The CLV and the Faculty of Engineering join forces

Anne Falkenauer, Centre de Langues Vivantes

Enhancing the international profile of our students has been high on the agenda for several years and the Faculty of Engineering has been working hard on this. This process has recently gained momentum with more Master’s programmes being taught in English as of the next academic year. Individual initiatives had already been launched by several pioneering academic teaching staff members and insightful accounts detailing these initiatives can be read in this issue. Now, to further develop these ideas, and successfully implement them on a much larger scale, Prof. Dehombreux has called in the CLV for support.

CLIL in Mechanical Engineering

Prof. Olivier Verlinden, Service de Mécanique Rationnelle, Dynamique et Vibrations

The Master’s degree in Mechanical Engineering at UMONS proposes 3 specialist focuses: Design & production, Mechatronics, and Power Engineering. The Department decided that, from the academic year 2012-2013, one course would be given in English for each of the focuses. My course, now entitled “Computer-Aided Kinematics and Dynamics of Mechanical Systems” was elected for the focus Design & Production.

To be honest, I was in a comfortable situation to undertake the mission. First, when I built the course, I decided that I would write the course notes in English. It is presently clear that it was a good decision although it was motivated at that time by other reasons: a service offered to the students, the possible share with foreign colleagues, and the wish to encourage the students to attend the oral course. Moreover, from 2006, I organize with colleagues of UCL and ULg a graduate course which is somehow an advanced version of the one given to our regular students. Therefore, the transition to full English was finally quite smooth. I “just” had to translate the slides in English, which I did during academic year 2011-2012, and to prepare the oral presentation. The course was not fundamentally changed. I introduced anyway some quizzes. I also prepared a specific glossary, advising the students to always have it at hand during the course. Either the course and the labs are organized in English. The lab reports must be written in English. For the oral examination, the questions are written in English but the students may answer in the language of their choice. Answering in English is presented as an opportunity and the chosen language has no impact on the final mark. About 80% of the students answer in English.

The feedback from the students is globally positive. English is an issue for very few students, generally the ones who had chosen Dutch as second language in the secondary school. Consequently, the proportion of courses in English will keep on increasing in the future in the Master in Mechanical Engineering. As an example, the second quarter of 1st Master can be fully followed in English for the specialist focus in Mechatronics from 2016-2017.

Teaching in English involves tremendous work and adaptation, and support will certainly be welcome, not only to boost language skills, but also to help build confidence. Collaboration is also necessary, as while English-taught programmes can bring huge benefits to students, in terms of language proficiency, cultural awareness and career prospects, they can also come at a price if methodological aspects are not taken into account. Previous experiences of English-medium instruction and other forms of bilingual education in different parts of the world, and at different education levels, have led to research into the impact of various practices on learning outcomes.

This research provides a whole body of evidence showing that the Content and Language Integrated Learning methodology is the most elaborate and successful approach.

A field trip organised by the Faculty was a first opportunity to get a taste of what CLIL is all about and to exchange ideas. This was soon followed by a 4-day workshop at the CLV in July, attended by highly motivated and enthusiastic participants, and there will be much more to come throughout the academic year to help the teaching staff to face up to the challenge of teaching in English.

And what do the students think?

