DEVELOPING INFORMATION SKILLS TRAINING TO MEET THE CHANGING NEEDS OF VETERINARY EDUCATION

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ABSTRACT:
This paper uses the example of the College of Medicine and Veterinary Medicine Libraries at the University of Edinburgh. It examines the changing course structure in veterinary medicine and shows how information skills training has developed to provide students with transferable skills which they can take into their veterinary career. This is particularly relevant as the profession is increasing the emphasis on continuing professional development.
The paper investigates how staff in the Veterinary Libraries have collaborated with colleagues in the Medical Libraries, using the example of information skills training for medical students to tailor training for veterinary students. The paper will discuss how Library staff liaised with the Veterinary School to integrate information skills training into the undergraduate curriculum.
The paper will also discuss information skills training of postgraduate students and staff in the Veterinary School.
Finally, the paper will show how the Veterinary Subject Guide on Library Online (http://www.lib.ed.ac.uk/resbysub/vet.shtml) was developed to assist ease of access to resources for students.
Relevance to the conference
The work described in this paper covers several of the conference themes including: training programmes, liaison with clients, teaching Internet search skills, knowledge sharing and developing library websites.
Finally, it suggests that a 21st century veterinary library must develop to meet its clients' needs and provide them with the transferable skills they require in 21st century veterinary medicine.

Introduction

This paper discusses how the Libraries of the University of Edinburgh's Royal (Dick) School of Veterinary Studies (R(D)SVS) have developed information skills training to meet the requirements of the School and provide students with transferable skills which they can carry into their professional lives.

Royal (Dick) School of Veterinary Studies

The R(D)SVS is one of four Schools which comprises the College of Medicine and Veterinary Medicine of the University of Edinburgh. The R(D)SVS was founded in 1823 by William Dick and became a faculty of the University of Edinburgh in 1951. The School is based on two sites; the Summerhall site in the centre of Edinburgh and Easter Bush Veterinary Centre (EBVC) seven miles south of the city.

The Veterinary Libraries

There are three libraries which serve the needs of the School's staff and students. The Veterinary Library at Summerhall is the largest of the libraries. In addition to daytime opening hours, it is open during the evenings and at weekends, and is well used by students. This library houses stock to support the whole undergraduate curriculum, as well as journals and books required by teaching and research staff based at this site.

The other two libraries are the EBVC Library and the Centre for Tropical Veterinary Medicine (CTVM) Library, both at the EBVC site. Both libraries are open 9-5, Monday to Friday, with EBVC Library having out-of-hours swipe card access for final year students and staff.

EBVC Library also stocks material to support the undergraduate curriculum as well as teaching and research material for staff based on this site. As the clinical staff are based here, EBVC Library has a large collection of clinical material. It has an excellent collection of equine material and is building collections in exotic animals and animal welfare to support developments in the undergraduate course and new postgraduate courses.

CTVM Library is used mainly by staff and research students of the School's Sir Alexander Robertson Centre for Tropical Veterinary Medicine. It has a specialist collection of material on animal production and health in the tropics, and related subjects. One of its strengths is its collection of annual reports from around the world.

The Veterinary Libraries are part of the College of Medicine and Veterinary Medicine (CMVM) Libraries and staff in these libraries form the CMVML team. The CMVM Libraries are part of Edinburgh University Library (EUL), which has sixteen libraries around the city.

Background

Over the past ten years there have been many developments in both educational methods and information provision. Educationalists have been moving from didactic teaching to more student centred learning whilst information providers have been making more products available electronically and online.

In veterinary medicine education in the UK there has been an increase in the use of case-based and problem based learning. Students are encouraged to participate in more group work and are expected to find their own references for some essay work. In many Veterinary Schools the Final Year of the course has become lecture-free, with students participating in clinical rounds each week and producing assessed work for each round.

More recently veterinary medicine is following the example of human medicine with the development of evidence based veterinary medicine and personal portfolios.

Furthermore, the Royal College of Veterinary Surgeons (RCVS), the professional body for UK veterinary surgeons, in its *Guide to Professional Conduct* states that "veterinary surgeons are expected to continue their professional education by keeping up to date with the general developments in veterinary science"[1]. The RCVS website adds to this that such continuing professional development "should be seen as the continuous progression of capability and competence"[2].

The R(D)SVS values the importance of continuing professional development, stating that it will ensure "a stimulating educational environment to equip our students for the profession and lifelong learning"[3].

The School and the Library in 1995

In 1995 the R(D)SVS had 417 undergraduate students, an increase of 42% over the 1985 figure. The School was reaching the final implementation stage of its revised curriculum. The new curriculum had been introduced in October 1991 and increased the amount of student study time by 12%. By summer of 1995 the School was preparing for its first lecture free final year. In this year, students spend time on clinical rotations and are required to produce a major project. They select their project towards the end of their fourth year and are required to submit it in May of their final year.

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[1] Royal College of Veterinary Surgeons. *Guide to professional conduct 2004.* London: Royal College of Veterinary Surgeons, 2004. p.21.

[2] *Veterinary Surgeons - Education: CPD (Continuing Professional Development).* Hp. 2004. Royal College of veterinary Surgeons. Available: http://www.rcvs.org.uk/vet_surgeons/education/cpd.html. 1st September 2004.

[3] Royal (Dick) School of Veterinary Studies. *Academic Plan 2004-2009.* Edinburgh, Royal (Dick) School of Veterinary Studies, 2005. p.4.

