

Exercises to Improve Memory and Language Acquisition in EMP (English for Medical Purposes) Classes

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Abstract:

This paper presents three types of vocabulary exercises, designed to improve memory and language acquisition in EMP classes. The exercises in question are the mind map, the crossword puzzle, and the medical anagram. These activities have the advantage of scientific vocabulary development in a creative and even playful way. On the one hand, by doing them, students are expected to understand, learn, and be able to use medical terminology. And on the other hand, the exercises discussed stir students' curiosity and avoid turning medical terminology learning into a dry activity. By focusing on concrete examples of EMP activities, this study tries to highlight the importance of variety and creativity in designing vocabulary exercises on relevant medical topics. Such teaching materials will always help the language teacher to keep the students involved.

Keywords: terminology acquisition, medical vocabulary exercises, EMP materials design

1. Teaching EMP vocabulary

Gibson Ferguson argues that in no other profession does language play such an important role than in medicine, “where effective communication is widely recognized as important to clinical outcome” (Ferguson 2013: 243). Moreover, any ambiguity or error in medical communication can have serious negative consequences in real practice.

At the core of medical communication lies terminology – made up of technical or specialized terms, mostly borrowed from Greek and Latin – and

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semi-technical and lower frequency general vocabulary. It should be mentioned, however, that specialized vocabulary does not always mean highly technical words that are not used in everyday language. Some common words can carry specific meanings in medical contexts. Nation (2008) points out that *by-pass* and *neck* are high frequency words in medicine, but they also occur outside that specialized context.

Vocabulary in EMP is important for several reasons. First of all, teachers and learners need to know that classroom time is directly related to their language needs. They should be reading material that contains key ideas in the language of their field and writing using those ideas and language. Woodward-Kron (2008: 246) carried out a study of undergraduate students' academic writing in education and found that students' knowledge of a discipline is closely tied to the specialized language of that discipline.

Secondly, understanding and using this special purpose vocabulary shows that these learners belong to a particular group. Learners need that language to show understanding and "make meaning and engage with disciplinary knowledge" (Woodward-Kron 2008: 246).

This means that EMP learners may face an extremely large learning task to fully develop their understanding and use of specialized vocabulary in their subject area at university or in a professional setting.

The role of the EMP teacher is to equip students with strategies for learning medical vocabulary. That goal can be achieved, for instance, in Chung and Nation's view (2003), through fostering students' skills in recognizing words, interpreting definitions, and relating word senses to core meanings.

2. Course content and activities

The pedagogical treatment of medical vocabulary is widely debated among EMP teachers. As pointed out by Paltridge and Starfield (2013: 253), a common opinion is that this vocabulary is better learnt in the course of studying medicine and that semi-technical and lower frequency general vocabulary tend to be more problematic areas for the intermediate-level EMP student. This is a view with some validity, but it also tends to oversimplify matters. Much depends, for instance, on the first language

background of the EMP student, their level of medical knowledge, the particular pedagogic activity in which the word occurs, the degree to which the word is important in the ongoing pedagogical activity, the availability of specialized dictionaries, and many other factors.

It is possible to build an EMP course around a sequence of relevant language items. Preferable, however, and more communicative, might be a course consisting of what Allwright and Allwright (1977: 59) refer to as “a planned sequence of pedagogically useful activities” with prominence given to authentic texts and tasks. These courses might include simulated case conferences; listening or reading to take notes on a medical subject; reporting or summarizing said medical subject; listening to a talk; preparing and presenting short talks based on case studies doctor – patient role-plays, medical English pronunciation practice and other activities which require both specialized medical vocabulary and semi-technical or lower frequency general vocabulary.

3. EMP materials

Teaching materials for EMP are based either on locally produced exploits of authentic medical texts, published textbooks, or some combination of both. The first option is often preferable in that it enables the teacher to tailor the course contents more precisely to the specific needs and profile of the target group. But there are obvious drawbacks and pitfalls: writing materials for a specific group is time consuming and may be uneconomical. It also requires skill, creativity, and, almost invariably, consultation with a medically - trained informant (cf. Paltridge and Starfield 2013: 257).

This article gives examples of different types of vocabulary exercises, developed for medical students, in order to improve memory and language acquisition in EMP classes in a creative way. The exercises in question are the mind map, the crossword puzzle, and the medical anagram. While helping the language teacher to build scientific terminology, these activities are also more engaging and fun, stimulating students’ curiosity and interest.

The topics chosen for the exercises are representative of the medical world: pain, body parts, medical practice, and practitioners. These topics are appropriate for 1st-year Romanian undergraduates in the general medicine programme. The exercises are adapted from *Check your English Vocabulary for Medicine* (2006).

As stated, the teaching goal is vocabulary development. By means of these activities, which involve a mixture of language skills as they are linked to other tasks, students are expected to understand, learn, and be able to use medical terminology. The vocabulary taught is suitable for 1st-year medical students' needs, being mainly made up of semi-technical words or common words used in medical contexts.

