and product information material as possible available in each country's local language(s), much of which will have to be made accessible through translation.

This question ties in nicely with the book review by Françoise Salager-Meyer on page 47, asking whether science should succumb to the preponderance of English as the Tyrannosaurus rex of scientific communication or a point should be made of promoting linguistic diversity (*cf.* the translation section in the previous issue of *TWS*). The 20th Review Volume of the *Association Internationale de Linguistique Appliquée* (AILA) entitled 'Linguistic inequalities in scientific communication' takes a comprehensive look at the question of language choice in science from the point of view of what are referred to as 'users of English as an additional language'. Françoise briefly touches on the story of a bilingual Chinese-Hong Kong English doctoral student who, even though English is one of his native tongues, is still faced with difficulties publishing in English.

Therefore, daring as communication in even a single language can be, every additional language compounds the challenge, as also demonstrated by the brief anecdote on medical jargon in the jazz club below and the photos on page 66. The culture gaps are there—as, thankfully, are the many dedicated linguists helping to fill them and building bridges to overcome them.

Gabi Berghammer

gabi@the-text-clinic.com

Medical jargon in the jazz club

The other day, I went to a Viennese jazz club with a friend of mine to see the American jazz singer and pianist Diane Schuur—an effervescent voice and a great show. As Diane was conversing with the audience, she mentioned that she was going to be 55 in just a few days. She went on to reminisce how, before her 50th birthday, she was keenly looking forward to going to the supermarket to get Centrum Silver® for the first time—one of the sweet little remarks she made that evening. This time, however, only three people in the audience got the joke—and I am positive that the other two also had a healthcare background. Why? First, unlike in the US, Centrum® in Austria is not sold in

supermarkets but at pharmacies only. Second, the formulation for those aged 50 or above is not called Centrum Silver® but Centrum Generation 50+®.

The artist on stage may have wondered why her brief narrative failed to provoke a response. That's how a medical joke in a jazz club can fall straight into a yawning culture gap.

Gabi Berghammer

gabi@the-text-clinic.com

References:

www.dianeschuur.com
www.centrum.at
www.centrum.com



The promise of 'KWIC-Web'

by Michael and Ingrid Friedbichler

How innovative semi-bilingual language guides can help non-Anglophone biomedical professionals master the English language skills they need for international communication.

The growing demand for professional communication in the global village

In today's world, medical researchers and health care professionals around the globe are increasingly faced with the need to have not only a passive but also an active command of professional English, which has become a skill essential for their careers [1,2,3,4]. After all, more than 80 per cent of all medical literature is currently published in English [5]. Therefore, it is impossible to keep abreast of new developments in the field without being able to read and understand medical articles written in English [6,7,3]. Yet the passive language skills may be relatively easy to master compared to the active ones, i.e. writing research papers for publication in international journals and presenting papers in English at conferences. In both contexts, the language proficiency required for clear, precise and competent communication must be close to that of a native speaker of English to allow for complex ideas and intricate relationships to be conveyed convincingly [5].

Today's need for health professionals worldwide to become fully bilingual

Some countries have adopted language policies which stipulate that, from the first years at university, all professional training and discourse should take place in English. This approach, however, is likely to have adverse effects on the national language. Its terminology might be doomed to become outdated, starved or even extinct, which would be a heavy price to pay, not only for large language communities such as the German-, Arab-, or French-speaking nations [1,2,3,8,9]. The only solution to this post-Babylonian dilemma of our progressively globalising world is for health professionals worldwide to start learning the universal language of science and research, which today is undoubtedly English [3,4], while at the same time not neglecting their national languages [1,9]. This means that—in order to keep up to date—scientists need to be fully bilingual in their domain.

