

What Should Teacher and Student Know in the Teaching and Learning of EMP (English for Medical Purposes)?

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Abstract

EMP (English for Medical Purpose) is a part of ESP (English for Specific Purpose). It is highly needed for students having medical background since ESP has absolute characteristics as follows: (1) ESP is defined to meet specific needs of the learner, (2) ESP makes use of underlying methodology and activities of the discipline it serves, (3) ESP is centered on the language appropriate to these activities in terms of grammar, lexis, register, study skill, discourse and genre (Brunton, 2009) and it is usually designed for adult learners at an intermediate or advanced level (Daiva Civilkienė, 2008).

1. Introduction

EMP dealt with will draw upon the combined disciplines of language teaching/learning, biomedical communication and descriptive linguistics. According to Wright, 2001 the first contributory area closely relates to that branch of ESP which deals with medical English (need analysis, teaching materials, courses, etc); the second involves issues in medical sociolinguistics and discourse analysis (many contemporary themes taken up in discourse analysis and the ethnography of speaking have focused on topics of common interest and with potential implications for EMP); the third contributory area is that of modern medical practice that deals with the largely stylistic--broadly speaking—or linguistic aspects of biomedical communication (e.g: stylistic and grammatical problem in modern medical writing, ‘good style’ in writing and public speaking).

This paper examines on some prior assumptions that a teacher who teaches EMP does not need to enhance his/her knowledge in medical science, only in teaching expertise. I do not agree with such kind of opinion since, in Indonesia, students still consider that teacher is a center-based knowledge for the teaching-learning process. So I argue that the teacher who wants to teach EMP, he or she should know about students' prior knowledge on medical science besides language acquisition that student has mastered, so teacher can combine them in enhancing students' comprehension on both acquisitions and apply them well in designing syllabus. For the students, they should exposure their ability and capability in mastering language, especially in EMP.

2. The Field of EMP

Needs analysis is neither unique to language teaching nor within language training but it is often seen as being the corner stone of ESP and leads to a very focused course (Dudley-Evans & St. John, 1998: 122). Although there are various ways of interpreting needs, the concept of learner needs is often interpreted in two ways:

- ❖ as what the learner *wants* to do with the language (*goal-oriented* definition of needs) which relates to terminal objectives or the end of learning; and
- ❖ what the learner *needs* to do to actually acquire the language (a *process-oriented* definition) which relates to transitional/means of learning.

Traditionally, the first interpretation was widely used and accepted. However, in today's globalised teaching and learning contexts, EMP courses tend to relate to

both at the same time but tend to focus on the process-oriented approach in aligning student's needs with their present working area.

The term 'English For Medical Purpose' or EMP refers to 'teaching of English for doctors, nurses, midwife and other personnel in the medical professions'. In Medical Humanities (<http://mh.bmj.com/>) stated that EMP involves the teaching/learning of English for utilitarian purpose, and identifiable goal—typically, the successful performance of work or the optimum effectiveness of medical training. In grammar term, EMP is (a) designed to meet the specific English language needs of the medical learner (e.g: nurse, GP, dentist, etc), (b) focuses on themes and topics specific to the medical field; (c) focuses on a restricted range of skills which may be required by the medical learner (e.g: for wrting a medical paper, preparing a talk for medical writing, etc)

3. Characteristics of English for Medical Purpose (EMP)

Terminology

The medical terms has its own register. In many cases medical terms originate from Greek and Latin, a fact which reflects the history of medicine. Physicians in Ancient Greece or Rome communicated with their community in their native language. Medieval physicians used Latin as a means of International communication, and Latin remained the language of Medicine well into the 18th century. Later on there were attempts to vulgarize texts, but by and large, Latin remained the standard of the professional elite. Since medical translation is based on specific cognitive knowledge which is mainly concerned with information, special care is needed when two or more fields overlap. The terms can have different meanings, making it more difficult for the student to understand the text. Newmark (1988: 152-153) distinguished

the characteristic of technical language used in medical terms/vocabulary, namely:

- Academic. This includes transferred Latin and Greek words associated with academic papers, e.g: *'pleghmansia alba dolens'*
- Professional. Formal terms used by experts, e.g: *'epidemic parotitis'*, *'varicella'*, *'scarlatina'*, *'tetanus'*.
- Popular. Layman vocabulary, which may include familiar alternative terms, e.g: *'mumps'*, *'chicken-pox'*, *'scarlet fever'*, *'stroke'*, *'lockjaw'*.

