

Watching Exercises for Teaching the Terminology of Clinical Procedures in English for Medical Purposes Classes

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Abstract: Teaching the terminology of clinical procedures in medical English classes can be a challenge. However, by using video, which is an excellent tool for showing language in operation, medical students are more likely to understand, learn and be able to use words and phrases pertaining to this overspecialized terminology. The present paper gives examples of home-grown exercises for watching purposes that can be used in the course room, with a special focus on the language skills developed by each video-based teaching material.

Keywords: English for Medical Purposes, materials design, video-aided teaching, medical terminology

1. Overview

A subset of English for Specific Purposes (ESP), English for Medical Purposes (EMP) owes its existence to the twentieth century advent of English as the international language of science, including medicine. EMP subsumes two partially overlapping categories, namely a research and a pedagogic enterprise, both aimed at improving the English language skills of non-Anglophone health professionals, medical students or researchers in the medical field.

On the one hand, there is a lot of language-related EMP research, such as studies of medical communication and discourse, genre studies, or terminology analyses. On the other hand, there is a great diversity of EMP courses around the world, varying in duration, target audience, medical specialties addressed, and the skills developed (cf. Ferguson 2013).

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The present paper follows the pedagogic approach to EMP. From the many aspects related to materials, course design and EMP teaching methodology, this article focuses on video-aided teaching of medical terminology in a Romanian medical university. The use of video in EMP teaching has been at the core of my linguistic investigations for many years (cf. Frînculescu, Badea 2013; Frînculescu 2016, 2019).

In the present study, by means of different video activities, which involve a mixture of language skills, medical students are expected to understand, learn and be able to use words and phrases pertaining to the terminology of clinical procedures. The target group of learners is represented by IInd-year Romanian undergraduates in the general medicine programme.

The terminology of clinical procedures, to which we dedicated a more comprehensive study (cf. Frînculescu, Lăzărescu, Badea 2016), is an overspecialized terminology, used by medical experts when communicating in an expert-to-expert context. This special vocabulary is made up of technical terms and lower frequency general medical vocabulary, including items of equipment, investigation techniques, medication, anatomical areas, the positions assumed by the patient, medical disorders and possible complications of the procedures.

This terminology expresses complex concepts, sometimes difficult to understand for laypersons. Should we also mention the scarcity of available teaching materials and dictionaries on the subject in both English and Romanian, we present ourselves with the reasons for a certain reluctance on the part of language teachers to tackle this terminology in the course room.

But medical students are future doctors, they undergo clinical training in the hospital from the first year of study. They are expected to perform clinical procedures in Romanian hospitals and possibly in foreign ones. They should gradually become accustomed to the terminology of clinical procedures, before actually performing them.

The question that arises is: how can we teach a complex medical terminology in a simple and efficient way? The solution suggested by this study is the use of video. One of the main advantages of video is that students do not just hear language, they see it too. That makes new vocabulary easier to understand. Actually, films are very efficient while teaching vocabulary, which could easily turn into a dry activity. With relevant watching exercises, developed on carefully selected medical videos, the language teacher will always succeed in keeping the students involved and interested. Moreover, films focus on realistic medical situations, they match language to students' own experience as trainees in the hospital, which is particularly important for medical students.

The present paper gives examples of home-grown exercises for watching purposes that can be used in the course room in order to teach the terminology of clinical procedures, with a special focus on the skills developed by each video-based material.

2. Video-based materials for teaching the terminology of clinical procedures

As already stated, using video in EMP classes can be very motivating, as it allows students to look at medical situations while working on different language areas. In addition, watching activities have the advantage of involving two or more language skills in combination, listening and writing, listening and speaking, and even listening and reading, when using transcripts of video extracts.

However, most medical videos are designed for medical purposes, not to teach English for healthcare. It is the task of the language lecturer to select films and design suitable watching exercises to meet the needs and level of knowledge of the target group of learners. Though challenging enough, this task can yield outstanding results, providing the materials produced are relevant, clear, attractive, and durable (cf. Harmer 2001: 151).

This article presents a number of home-grown exercises designed for specific video situations involving the terminology of the following clinical procedures: central venous catheterization, transcatheter aortic valve replacement, lumbar puncture, arterial line placement, thoracentesis, and bronchoscopy. All the video recordings on which the exercises are made are listed in the *References* section.

The activities are sufficiently varied so as to achieve different comprehension goals. The main skills specific to watching activities are mentioned below. The skills are used by students singly or in combination to achieve the desired comprehension goals.

Watch:

- for general comprehension – understand the gist of a message;
- for specific information – understand and identify details, specific information;
- for main ideas – understand and summarize the key ideas in a message;
- for opinion – understand, interpret text, and provoke thought;
- for pronunciation purposes – focus on pronunciation and practise it;
- and translate – understand language and translate it;
- and predict – anticipate what one will watch;
- selectively – pay attention to specific parts of the message by ignoring other parts;
- and infer – fill in the gaps in one's understanding by using knowledge about the language forms and use, and relevant prior knowledge.