Lacking opportunities and resources for professional English language learning

For many years, non-Anglophone scientists and health pro-

fessionals (non-native-speakers, NNS), particularly the French, were somewhat reluctant when it came to professional communication in English. In the German-speaking countries, the notion that the level of English one has picked up at secondary school is sufficient for professional communication was widespread in the scientific community for a long time. Fortunately, there is now a growing perception of the fallacy of this myth.

Although English for Medical Purposes (EMP) courses are provided at numerous universities in Europe today, most of these courses are offered on a voluntary basis without a well-developed curriculum and standardised achievement levels for students. To our knowledge, medical faculties in France [10], Poland [11] and Serbia [12] are currently the only ones in Europe that offer compulsory EMP courses, while standardised EMP testing is still in the early stages of development (first trial runs are under way in Hungary [13] and at Tokyo Medical University [14]). For the vast majority of NNS health professionals in Europe, learning and mastering the language skills they need for international communication, therefore, remains a private affair and calls for personal initiative, self-study and learning-by-doing.

Looking for a way forward

Our involvement in EMP teaching, medical translation and editing over the past 30 years has made us progressively aware of these needs, challenges, and deficiencies. It was this background that provided the incentive to develop new materials that are comprehensive and, at the same time, specific enough to help NNS from different medical fields acquire the English language skills they need in their professional setting step by step.

On the basis of our experience in the classroom and countless face-to-face editing sessions with medical writers, we have developed a new tool for professional language learning in medicine, which we have dubbed *KWiC-Web* [6,15]. It is essentially a learner's dictionary in which the medical lexicon is organised in a modular fashion (Figure 1). Its building blocks are based on medical concepts, which makes it possible for users to familiarise themselves with the terms and expressions that are relevant to their fields of specialisation. As each module comprises a limited number of terms, *KWiC-Web* offers all users the opportunity of building and activating their professional English at their own pace and according to their individual needs.

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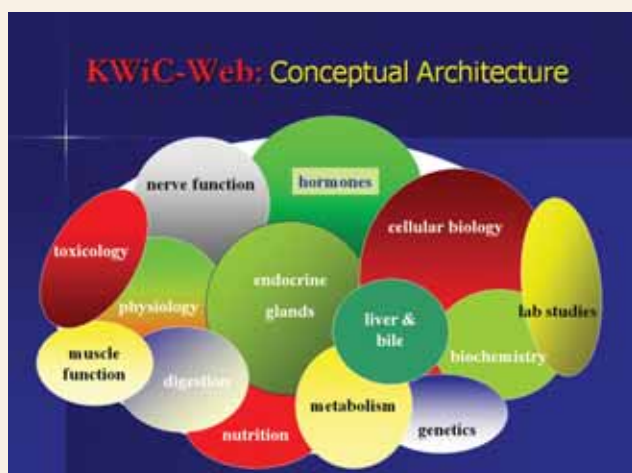


Figure 1 In KWic-Web the medical lexicon is arranged in a modular fashion. Each of the 142 units covers the terminology of a particular medical field, concept or word field.

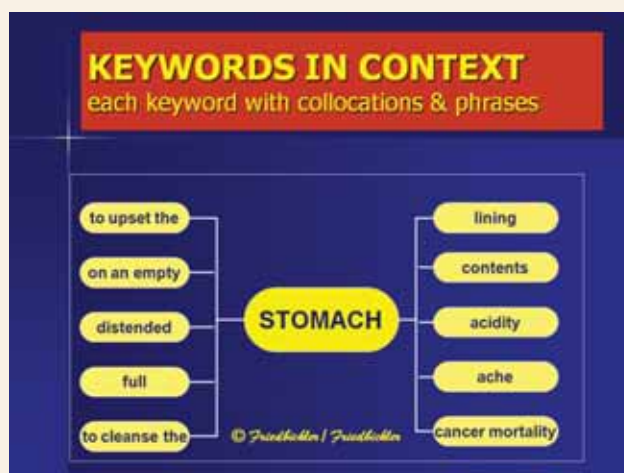


Figure 2 One of the unique features of KWic-Web is the wealth of collocations and phrases given with the keywords, which makes it the first collocational dictionary in the field of medicine.

