The A-B-C of Content Learning in CLIL Settings:

The Teaching and Learning of the Middle Level Cycle "Pharmacy and Parapharmacy Technician" in Vocational Education

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1

What is the main purpose of teaching and learning Pharmacy and Parapharmacy in post-compulsory education?

Pharmacy and Parapharmacy aims to prepare students of all ages (starting at 16 years old) to work at a community pharmacy, hospital pharmacy, parapharmacy or pharmaceutical distributor. 'Parapharmacy' refers to health products other than medicine that are dispensed with or without prescription. In Spain, "Pharmacy and Parapharmacy Technician'' is a middle level degree included in Vocational Education.

Most students enrolled in this degree have an ESO certificate (post-compulsory school leaving certificate) although a number of students failed to graduate and entered VET by way of a very basic exam in language and mathematics. In general, they are poorly prepared for the challenges of the course, and often find it difficult to adjust to master classes and the demanding content, especially when they feel this content does not have a direct application in their personal or immediate professional life.

Accordingly, the curriculum of the Pharmacy and Parapharmacy Technician degree is competency-oriented: teaching and assessment practices are focused on the professional competencies that students must acquire. Some examples of these competencies are: interacting with customers, ordering products from the distributor, managing the stock placement, receiving store deliveries, filing inventory receipts and assisting the pharmacist to prepare master formulas.

Personal and social competencies are also highly important, and often constitute the main challenges of the course. This is because the previously mentioned professional competencies require basic attributes such as punctuality and the ability to work as part of a team, both of which are often lacking in new students.

2

How do current approaches to the teaching and learning of Pharmacy and Parapharmacy differ from traditional encyclopaedic approaches?

Due to the factors previously mentioned, the teaching of any Vocational Education Cycle must include practical experiences that could be used in real life situations in a pharmacy. In order to design the course following this principle, the first approach is for the teacher to observe the daily work at a pharmacy (pharmacies provide the possibility of placements for teachers to gain direct experience). After this experience, the teacher should be able to design the activities that will help students acquire the competencies related to that job.

In the pharmaceutical field, there are three important professional competencies that students must master. First, using the main pharmacy management programs (Iof Win, Farmatic, Bitfarma…). Second, dealing with customers, which includes: dispensing medicines (under the supervision of a pharmacist) and parapharmacy products, recommending health habits, and other professional abilities (see Figure 1). Third, performing laboratory procedures through weekly laboratory practices. At Institut Eugeni d'Ors, from November through March, these practices are conducted in English, using CLIL methodology (see Figure 2).

Not only should teachers know how to perform most of the tasks undertaken at a pharmacy, but they should also should master methodologies and programs that help students to achieve personal and social skills, such as problem-based learning, international programs (Erasmus plus, e-Twinning), dual FP, Service-Learning and others.

3

What role does language (i.e., oral interaction, reading and writing) play in the teaching and learning of Pharmacy and Parapharmacy?

Following the current Catalan education standards, English should be used in two kinds of modules, with different roles and objectives in each one:

- **Technical English Module.** The objectives are related to the use of the English language: for instance, to communicate with the customer, to write and read emails, etc. However, some teachers believe that CLIL can be useful here. In my Technical English class, students learn in English a variety of themes related to the course, such as chemistry, anatomy, and illnesses, although in the evaluation, language use takes preference over content knowledge. Students often express that learning English through professional content is much more interesting than just learning the language.

- **Other professional modules.** The curriculum states that at least one module of the cycle should include activities in English. Although CLIL is not specified as being

the only possible approach, the Catalan Department of Education recommends applying it, and promotes it through numerous Professional Development courses. However, performing a few activities in English in only one module is insufficient despite being a common practice in the majority of schools. When I started doing occasional CLIL activities nine years ago, it became evident that the students did not learn English with such short exposure to the language. After a few years, I started to increase the number of activities. Ensuring one to two hours a week of CLIL helped the students feel at ease and learn both content as well as language.

Institut La Guineueta, in Barcelona, deserves a special mention. The school promotes teaching in English through at least two strategies: the use of language assistants and the presence of teacher innovation groups called 'CLIL teams' (previously CITE: Creativity and Innovations in Teaching through English). These groups prepare and share CLIL materials related to a variety of vocational studies.