In the examples that follow, all the skills addressed by each activity are indicated.

2.1. Example 1

Skills:

- watch and predict

- watch for pronunciation purposes
- watch and translate

A. Students watch a film without sound. They have to guess what medical procedure is performed. When they have done this, the teacher plays the film with sound so they can check if they guessed correctly.

B. Students watch the video again, presenting the procedure called “central venous catheterization” (Graham, Ozment, Tegtmeyer, Lai, Braner 2007), while having a list of key medical terms on which they are told to focus. After watching the excerpt, students practise the correct pronunciation of the words, by using them in sentences they create. Then, in pairs, they are asked to give the Romanian counterparts for each word or phrase.

- catheter;
- chlorhexidine;
- coagulopathy;
- emergency resuscitation;
- face shield;
- haemothorax;
- internal jugular vein;
- large-bore peripheral IV;
- needle driver;
- pulmonary artery catheterization;
- respiratory distress;
- scalpel;
- sterile drape;
- sterile gauze;
- ultrasound probe.

2.2. Example 2

Skills:

- watch for general comprehension
- watch for specific information
- watch for opinion
- speaking
- writing

Students watch a video (<http://www.youtube.com/watch?v=icWNXzTLsk>) and discuss these questions in small groups. When students have written the answers, they choose a student to present their points of view aloud.

1. What does the film present?
2. What is the name of the procedure?

3. How is the procedure carried out?
4. What does the patient suffer from? How old is he/she?
5. How is treatment adapted to elderly patients in the Romanian medical system?

2.3. Example 3

Skills:

- watch for specific information
- watch and predict
- writing
- speaking

A. Students watch the clinical procedure called “lumbar puncture” (Ellenby, Tegtmeier, Lai, Braner 2006). They are being told to remember as much as they can. After watching, in pairs, they have to agree on everything they heard and saw and answer the following questions in writing. When students have written the answers, they compare them with other pairs to see whether they all agree.

1. Is lumbar puncture indicated for diagnostic or therapeutic reasons?
2. What kind of sample is obtained by performing lumbar puncture?
3. Name three contraindications of lumbar puncture.
4. What positions should the patient assume? What is the preferred position and why? In your own words, explain the meaning of “lateral recumbent position”.
5. What disinfectants are used to clean the skin?
6. Is lumbar puncture a painful or anxiety-provoking procedure? Is anaesthesia appropriate?
7. Can cerebrospinal fluid (CSF) be tinged with blood?
8. Should CSF be aspirated? What can a small amount of negative pressure precipitate?
9. What should the amount of fluid collected be limited to?
10. What are the challenges of lumbar puncture?
11. Name three possible complications of lumbar puncture.

B. Students are told to imagine that they are preparing a patient for lumbar puncture. They have to instruct the patient to take up the correct position. With all the information gathered while watching the video, they predict the instructions and fill in the gaps. Each blank may represent one or several missing words. Then they watch the excerpt again to see how good their guesses are.

- a. Now I want you to move right to the edge of the bed.
- b. Lie on _____.
- c. Now can you bend both your _____?

- d. Put your head _____.
- e. Curl _____.
- f. Lie _____.

2.4. Example 4

Skills:

- watch selectively for specific information
- reading

A. Students watch a video extract, which presents the clinical procedure called “arterial line placement” (Tegmeyer, Brady, Lai, Hodo, Braner 2006). They are asked to read the transcript of the film and use the words/phrases in the box to fill in the gaps of the text.

ventilatory deficits	radial arterial lines	catheter	titration
collateral circulation	tape	dorsiflexion	needle
monitoring	“over the wire”		

a. Indications

..... are important tools in the treatment of critically ill patients. Continuous monitoring of blood pressure is indicated for patients with haemodynamic instability that requires inotropic or vasopressor medication. An arterial line allows for consistent and continuous of blood pressure to facilitate the reliable of supportive medications. In addition, arterial lines allow for reliable access to the arterial circulation for the measurement of arterial oxygenation and for frequent blood sampling. The placement of arterial lines is an important skill for physicians to master as they treat critically ill patients.

An arterial line is also indicated for patients with significant

b. Contraindications

The contraindications to the placement of an arterial line are few but specific. Placement of an arterial line should not compromise the circulation distal to the placement site, which means that sites with known deficiencies in collateral should be avoided.

The value of the Allen test, which is used to verify to the hand through alternate occlusion of the radial and ulnar arteries while the hand is checked for perfusion, is somewhat controversial. Other contraindications include infection of the site where the is to be placed and traumatic injury proximal to the proposed insertion site.

c. Preparation

There are several techniques for the placement of a radial arterial line; two of the more common are known as and “over the needle.”