The KWic-Web concept: Language acquisition in a professional context

KWic-Web is an innovative lexical resource which can be used as an EMP language activator on the one hand, and as a bilingual medical dictionary on the other. *KWic* stands for 'Key Words in Context', while *Web* refers to the interconnected network of topic-related medical glossaries of terms that forms the backbone of the concept.

► **Keywords.** In *KWic-Web*, medical terminology is presented in 142 modules (Units) in which medical terms, clinical expressions and phrases related in meaning are organised in a fashion comparable to the arrangement of nerve fibres in a plexus. Thus, *KWic-Web* reflects the way words are stored in the so-called mental lexicon of the human brain. Each module comprises the high-frequency terms of a medical field in a meaningful context of related terms and concepts. The keywords range from health-related general English expressions, e.g. *cough* or *tooth decay*, to highly specific terminology, e.g. *initial stab incision*, an important term in minimally invasive surgery.

► **Contextualisation.** *KWic-Web* is much more than a mere list of bilingual equivalents. It is a well-known fact that embedding medical terms in appropriate context constitutes the most challenging task for NNS health professionals, medical copy editors and translators. Yet effective language acquisition is impossible if the terms are stripped of their context—just translating isolated words is often less than useful. This is why contextualisation is the name of the game in EMP, medical lexicology and terminography. Therefore, the headwords in *KWic-Web* are presented not only with their translations but also in the typical context—English explanations, authentic sample sentences as well as commonly used collocations and phrases (Figure 2).

Corpus-based materials guarantee authenticity

The English keywords, sample sentences and collocations were collected from an electronic corpus of representative medical texts containing more than 20 million words. Great care was taken to make sure that all texts came from authentic and professionally edited sources and were authored by native speakers.

Since *KWic-Web* is based on computerised text analyses of the frequency, usage and context of specific terms and phrases, the data collected are not only up-to-date but also reflect the way the terms are actually used among professionals.

Language guide and lexicon in one

KWic-Web combines the functions of a monolingual medical dictionary which provides definitions in English, with those of a domain-specific glossary, a thesaurus and a bilingual medical reference book.

Each unit comprises 200-400 morphologically and/or semantically related terms, phrases and collocations which are cross-referenced with other units. This way a knowledge data bank is created that is easy to remember and facilitates learning because in each unit medical information is networked into a semantic web of terms, phrases and lexical clusters. *KWic-Web* includes the key terms and phrases encountered every day in clinical settings or when studying the literature on the subject. Users can find familiar household terms and those they have heard before but do not recall any more next to words they have not encountered before, and *KWic-Web* illustrates how they are interconnected. This helps to create subconscious associations which significantly enhance long-term memory and recall. Working with *KWic-Web* resembles studying thousands of pages by diagonal reading—but owing to its highly condensed format, *KWic-Web* is more effective and quicker.

The promise of 'KWIC-Web'

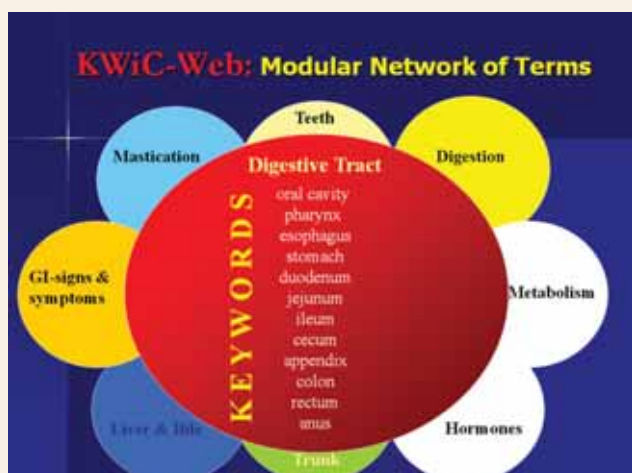


Figure 3 Within the modules, the keywords are arranged in a conceptual fashion (rather than alphabetically). In the module on the digestive tract, for instance, the keyword list follows the path of the food through the alimentary canal. Related modules covering the terminology on digestion, teeth, mastication, etc. are cross-referenced.