Medical Phraseology

Phraseology is given a sufficient linguistic competence in the working language. It concerns the description of concrete phenomena, the difficulty in this context concerns extra linguistic factors such as the type of text. Medical phraseology comprises a very limited group that can be divided into 4 (four) categories:

- nominations (e.g: *malignant tumor*)
- irreversible binominals (e.g: *supply and demand*)
- collocation (e.g: *to induce an abortion*)
- routine formulae (e.g: *approaching vessel please acknowledge*)

Acronym

Medical texts are known for numerous acronyms, which can be divided into two major groups: general and author-specific. General acronyms are readily found in the specialist literature. Author-specific acronyms are very often complicated to understand unless explained by the author. These difficulties should, if possible, be dealt with by the authors themselves. Otherwise, the clients should be consulted and

their attention drawn to the potential pitfall, especially if the text contains author-specific neologisms.

1	SIDS	Sudden Death Infant Syndrome
2	AIDS	Acquired Immuno Deficiency Syndrome
3	TB	Tuberculosis
4	Pt	Patient
5	EDD	Expected Date of Delivery

Eponyms

Eponyms are proper names used to designate syndromes, illness, research-related matters and devices because proper names usually need no translation. However, a syndrome (for example) may have been discovered simultaneously in various countries by different people and may therefore be named after the person who discovered it in different locations. According to the typology developed by Van Hoof (as cited in Teaching Medical translation by Karin Brand, 2006), there are three types of eponyms:

- Identical in source language and target language
- Different in source language and target language
- Cases where there is no equivalent eponym in either source language or target language

Prefixes and Suffixes in Medical Text

A prefix is a group of letters added before a word or base to alter its meaning and form a new word. In contrast, a suffix is a group of letters added after a word or base. A prefix is an affix which is placed before the root of a word. Particularly in the study of languages, a prefix is also called a performative, because it alters the form of the words to which it is affixed. Here are the examples of prefixes in Medical text:

No	Prefix	Meaning	Example
1	a-, an-	Not, without, lack of	Anemia (lack of blood)
2	Ab-	Away from	Abductor (leading away from)
3	Ad-	To, near, toward	Abductor (leading forward)
4	Ana-	Up, apart, toward	Anatomy (to cut away)
5	Ante-	Before	Antecubital (before elbow)
6	Ap-, apo-	Separation from, derived from	Apobiosis (death of a part)
7	Aut-, auto-	Self	Autoanalysis (self analysis)
8	Bi-	Double, two	Biarticulate (double joint)
9	Cata-	Down, under, against	Catabolism (breaking down)
10	Contra-	Opposed	Contralateral (opposite side)
11	De-	From, down	Dehydrate (remove water from)
12	di-	Two, twice	Dicephalous (two headed)
13	Dys-	Difficult, bad, painful	Dyspnoea (difficult breathing)
14	Endo-	Within	Endocranial (within cranium)
15	Im-, in-	Not	Implant (insert into)
16	Inter-	Between	Intercostal (between ribs)
17	Micro-	Small	Microbe (small organism)
18	Peri-	Around	Periosteum (around bone)
19	Poly-	Excessive	Polydipsia (excessive thirst)
20	Post-	After	Postnatal (after birth)
21	Pre-	Before	Preoperative (before surgery)
22	Re-	Backward	Regurgitation (vomiting)
23	Sub-	Under	Sublingual (under the tongue)

In linguistics, a suffix (also sometimes called a *postfix* or *ending*) is an affix which is placed after the stem of a word. Common examples are case endings, which indicate the grammatical case of nouns or adjectives, and verb endings, which form the conjugation of verbs. Particularly in the study of Semitic

languages, a suffix is called an afformative, as they can alter the form of the words to which they are fixed. In Indo-European studies, a distinction is made between suffixes and endings. Suffixes can carry grammatical information (inflectional suffixes) or lexical information (derivational suffixes).

Example:

Cardiology → *study of heart*

Comes from: *root* → *cardi* → *heart*

sufiks → *-logy* → *study of*

When suffix begins with a vowel, then the last vowel of the root (the base) was removed before adding the suffix.

example:

Carditis → *inflammation of the heart*

Comes from: *root* → *cardi* → *heart*

sufiks → *-itis* → *inflammation*

Here are the examples of suffixes in Medical text:

No	Suffix	Meaning	Examples
1	-al, -ic, -ous, -tic	Pertaining to, relating to	Cardiac (pertaining to the heart) Neural (pertaining to nerve) Delirius (relating to mental disturbance)
2	-algia	Pain	Neuralgia (pain in nerve)
3	-ate, - ize	Use, subject to	Impregnate (to make pregnant) Visualize (use imagination)
4	-cele	Proturtion (hernia)	Cystocele (bladder hernia)
5	-centesis	Surgical puncture to remove fluid	Thoracentesis (form a chest cavity)
6	-cyte	Cell	Leukocyte (white blood cell)
7	-ectomy	Cutting out	Lobectomy (of a lobe)
8	-emesis	Vomit	Hyperemesis (excessive vomiting)

9	-form, -oid	Resembling, shaped like	Fusiform (spindle shape)
10	- genesis	Beginning process, origin	Ovoid (egg shape)
11	-ites, -it is	Inflammation	Tympanitis (drumlike swelling of abdomen)
12	-logy	Science, study of	Biology (science of life)
13	- oma	Tumor	Carcinoma (malignant growth)
14	-penia	Deficiency of, lack of	Leukopenia (white blood cell)
15	-phobia	Abnormal fear of	Photophobia)(of light)
16	-pnea	Breathing	Apnea (absence of breathing) Dyspnea (difficult breathing)
17	-ptosis	Prolapse, displacement	Nephrotosis (prolaps of kidney)
18	-rrhage, -rrhagia	Excessive flow	Hemorrhage (excessive blood flow)
19	-rrhea	Flow or discharge	Rhinorrhea (nasal discharge)
20	-stomy	Surgical opening	Colostomy (cutting into bladder)
21	-tome	Instrument for	Neurotome (dissecting nerves)
22	-tomy	Cutting or incision	Cytotomy (of urinary bladder)

3. What should teacher know in teaching English for Medical Purpose (EMP)

Teaching ESP, especially English for Medical Purpose, is aimed at developing students' skills of professional communication in English depending on the area of their professional field. It means that such teaching should be connected to students' particular specialization. Therefore, English for specific purpose includes specialized program which are designed to develop the communicative use of English in a specialized field of science, work or technology.

Students learn English for Medical Purpose and the purpose of EMP is to prepare a specialist able to use a foreign language as the main communications means in communicating and cooperating with foreign partners in the professional field and real-life situations. Therefore, teaching/learning EMP is said to be specialty-oriented as it is submitted to specific (professional) needs of the students. Making use of a foreign language the student acquires profound professional knowledge as well. Thus, it is difficult to determine where the language learning ends and where subject learning starts or vice versa. So, EMP's teacher should know about:

✚ Material Development Procedures

According to Harsono, 2007 the steps or procedures of material development includes the design, implementation, and evaluation of language teaching materials. Dick and Carey in Harsono suggested ten components of systems approach model, there are:

- a. Identify instructional goal
- b. Conduct an instructional analysis
- c. Identify entry behaviors and characteristics
- d. Write performance adjectives
- e. Develop criterion –referenced test items
- f. Develop instructional strategy
- g. Develop and or select instructional materials
- h. Design and conduct the formative evaluation
- i. Revive instruction
- j. Conduct summative evaluation

Each of these components is closely related to each other in the system approach model. According to Harsono, 2007 to design or develop an accurate teaching material, each component in the system has to be considered. In other words, suitable teaching-learning materials should be able to fulfill each of the other components in the system approach. The teaching or learning materials

already develop for specific target learners have to be implemented in the real teaching learning- materials in the real situation in this step is meant to try the teaching-learning materials whether they are suitable for the target learners. If not, then the teaching-learning materials have to be revised based on the data obtained from the try out to the target learners. This is called the evaluation step.

✚ Learning activities should focus on the content that is important to students therefore, they should be allowed to choose the learning content. The relevance of andragogy to the teaching of Medical English cannot be ignored. It is the writer's belief that Medical English cannot be taught at the level of or in the same methods of basic English language teaching. Career-specific, highly technical language must be contextually based.

✚ Medical English is taught from the perspective of medicine and health care first and foremost while reinforcing vocabulary acquisition, grammar and structure secondly. Teachers do require special knowledge of medicine to teach EMP and also an interest in the language needs of the medical profession and a grasp of the teaching techniques of the communicative approach.

✚ Written and oral English skills should be taught through intensive and integrated activities. Teaching writing and speaking should be integrated with reading and listening to content that is meaningful to the learners. Please remember that grammar instruction and error correction do not bring about improved precision or smoothness in expression.