4

May the teaching and learning of Pharmacy and Parapharmacy benefit in any way from being taught through English, or through any additional language in general?

There are two main benefits of using English as a vehicle for teaching Vocational Training courses. First, a number of VE students will go on to study a second or even a third cycle, and some of them will reach university, as part of lifelong learning for personal and professional development. They will require English language skills at all further educational levels and beyond; thus, VET teachers cannot dismiss the importance of teaching in English. Second, many VET students will be dealing with customers immediately after they graduate. With tourism accounting for a notable part of the economy in Barcelona and in Catalonia as a whole, a knowledge of English and other foreign languages is increasingly necessary to ensure quality service for all customers.

5

Can the teaching and learning of Pharmacy and Parapharmacy benefit from an across-the-curriculum approach? If so, how?

Pharmacy and Parapharmacy, as well as most vocational degrees, require highly specialized teachers who tend to focus on the material they teach, and who are reluctant to adopt a cross-curricular approach.

However, in order to help students achieve soft skills, which are social and personal competencies, a greater degree of creativity is required to develop scenarios whereby teachers and students from different modules and levels work together to create products or to solve problems.

Two examples of transversal projects are:

- The Synthesis Module, in which students use a variety of different professional skills to solve problems (recommend medicines or health products to relieve pain, prepare master formula, determine the dispensation procedures for certain medicines, etc…). Many parts of this module may be performed in English.

- A Learning-Service project: at Institut Eugeni d'Ors, teachers from different modules carry out projects with Maregassa, a Special Education Professional school. With respect to the Pharmacy course, Maregassa students on the gardening course helped the Institut establish a medicinal herb garden, and Pharmacy students from the Institut gave a presentation at Maregassa on health and on the properties of medicinal herbs. The interaction and co-learning that is established through projects of this nature is invaluable.

6

Can you provide one or two examples of quality learning tasks for the Pharmacy and Parapharmacy CLIL class? (maybe perhaps also useful in non-CLIL classes)?

A good example is an e-twinning project called *DIET (Did I Eat It?)*, in which many schools from different levels and countries share ideas and tasks about nutrition. It comprises multiple activities, such as making a poster and an oral presentation on Hidden Sugars in Processed Foods (see Figure 3), whereby students brought food packages and demonstrated their sugar content with real bags of sugar (see Figure 4); cooking snacks in class and finding out which nutrients are to be found in each; and cooking at home a well-balanced meal and explaining its nutritional aspects in an oral presentation. All of these activities are performed while maintaining contact with students of other countries, discussing their contributions and holding videoconferences.

7

How can a teacher adapt the activities above to a CLIL classroom, so that the activity can be carried out partially or mainly through an additional language?

A dapting the activities does not simply mean translating them. As students need strong language support for learning foreign languages, teachers often need to start from scratch, finding or creating inputs as well as designing the outputs that will be required from the students. First, the teacher must decide which contents they want to teach in English. Then, they must look for some basic resources in books or on the internet, and design the necessary activities for students to achieve the expected results. Activities should be carefully matched to the capabilities of the students; the language must be quite basic; and the interactions between Teacher-Student and Student-Student are essential. The interactive activities through platforms (like Moodle) and web tools (Edpuzzle, Thinglink, Voicethread, and others) are very interesting resources.

Designing activities is a laborious task: not all teachers are willing or have time to adapt the activities to the CLIL methodology. Fortunately, the websites the websites "Boost for CLIL in VET" and ARC (Aplicació de Recursos al Currículum) offer sets of teaching materials for VET teachers, each of them for 10 teaching hours. Figure 5 shows a teaching unit designed for Pharmacy students, but it could be used for other Health studies.

8

Can you provide some instances of exemplary tasks especially useful in the assessment of Pharmacy and Parapharmacy related key competences which could be adapted to a CLIL environment?

Some of the activities that I use are:

- **Right question, right answer.** It is useful to encourage students to make questions (which is a high-level skill) and to answer them, as the task of questioning a customer about what they require is a key competency of a pharmacy technician. For this activity, students work in pairs. The teacher gives sheet "A" to one of the students in each pair. It contains a list of key words and a "question construction table". Student A must ask questions of Student B to help them guess the right word. For instance, if the word that Student B must guess is "*steam*", the question could be *"What do you call the cooking method in which the food is in contact with water vapor?"*. If Student B answers correctly, then Student A marks the word accordingly, and then it is Student B's turn to create and ask a question. The time allotted to each round is 10 minutes.