Figure 4 The language of medicine is not restricted to medical terms but includes several other registers such as professional jargon (e.g. sed rate), clinical expressions (e.g. swelling) and informal words typically used by laypersons (e.g. womb, blackout). In addition to providing register labels for the keywords, KWIC-Web is also particularly strong in its coverage of the overlap between technical terms and general health-related English.

The modular structure of KWIC-Web

The way medical terminology in *KWIC-Web* is presented in concise, well-integrated modules (units) very much reflects the structure of medicine with its specialties and subspecialties (Figure 3).

Within the modules, the terms are arranged in word fields which are structured according to medical criteria. Similar to a well-organised textbook, there is a logical order from basic, more general terms and word fields to progressively more specific ones. As in each unit the complexity of the entries increases, users can determine for themselves at which depth they want to study an entry or unit and decide to go on to the next one, if they feel that things are getting too specific. In addition, the arrangement of the terms in semantic concepts (rather than in alphabetical order) results in coupling effects, which help to increase the efficiency of *KWIC-Web* by promoting acquisition of new terms and phrases, above all among learners who are familiar with the terms in their first language (L1) already. The modules have been designed so that the essential concepts of each medical field are covered and gaps and overlaps between related modules are minimised.

In many medical fields, there are standard clinical situations in which specific phrases are used again and again. These are embedded in sentences and translated into the user's L1.

The KWIC-Web entry structure

The entries are multi-layered and consist of up to 11 components:

- the English headword (= keyword)
- explanations of the headword in easy-to-understand English
- semantically related terms (synonyms, antonyms, hyper- and hyponyms of the keyword)

- morphologically related words connected to the headword and its related terms
- authentic sample sentences from the medical literature
- collocations, phrases and multi-term expressions (MTEs)
- explanatory notes on special usage, multiple meanings, confusable words, etc.
- grammar and linguistic register labels (Figure 4)
- translation equivalents of the keywords and their related terms in the user's L1; words or passages in the context which may be difficult to understand for NNS users or are particularly relevant have been translated as well
- pronunciation aids for headwords and difficult context words

The lookup function

Similar to a bilingual dictionary, KWIC-Web can also be used for looking up words. This way of using the book is particularly valuable for medical writers, editors and translators who are hunting for the appropriate medical expression. All keywords and their translations are accessible via alphabetical registers, which enable the user to search for medical terminology in context. In addition, the medical abbreviations and acronyms provided in the entries are accessible via a separate register.

Target groups

Owing to the rich language material and the elaborate structure, *KWIC-Web* represents an effective tool for a number of user groups in the health care professions, provided they have an intermediate command of general English (at least B1 level of the Common European Framework for Languages):

- **medical students and postgraduates**
- **physicians and medical researchers** (clinicians & scientists)

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- **paramedical staff**
- **medical translators**
- **copy editors** working with English texts

Irrespective of whether these users have to familiarise themselves with new medical fields or are searching for specific multi-term expressions, collocations or phrases, *KWiC-Web* provides a wealth of highly condensed linguistic and medical information for which they would otherwise have to start tedious searches online or consult a series of different reference works. Although no dictionary can ever claim to be complete, *KWiC-Web* contains a multitude of phrases, collocations and multi-word expressions which are commonly used in medicine but have not previously been described in other resources.

Even though NNS health professionals are the main target group, these features—as leading colleagues in Britain and the US have confirmed [16,17]—make *KWiC-Web* a treasure trove also for medical linguists, translators and editors who are native speakers of English.