✚ Teaching communication skills in EMP is essentially about facilitating learning so that your students can develop flexibility and confidence. If

teacher can create realistic situations where students actively use their medical knowledge, teacher will give them very real skills practice for their place of work. One way to achieve this is through role-play exercises. Give the student a chance to have the role playing as health care workers and patient (a doctor and patient, nurse and patient or midwife and patient) in a real life situation (in lab or in mini hospital).

- ✚ The goal of curriculum and curriculum framework must be developed to meet the needs of the educational institution, the students, relevant legislation, and any other stakeholders such as employers of the students.

Dudley-Evans and St. John (1998: 145) discuss criteria for ESP course design and put forward useful steps for ESP (especially for EMP) teachers and course designers to consider. They list these concerns surrounding course design in the form of the following questions:

- ✚ Should the course be *intensive* or *extensive*?
- ✚ Should the learner performance be *assessed* or *non-assessed*?
- ✚ Should the course deal with *immediate needs* or with *delayed needs*?
- ✚ Should the role of the teacher be that of the *provider* of knowledge and activities, or should it be as *facilitator* of activities arising from learners expressed wants?
- ✚ Should the course have a *broad* focus or *narrow* focus?
- ✚ Should the course be *pre-study* or *pre-experience* or *run parallel* with the study or experience?
- ✚ Should the materials be *common-core* or *specific* to learners study or work?

- ✚ Should the group taking the course be *homogenous* or should it be *heterogeneous*?
- ✚ Should the course design be *worked out by the language teacher* after consultation with the learners and the institution, or should it be *subject to a process of negotiation* with the learners?

By considering at these questions prior to planning course design, the EMP teacher can be better prepared more, so if the teacher has to balance out some of these parameters which are linked to institutional and learner expectations (Dudley-Evans and St. John, 1998).

4. What should students know in learning English for Medical Purpose (EMP)

Language can only be properly understood as a reflection of human thought processes. Hutchinson and Waters, 1993: 39 say that language learning is conditioned by the way in which the mind observes, organizes and store information. In other words, the key to successful language learning and teaching lies not in the analysis of the nature of the language but in understanding the structure and processes in mind. For the student who wants to master the EMP, they should be aware of what they really want to develop, so they:

- a. should provide the good medical knowledge. The right blend of what teacher should teach for EMP will give result.
- b. must deal with the authentic material/documents to have a better understanding about EMP, especially they have to exposure to reading habit, such as; medical textbook, medical research journal, medical abstract, medical case reports, medical leaflet etc.

- c. see learning EMP as an enjoyable and satisfying experience and be well motivated in teaching and learning process.
- d. should have the learning strategies in studying EMP. They have to be aware of that they do not only learn about language acquisition (focuses on how they develop their knowledge on mastering language) but also the cognitive psychology (focuses on how they deals with medical knowledge they have already known and learnt).

5. Conclusion

- Teaching EMP is very challenging. It does not only focus on language teaching method but also on how to deal with some characteristics of the language itself. Both teacher and students have to be aware of the certain task they have to develop.
- Teacher should develop the communicative method in teaching EMP to introduce students the real life situation in learning EMP.
- Teaching EMP covers the need analysis; the development of the English materials and test for the medical students and the evaluation. Student are also demanded to have the learning strategies to enhance their knowledge both in language acquisition and cognitive psychology.

An example activity for teaching and learning EMP:

Consider, for example, taking a medical history from a patient. Teacher can create a lesson using just one word – such as headache– and the students’ knowledge. Ask them to create a brief case presentation: a 25-year-old patient presents with a (tension) headache. Students can take turns taking the history

from the patient. Give each of them five minutes to take the history, allow two to three minutes for feedback, then follow it up with whole class feedback.

A role-play such as this is made more challenging by asking the ‘patient’ to adopt an attitude (aggressive, annoyed or challenging, for example). Alternatively, students can work in groups of three so the third student acts as a monitor of the ‘doctor’ who checks medical detail. Teacher can refer monitors to particular pages of medical text books too.

Medical case histories also lend themselves to information gap activities. These activities are where the ‘patient’ presents to the doctor with an illness that the doctor does not know about. To make this type of activity more challenging, teacher can:

- restrict the enquiry to different types of headache – tension, migraine, haemorrhage, thunderclap, for example
- set the activity for a specific field, such as respiratory medicine
- make it completely open – let students decide on the patient’s problem themselves.

As a lay person rather than a medical expert, you as the teacher are the ideal candidate for getting doctors to ‘decode’ medical language in the way they would need to if they were speaking to a patient. So, be open to role-plays, be clear about the objectives for each activity, and don’t forget to use the wealth of knowledge sitting inside students’ heads.

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