Placing the academic library at the centre of veterinary PhD students' training

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Introduction

The University of Liège is the only French-speaking institution in Belgium to be entitled to offer the second cycle – the last three years out of six – of Veterinary Medicine studies, and to grant the title of DVM (Doctor in Veterinary Medicine).

The Life Sciences Library – with its scope extending to encompass Medicine, Veterinary Medicine, Botany, Zoology, Psychology and Education Sciences – occupies a significant position in the activities of the Veterinary Medicine Faculty (VMF) and in the practitioners' life.

Step by step, the Library staff have developed high quality services, enabling the approach of its various public targets. In order to satisfy the specific needs of researchers and PhD (third cycle) students, the Life Sciences Library has been working closely together with the VMF and has created different solutions to support their education.

We present here an outline of how the Life Sciences Library helps those postgraduate students in their first steps as researchers and thus as authors of scientific papers.

Specific targeted courses and training sessions

For several years, the teachers of the University of Liège's VMF have been very conscious of the need for their students to master the research tools that give access to scientific information. This clear position on the part of the Faculty has generated an efficient collaboration between teachers, scientists and librarians. Targeted and advanced courses on information retrieval and management have been officially incorporated into the PhD students' program. These courses are a continuation of the teaching they receive throughout their six years of study in Vet Medicine. Courses are both theoretical and practical and are designed to help the PhD students to be autonomous and efficient in information management.

Over the last few years, the strengthened cooperation between the VMF and the Life Sciences Library has influenced the evolution of these courses, in terms both of content and educational approach.

Information literacy is progressively consolidated through the following activities:

1) Acquisition of basic skills

- developing an awareness of one's own information needs;
- developing a deep understanding of the question to be answered;
- locating the appropriate sources of scientific information;
- creating effective search strategies for specific databases: *Medline* via *Pubmed*, *CAB Abstracts*, *Web of Science*;
- using criteria to select the relevant material from the references collected;
- analyzing critically the information collected, in relation to present needs.

The first 10 hours of the course consist in a passive theoretical approach, in auditorium.

Following this, 5 hours of hands-on learning are offered. The students (maximum 10 PhD students) are supervised by a scientific librarian, who helps them through the whole process of searching for, retrieving and evaluating information.

2) How to write and publish a scientific paper

The approach is somewhat different here, consisting of a discussion based on the different aspects of scientific writing (structure of the article - citations - ethics). The discussions relating to theoretical sources grow richer with the experience of each student, even though they are just beginning this process.

3) Bibliographic management

In 2007-2008, a new 5-hour course was created, aimed at demonstrating the usefulness of managing information through the use of specific bibliographic software.

Free access to *EndNote Web* is included in the package of ISI databases purchased by the university. PhD students are trained to create personal databases, to manage references imported from different sources such as *PubMed*, and to generate automatically their own bibliographies according to specific editorial styles.

The training aims at being pragmatic, with a maximum of twelve students per workshop. A personal computer is at each student's disposal. The theory is immediately put into practice by the students, centered on the students' own scientific interests.

At the end of this training course, each PhD student is able to use *EndNote Web* and to create bibliographies related to scientific work. The students' motivation increases as they go through the research process, and in time, they feel the need to use advanced functionalities. In this case, they come back to the Library, where they have the opportunity to attend advanced training in using the desktop version of the software. The scientific librarian in charge of the project is also responsible for providing both helpdesk support (by phone and/or e-mail) and personal assistance in order to solve specific problems.

After the training, the scientific librarian remains at the students' disposal and will continue to provide support to individual students as necessary.

Support with publishing

During the PhD Vet curriculum at the University of Liege, the student must be the first author of at least two original research articles and of one bibliographical article giving a 'state of the art'. So, the student has been accepted for the publication of a minimum of three publications in peer-reviewed scientific journals. Following this, these articles are attached to the final document (PhD thesis) that he will present in front of a panel in order to gain his degree.

The University Life Sciences Library is important for the PhD student at two crucial stages in the curriculum:

1) At the end of the first year: the opportunity to publish a review paper

Before the end of the first year of the PhD program, the thesis director usually suggests to the PhD student that he should write and submit for publication an extensive review of the literature concerning the subject of his thesis. This first approach to literature analysis and editing can be greatly simplified by the scientific librarians in the Life Sciences Library. Indeed, the Library numbers among its scientific librarians the editor-in-chief of *Les Annales de Médecine Vétérinaire*, a peer-reviewed journal published since 1856 and indexed in major specific databases, such as *CAB Abstracts*, *Web of Sciences*, and *Current Contents*.

In fact, the young researcher usually opts to submit this review paper to the *Annales de Médecine Vétérinaire*. This choice is based on various advantages: (i) the ability to publish in the mother tongue (French), which simplifies the process of critical analysis; (ii) easy access to the editor-in-chief (a scientific member of the Life Sciences Library), which relieves the student from having to submit to formal procedures; (iii) free access publication (open access) (http://www.facmv.ulg.ac.be/amv/), which maximizes the dissemination of the paper among the scientific community and veterinary practitioners.

2) At the end of the PhD process: online publication of the dissertation

In the spirit of open access and in order to maximize the dissemination of scientific work, the University of Liège has, since 2006, required the electronic deposit of the student's dissertation (http://bictel.ulg.ac.be/) in advance of the oral presentation.

A librarian is on hand, if necessary, to help those students who experience difficulties in completing the specific layout.

In the future?

We have now reached the stage where it would be advisable to evaluate the different training programs. Surveys could be run before and after the sessions, in order to measure their contribution, and possibly to adapt the course on the basis of those results.

It would also be useful to improve the librarians' teaching skills and expertise in two specific fields: desk research application software and bibliography management.

Finally, we need to create online learning materials – database tutorials, links to relevant web pages, on-line self-assessment tools and exercises – in order to promote life-long learning and to support the researchers confronted with the constant evolution of the systems.

In October 2008, the VMF is to hire a scientific librarian, who will help the Library develop these applications.

Conclusions

The Life Sciences Library has increasingly positioned itself as a valuable partner in PhD students' training.

The presence in the Library of a skilled and motivated staff constitutes a decisive advantage; however, more important is the presence of scientific librarians, who themselves have carried out research in closely allied fields. In fact, some of the librarians, who themselves hold a PhD, are quickly able to understand the young researchers' needs and can easily guide them towards solutions. This constitutes a major asset in the establishment of professional relationships.

This also establishes a strong relationship between the VMF and its Library: the official existence of librarian-run courses and training sessions in the PhD students' study program contributes to the full recognition of the Library as a pedagogic partner within the Faculty.

The benefits for the PhD students and young researchers continue once they have finished attending these courses in the program, including the acquisition of new knowledge, increased skills, changed attitudes and modified behavior. It is the beginning of their empowerment as professionals.