'e-KWiC'—the quick digital KWiC-Web

To facilitate and speed up access and searching, the *KWiC-Web* data have also been published in digital form on CD-ROM [18]. A very useful feature of the software is that users can 'turn off' practically any component in the entries, thus hiding data that are not relevant at the moment to enhance the focus on points of interest. Yet, the most powerful instrument of *e-KWiC* is undoubtedly the possibility of searching the full text electronically.

A future 'Rosetta Stone' for EMP?

To date *KWiC-Web* materials, including a volume on the language of dentistry [19], are available only for German-speaking users. However, as was already pointed out, the need to master professional English is a global one. Owing to their semi-bilingual structure (i.e. only keywords and selected terms and phrases in the context are translated), the *KWiC-Web* materials can be adapted to the needs of medical professionals in other countries with relatively little effort by simply replacing the original translations with equivalents in other languages. At the same time, the semi-bilingual approach has the advantage of strengthening the user's L1 [1,9]. As we are writing this, a Dutch print edition of *KWiC-Web* is being completed [20] and negotiations about *KWiC-Web* editions with translations in other languages and/or covering selected medical fields are under way. Hence, in the not too distant future, *KWiC-Web* materials will be available to speakers of other languages as well.

Michael Friedbichler

EMP-Lecturer,
Innsbruck Medical University, AUSTRIA
Freelance Medical Editor
med-english@i-med.ac.at

Ingrid Friedbichler

EMP-Lecturer,
Innsbruck Medical University, AUSTRIA
Lecturer for Medical Translation
Department of Translation Studies
Innsbruck University, AUSTRIA
Freelance Medical Translator
M.I.Friedbichler@uibk.ac.at

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A jolly congress in Wien (Vienna). The exhibition organisers forgot that *Wein* means *wine* in German. (*Messe* means *exhibition*).



This is a photograph of some instructions on a packet of popcorn. The popcorn is made by placing the packet in the microwave oven, and turning the oven on of course. The question is which way do you place the popcorn packet in the oven? If you were Czech, Slovakian, Polish, Hungarian or English (first 4 languages and last language) you would place the packet in the oven with 'This side down'. But if you happen to be German you would read 'This side up' in the fourth line.

Research journal with sexy cover

The German research institute Max Planck ran into some embarrassment at the end of last year when it published a special China issue of its journal *Max Planck Forschung*. Their idea had been to publish a Chinese poem on the cover but it transpired that the poetic words came from a strip club poster. One translation¹ runs as follows:

“We spend a lot of money to have [girls] to be in house during daytime. Our mama sans, Ga Mei and KK, present you with young and beautiful girls. Stylish and good mannered beauties from the North [of China]. Sexy and hot, young housewives. Flirty and enchanting, available today.”

1. From <http://www.smh.com.au/news/home/technology/how-eminant-science-mag-got-hit-for-sex/2008/12/11/1228584998876.html>

The original cover of *Max Planck Forschung* (left) and the replacement cover (right) published after the editorial office became aware that they had published words from a strip club poster.

Sorry: Change in nuance

Matt Frei, the BBC news correspondent in Washington, has noticed that a lot of people are saying ‘sorry’ nowadays. He points out that while in the Bush era ‘sorry’ was for wimps the new era is defined by a manly gusto for apologia. Using headings such as ‘Apologiser-in-chief’ (Barack Obama) and ‘Cancer of insincerity’, Frie lists recent apologies and considers the Pope’s initiative in the reissuing of indulgences.

Source: http://news.bbc.co.uk/2/hi/programmes/world_news_america/7882652.stm

Parkinson’s Law of Medical Research

Successful research attracts the bigger grant which makes further research impossible (*The New Scientist* 25th January 1962)

Professor Parkinson explained, “In accordance with this law, we mostly end up as administrators. We should have ended as administrators, in any event, remember, had we never done any research.”