The level of the exercises is intermediate, and the methodology may vary. The vocabulary activities may be used as a warm-up to the course, but they may also end a lesson, or function as a bridge between other exercises.

3.1. Mind map

A mind map is a way of organising vocabulary to show the connections between words.

After watching a video presenting the physical examination of the musculoskeletal system, which introduces students to the subject of 'pain', students are asked to put into practice what they have learned by finding terms in the mind map connected to the term *pain*. This activity, which functions as a bridge between other tasks, improves language acquisition and long-term retention of the terminology recently taught.

Students work in pairs and are given six sets of four words that can be linked by another word. All the words are related to medical matters, and one in particular to the subject of 'pain'. The learners have to discover the missing words and write them in the centre of the charts, thus recreating the medical phrases in which they appear. These lexical phrases are very important in medical language because words exclusively are not always sufficient to account for the different kinds of meaning which language users have at their disposal.

1.

ciliary		temperature
foreign		fat

2.

throbbing		relief
abdominal		threshold

3.

metacarpal		graft
cancellous		marrow

4.

cardiac		fatigue
skeletal		spasm

5.

black		bath
glass		drops

6.

blood		membrane
beta		body

(adapted from *Check your English Vocabulary for Medicine* 2006: 1)

Answers:

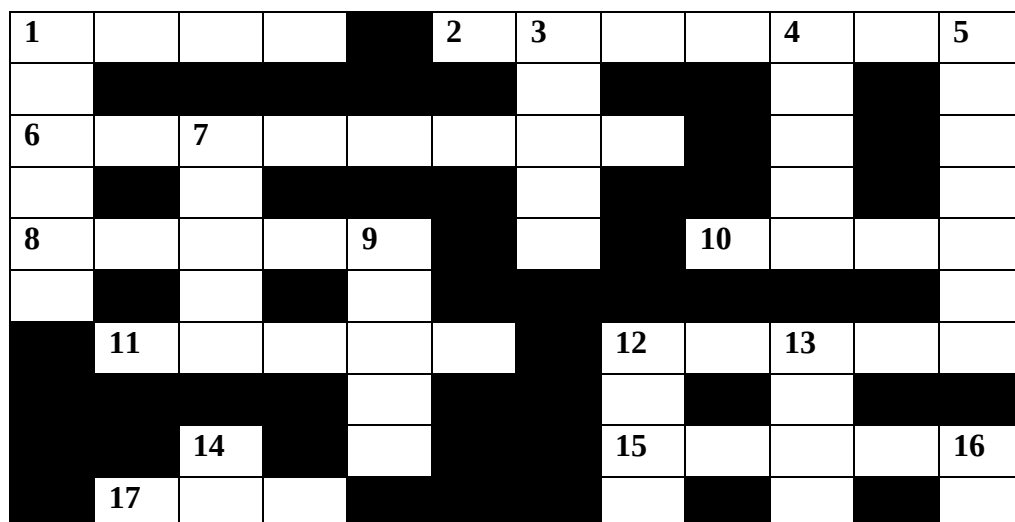
1. *body*: ciliary body, foreign body, body temperature, body fat
2. *pain*: throbbing pain, abdominal pain, pain relief, pain threshold

3. *bone*: metacarpal bone, cancellous bone, bone graft, bone marrow
4. *muscle*: cardiac muscle, skeletal muscle, muscle fatigue, muscle spasm
5. *eye*: black eye, glass eye, eye bath, eye drops
6. *cell*: blood cell, beta cell, cell membrane, cell body

3.2. Crossword puzzle

This crossword puzzle ends an English lesson structured around the topic “Introduction to Anatomy and Physiology”. The lesson starts with a reading comprehension activity. Students read a detailed text about body parts and their physiology, the building blocks of the body from the smallest to the largest. A series of exercises follow the text, ensuring language comprehension and retention. Targeted questions, fill-in tasks, match exercises, using words in context, deciding which category or categories each body part belongs to, and others.

The crossword puzzle closes the learning session, functioning as a summary. Working in groups of four, and using all the terminology recently acquired, students are asked to find the names of the body parts and anatomical structures necessary to complete the puzzle. Placed at the end of the lesson, when learners are not as active as at the beginning, this exercise is able to catch their attention again and stir curiosity. It may prove very helpful in terms of ensuring a long-term retention of the vocabulary in question.