Preparation for both techniques is identical. The equipment needed includes a sterile preparation solution and a sterile field, a board and to secure and position the wrist, 1 percent lidocaine solution (without epinephrine) and a small gauge and syringe, an angiographic catheter and needle, a wire if the over-the-wire technique is to be used, material such as suture or tape to secure the line once it has been placed, and a transduction system for monitoring.

After the risks of the procedure have been appropriately assessed and consent has been obtained from the patient, the hand should be positioned on the wrist board. The hand should be placed in moderate, which brings the artery closer to the skin and aids successful placement of the line.

B. Students watch the film again and label each statement below true (T) or false (F). Then, they compare their answers with the other colleagues to see whether they all agree.

1. For the over-the-wire technique, the needle should enter at a 30-to-45-degree angle to the skin, directly over the point at which the pulse is palpated.
2. The catheter should be advanced rapidly through the artery.
3. The radial artery is palpated 1 to 2 cm from the wrist, between the bony head of the distal radius and the flexor carpi radialis tendon.
4. Perfusion to the hand shouldn't be reassessed after the placement of the arterial line or at frequent intervals while the line is in use.
5. Any sign of vascular compromise at any time should prompt the removal of the line.
6. The line should be removed as early as possible after it is no longer needed.
7. Arterial spasm and an inability on the part of the clinician to pass the wire or catheter through the artery are the most common difficulties in catheterization.
8. Even if a spasm is suspected, attempts at catheterizing that artery shouldn't be abandoned for an alternative site to be selected.

2.5. Example 5

Skills:

- watch to infer meaning
- watch and translate
- writing

Students watch the clinical procedure called "thoracentesis" (Thomsen, DeLaPena, Setnik 2006). After watching, they are asked to translate into Romanian the following samples of text. When students have written the translations, they check them with the class.

1. A study suggests that the procedure is safe and that fresh-frozen plasma is not needed in patients with mild elevations of the prothrombin time or partial-thromboplastin time.
2. Thoracentesis must be performed with extreme care in patients who receive mechanical ventilation.
3. The thoracentesis needle should not pass through sites of cutaneous infection, such as cellulitis or herpes zoster, on the chest wall.
4. You will need the following items: antiseptic solution, a sterile gauze, a sterile drape, sterile gloves, a small syringe for the anaesthetic injection, and local anaesthetic, such as lidocaine.
5. You will also need the following items: an 18-gauge catheter, a large syringe (35 to 60 ml) for the aspiration of pleural fluid, high-pressure drainage tubing, sterile occlusive dressing, specimen tubes, and one or two large evacuated containers.
6. Place the patient in a sitting position on the edge of the bed, leaning forward, with his or her arms resting on a bedside table. If the patient is unable to sit upright, the lateral recumbent position may be used.
7. The level of the effusion should be estimated on the basis of diminished or absent sounds on auscultation, dullness to percussion, and decreased or absent fremitus.

2.6. Example 6

Skills:

- watch for general comprehension and main ideas
- speaking
- writing

A. Students watch a video in which a bronchoscopy is performed (<https://www.youtube.com/watch?v=F7OztWEB9PQ>). They are asked to briefly describe what they saw.

B. Students have to imagine a medical situation in which a patient has been admitted to hospital and undergoes flexible bronchoscopy. They have to write a medical letter to the patient's GP, explaining the findings of the procedure.

3. Conclusions

By means of a practical approach, this paper has tried to show that the use of video can be a solution when teaching a more complex medical terminology, such as the terminology of clinical procedures. With medical undergraduates, videos are more efficient and powerful than any other teaching methods, as they give learners the chance to see language as well as hear it or read it. Moreover, films match language to medical situations, which is essential in EMP.

By providing some examples of home-grown video-based activities for teaching the terminology of clinical procedures, this study encourages English language teachers in Romania to enhance the use of video resources in the course room. EMP teachers should aim to use video materials as often as they can and for as many purposes as possible, both for practising a variety of skills and as a source material for other activities.

As seen before, the watching activities presented cover at the same time different language areas and involve a mixture of skills. More often than not, students watch for general comprehension or main ideas at first before moving on to different tasks. In other cases, they watch for details straight away. They can watch and predict or infer meaning. At the same time, students are introduced to vocabulary and concepts which they need to use in other reading, speaking or writing tasks. Some watching activities can also provoke students' thought by encouraging interpretation and asking for language use.

I have also shown that translation can be a part of a video-aided course that focuses on vocabulary. Even though sometimes underestimated, translation exercises help teachers to recognize language-related comprehension problems. Moreover, translation activities can be carried out more easily by using video extracts that illustrate the terminology under study.

And finally, in terms of how to implement watching materials in the course room, videos can be used any time that teachers need to show language in operation or to stir students' interest. Films can be a warm-up to a course and they may end a lesson. In addition to that, they can also be used as a bridge between activities.

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