- **Journey to…** See Figure 6 (template) and Figure 7 (question). It is useful to assess content knowledge through games. The teacher hands a template to each student. They must move from the starting point (marked with the number 1) to one of the destinations (London, Rio de Janeiro…) by answering four questions. Only if they answer all of them correctly, will they get to the right airport.

9

Can you suggest one or two titles (books, articles, etc.) which might help a practitioner to become a better CLIL (and non-CLIL) Pharmacy and Parapharmacy teacher?

T wo reference materials which might help a practitioner to become a better CLIL (or non-CLIL) teacher of the Pharmacy and Parapharmacy certificate course are:

Echevarría, J., Vogt, M. E., & Short, D. (2000). *Making content comprehensible for English language learners: The SIOP model.* Allyn and Bacon.

Martin, G. T. (2002). Reading, writing and comprehending. *The Science Teacher,* 56-59

Notes

This article includes examples of activities that were put into practice at Institut Eugeni d'Ors, an education centre located in Sant Roc, Badalona, in the metropolitan area of Barcelona. The district is characterised by its large immigrant population, and Eugeni d'Ors students come from Roma communities, as well as from North Africa, Asia and Latin America.

A majority of the students coming from other countries, and involved in the activities described below, had immigrated within the previous three years and had difficulties speaking Catalan, Spanish and English. Students of Pakistani origin showed relatively better English skills compared with the rest of the students.

Most students access the middle grade cycle of education at the age of 16 or 17, either holding an ESO certificate (Obligatory Secondary Education) or a different middle grade cycle degree, or no formal qualification at all.

Appendix

Figure 1

A pharmacy technician dealing with customers.

Figure 2

Pharmacy Technician students at Institut Eugeni d'Ors carrying out laboratory procedures.

Figure 3

Student-prepared exhibits showing amounts of sugar contained in processed foods, part of the DIET e-twinning project.
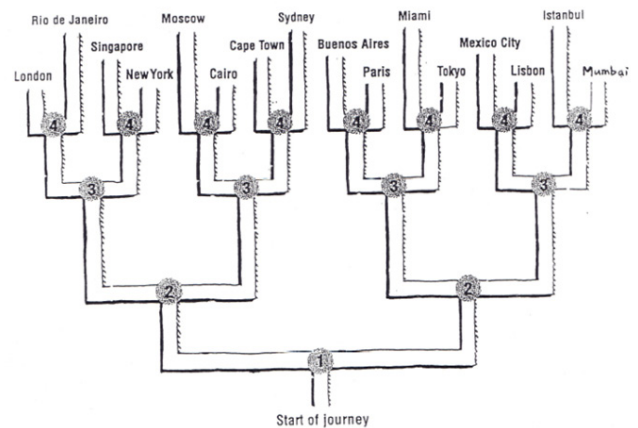
Figure 4

Students with nutritional snacks prepared in class as part of the DIET e-twinning project.
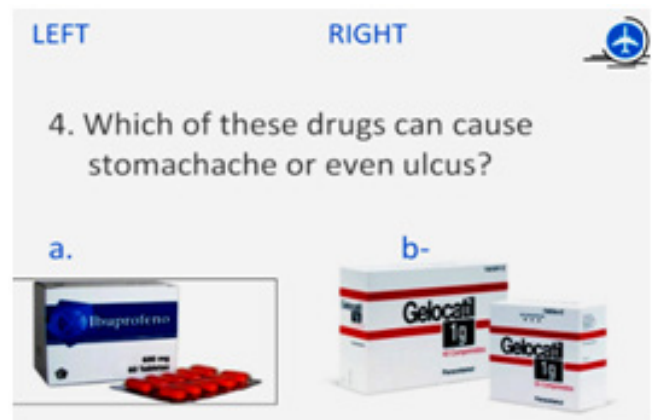

Figure 6

Game template for Journey to… activity.

Figure 7

Sample question card from Journey to… activity.

Figure 5

Screen capture showing a teaching unit posted on the Catalan Department of Education's ARC digital platform.