ACROSS

1. The joint between the thigh and the lower leg
2. An organ of the digestive system, in which food is digested
6. The first portion of the small intestine
8. The outer part of the joint between the forearm and the upper arm
10. It grows on your head
11. The upper chambers of 18 across
12. Breathing organs
15. They carry blood to 11 across
17. Part of the body with which a person sees
18. The organ which moves blood around your body
21. Cell in the nervous system which transmits impulses
22. An organ which secretes substances which act elsewhere in the body
24. A white oily substance in the

DOWN

1. One of the two organs that excrete the urine
3. Main part of the body, without the arms, legs and head
4. A major artery
5. Connected to 8 across, funnily enough
7. Eye socket
9. Narrow part of the body below the chest and above the hips
12. The largest gland in the body, which secretes the bile
13. Hard growth which forms on the top surface at the end of each finger and toe
14. Cheek-bone
16. Protects the brain
18. At the end of your arm
19. The throat or neck, major vein
20. The back of each joint on a person's hand
23. Bundle of fibres which take

body, which stores energy and impulses from one part of the
protects the body against cold body to another

25. Tissue which forms the outside 24. End part of the leg on which a
surface of the body person stands

26. Type of nerve ending

27. The organ of hearing in men and
animals

(adapted from *Check your English Vocabulary for Medicine* 2006: 38)

Answers:

ACROSS

1. knee
2. stomach
6. duodenum
8. elbow
10. hair
11. atria
12. lungs
15. veins
17. eye
18. heart
21. neuron
22. gland
24. fat
25. skin
26. receptor
27. ear

DOWN

1. kidney
3. trunk
4. aorta
5. humerus
7. orbit
9. waist

- 12. liver
- 13. nail
- 14. zygoma
- 16. skull
- 18. hand
- 19. jugular
- 20. knuckle
- 23. nerve
- 24. foot

3.3. Medical anagram

The last exercise suggested by this study is called a medical anagram and functions as a warm-up to a course dedicated to medical practice and practitioners. This is a lead-in game to the content of the lesson, designed to stir interest about the subject.

After asking some general questions about the medical profession, the lecturer groups students in pairs and asks them to solve the anagram by reading the clues and putting the letters in order to form words. After deciding on the best answer, they write the newly formed words in the grid to find the mystery term, which describes a person specially trained to operate a machine to take X-ray photographs in this provided example.

- | | |
|--|-------------|
| 1. Action of breathing _____ | RAEINOPRIST |
| 2. Sensitivity to certain substances, such as pollen or dust which cause a physical reaction _____ | AEGLRLRY |
| 3. A female child of a parent _____ | ADEGHRTU |
| 4. Cut in a person's body made by a surgeon using a scalpel _____ | CHINNOS |
| 5. Surgical intervention _____ | AEINOOPT |
| 6. The scientific study of old age and of the process of ageing _____ | EGGLNOOORTY |
| 7. Becoming worse after seeming to get better _____ | AEELPRS |
| 8. Equipment used in a laboratory or hospital _____ | AAAPPRSTU |
| 9. Give instructions for a person to receive a specific dosage of a drug _____ | BCEEIPRRS |

10. Place where sick or injured people are looked after _____ AHLIOPST
 11. Physical or mental activity _____ CEEEIRSX
 12. The ability of a person not to get a disease _____ ACEEINRSST

Mystery word: _____

1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												

(adapted from *Check your English Vocabulary for Medicine* 2006: 37)

Answers:

1. respiration
2. allergy
3. daughter
4. incision
5. operation
6. gerontology
7. relapse
8. apparatus
9. prescribe
10. hospital
11. exercise
12. resistance

Mystery word: radiographer

4. Conclusions

This study has provided concrete examples of EMP activities, in order to highlight the importance of variety and creativity in designing vocabulary exercises on relevant medical topics. The exercises presented are a very efficient and powerful tool while teaching medical terminology, which could sometimes turn into a dry activity.

While ensuring terminology acquisition and enforcing long-term retention of medical words and expressions, exercises like these will always help the language teacher to keep the students involved and invested in different vocabulary activities.

And finally, in terms of how to implement the materials presented above in the classroom, these exercises can be used any time that teachers need to stir students' natural curiosity and interest. We have shown how the exercises can be used to warm-up to a course, link other activities, or may also end a lesson.

References:

- *** 2006. *Check your English Vocabulary for Medicine*, 3rd edition, London: A&C Black.
- Allwright, J. and R. Allwright. 1977. "An Approach to the Teaching of Medical English". *English for Specific Purposes*. Ed. S. Holden. London: Modern English Publications. 58-62.
- Chung, T. and P. Nation. 2003. "Technical Vocabulary in Specialised Texts". *Reading in a Foreign Language* 15: 103-116.
- Ferguson, G. 2013. "English for Medical Purposes". *The Handbook of English for Specific Purposes*. Eds Brian Paltridge and Sue Starfield. Chichester: Wiley-Blackwell. 243-261.
- Nation, P. 2008. *Teaching Vocabulary: Strategies and Techniques*. Boston: Heinle Cengage.
- Paltridge, Brian and Sue Starfield (Eds.). 2013. *The Handbook of English for Specific Purposes*. Chichester: Wiley-Blackwell.
- Woodward-Kron, R. 2008. "More Than Just Jargon – The Nature and Roles of Specialist Knowledge in Learning Disciplinary Knowledge". *Journal of English for Academic Purposes* 7: 234-249.