Aurélien Van Laere, Service d’Electromagnétisme et Télécommunications

As one of the first student to attend the Telemedia Master (now “Multimedia and Telecommunications”) of the Faculty of Engineering, I followed all the Telecommunications courses in English. This was a great opportunity for me to directly acquire all the specific terms and principles in one of the most used technical language, and to practice a foreign language in a more professional context that differs from the typical language courses. Indeed, it has been of great use to me because every technical documents and every research papers that I used afterwards for my work as an assistant are written in English. Moreover, it also brings foreign students to interact more than in a classic class. This allows our students to be confronted with people from different origins and to be prepared for a real work environment. Those are tangible advantages to this type of cursus, however, it may be frightening to students who aren’t proficient in English to enrol themselves in a full English option. Interrogations such as the additional workload, the fear of not understanding ‘as well’ as in French and the examination language often arise. In my experience, the additional load is negligible as long as the student attend the course. Indeed, the professors often make an extra effort in class to ensure the students comprehension (repeating a difficult part and even switching to French if it is absolutely necessary). As for the last point, the examination language is chosen at the student discretion as to not jeopardize the student success. As a conclusion, I would say that attending a whole specialty in English brings a lot of advantages both in terms of technical vernacular and professional English practice and that the disadvantages are far outweighed.
For the last two decades, some initiatives in Content and Language Integrated Learning (CLIL) have been implemented in higher education at the European level with mixed educational success. In Belgium, in order to attract exchange students and encourage mobility, many universities are already offering Master’s programmes which are partially or fully taught in English. In a globalised world, where graduates are expected to be fluent in several foreign languages to increase their chances in an ever growing competitive market, English has become THE language of instruction. Teaching in English not only raises students’ cultural awareness, it also questions traditional pedagogical practices.

The aim of CLIL methodology is two-fold: equipping students with essential language skills that will have a lasting impact on their future professional life, and assisting the teaching staff who are about to ‘dive in’. For CLIL to be successful, educational authorities need to provide a safety net, thereby ensuring that content teachers are properly trained and armed with the appropriate tools. CLIL is anything but a simple translation of a course into the target language or a copy-paste of original material. On the contrary, a CLIL approach is essentially student-centred: classes involve much more engagement from the learners and aim to foster interaction.

At first, the task can seem a bit daunting to academic and scientific teaching staff, who are often used to lecturing. However, the experience can produce very positive outcomes in the long run, providing the authorities are willing to invest in a large-scale programme that offers teaching and linguistic support.

At the University of Mons, such an initiative has recently been set up by the Centre for Modern Languages (CLV). After the organisation of an intensive four-day workshop in July, the CLV is planning to offer a wide range of activities and resources that will help teachers improve their command of the language and, perhaps most importantly, feel confident enough to teach in English. Guidance includes:

- **Intensive workshops** which introduce the key CLIL concepts and give a general overview of what a CLIL teaching approach entails. They consist of morning sessions revolving around discussions, analysis of good practices, and exchanges. Each face-to-face session is accompanied by an online module, through which participants are invited to express their opinions and explore the resources at their own pace.
- **Individual coaching**: the objective of these tailor-made programmes is to assess teachers’ own needs and work on areas that need improving, such as pronunciation, functional language or course design, through classroom observation and individual training.
- **Seminars** will be spread out over the academic year and focus on specific CLIL-related topics that have been discussed during the workshops.

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**CLIL in Electrical Engineering**

**Julie Walaszczyk, Centre de Langues Vivantes**

Since more than 10 years, two specialist focuses out of three from the Master degree in Electrical Engineering (“Multimedia and Telecommunication” and “Biosystems Engineering”) are taught in English. At the beginning of this experiment, many students were anxious about the difficulties they would have to face, particularly during the exam. Therefore, we decided to give them the choice of the examination language (English or French). First, most of the students chose to pass the exam in French but we notice that now, more and more students try to do it in English, and finally they leave the exam being convinced they can argue in English.

Furthermore, opportunities for the students to speak English are given not only through the lectures but also during the exercise classes and the laboratory sessions. We believe it is an important point because during the labs and exercise classes, the English style is more informal as the classes mainly consist of small groups of students and discussions are “more private” with the academic staff (professors, assistant professors and technicians).

These courses in English are now very well appreciated by the students as well as recommended by the industrial members of the “Advisory Committee of the Programme Committee for Electrical Engineering”. In the previous programme, it was nevertheless possible for some students to completely escape English lectures if they chose the specialist focus “Énergie Electrique” that is in French. This is why it has been decided to also offer the core curriculum in English from the academic year 2016-2017. All students in Electrical Engineering will thus have technical lectures in English and for some of them, (“Multimedia and Telecommunication” or “Biosystems Engineering”) the whole cursus will be taught in English.