Whilst the final year project increased students' use of bibliographic databases and journals, the main feature of the new curriculum to impact on the library was the introduction of self-directed learning. In 1991-92, after one year of the new curriculum, reference enquires had increased by 10% on the previous year. In 1992-3 they increased by 20%, and continued to increase over the next few years as the new curriculum continued.

The course, however, was more didactic than it is at present. Over the last ten years the School continued to evaluate the curriculum and examine how it could best be developed, with changes to courses being made each year.

In 1995 the Veterinary Libraries' resources were still very much print based. Whilst CAB Abstracts and Medline on CD-ROM were available for users, print indices such as *Veterinary Bulletin* were still used. Journals and books were mainly available in print only and electronic journals were not a major part of the Library's collections until the end of the century.

The School and the Library in 2005

Undergraduate numbers have continued to increase and in 2005 the School has 528 students, an increase of 26% since 1995 and 80% since 1985. The curriculum is more complex and students and staff felt that there is 'curriculum overload'. Veterinary students can feel that there is too much information for them to learn and the School is again undergoing a Curriculum review with the aim of reducing the amount of didactic teaching. This can be a difficult exercise, especially as the 2005 curriculum includes lectures on topics which were not taught in 1995, such as exotic animal medicine and wildlife medicine. "Vertical themes" have been introduced in the last few years in areas such as Veterinary Public Health and Population Medicine. These themes run through four years of the course. Furthermore, there has been an increase in the amount of in-course assessment.

As the curriculum evolves, the development of problem and case based learning and group study are encouraged. Within the veterinary profession, evidence based veterinary medicine is being promoted, and this is also becoming part of the undergraduate curriculum. Furthermore, the School is keen that students are aware of the clinical relevance of all aspects of the veterinary degree course and closer collaborative teaching between pre-clinical and clinical members of staff is encouraged.

Further additions to the curriculum since 1995 include the introduction of communications skills and Personal and Professional Development Portfolios (PPDP). The latter are designed as a way of assisting the students to build up a personal record of their experiences in areas that are not directly within the remit of specific courses, such as information skills and communication skills.

The final major development in the School over the last ten years has been the in-house development of the

Edinburgh Electronic Veterinary Curriculum (EEVeC), a virtual learning environment.

The Veterinary Libraries' resources have also changed dramatically over the last ten years. There has been a huge increase in the provision of electronic resources. In 2003-4 the Veterinary Libraries spent £70K on electronic resources (including databases and electronic journals) and £53K on print resources. As recently as 2001-2 (when EUL introduced separate financial codings for e-resources) only £7K was spent on electronic resources, with £114K being spent on print resources.

Web-based resources are constantly developing, for example, Elsevier have produced electronic journal backfiles in many subject areas, making more full-text journals available online. Search interfaces in established databases change as producers vie to make their products more user-friendly and attractive.

Over the last ten years many bibliographic databases and other resources have changed from CD-ROM to web-based, examples include CAB Abstracts, Medline, Vetlogic and CD Canis etc.

Information specialists have had to keep up to date with developments in electronic resources, as well as with the developments in their parent organisations. These developments bring many challenges for libraries.

The challenges for the R(D)SVS Veterinary Libraries

The increase in student numbers has meant information skills provision has had to change. In 1995 students were trained on using CAB Abstracts and Medline on CD-ROM in groups of up to six. This usually took place in the clinical years of the course on an ad-hoc basis. It is no longer possible to teach such small groups, and it was found that because library staff did not have time to do this, students taught each other. Whilst this is a useful example of group work, it was found that students did not necessarily explain the resources fully to their colleagues, who still required assistance from library staff.

The changes to learning and teaching methods, such as the introduction of self directed learning, saw library use increase. This meant that staff had less time to spend with students who ironically required more assistance. These changes also resulted in students using journal articles much earlier in the course than previously.

How these challenges were met

The first aim was to structure information skills training. We discussed this with colleagues in the Medical Libraries who already had information skills training embedded in the medical curriculum. The Medical Libraries staff had produced training session outlines and documentation on topics such as how to structure a literature search and the different electronic resources available for the subject. These were adapted for veterinary medicine.

It would be much more efficient to provide training to larger groups of students and to relate it to their level of study. In 1999 the Veterinary Libraries had subscribed to CAB Abstracts online which was this much easier than the CD-ROM version to show to larger groups of students.

With this in mind the School was approached and timetable slots were requested. The Librarian spoke of this in an Undergraduate Studies Committee (UGSC) meeting and explained why timetabled information skills training would be useful to the students at the time and in the future. Such training would provide students with an early grounding in information retrieval which would assist them in their course work. It would also equip them with transferable skills which they could use in future continuing professional development. The committee agreed to this proposal and in February 2000 the first timetabled information skills sessions were given in the School microlab. The first year class was divided into four and each group received one hour on information skills training.

It was felt that it was essential to evaluate all information skills sessions. This was invaluable for the Veterinary Librarian because it informed the development of the content of the sessions and also influenced the timetabling. Initial feedback from the students was that there were not enough pcs – there were 25 students in each first year group, but only 15 pcs. This feedback was taken back to the UGSC who agreed with the suggestion that the first year cohort should be divided into eight groups rather than four. The feedback from the information skills training in 2001 was that the first year students would prefer to begin the sessions in first term and that they would like to have more information skills sessions. As a result, it was agreed that the number of first year sessions would be doubled. This was an indicator of the importance the School gave to information skills training, especially as the trend was to reduce the number of timetabled slots rather than increase them.

The School support and user evaluation were both essential elements in the development of information skills training, as was collaboration with colleagues.

What is being done at present

Currently, timetabled information skills training is given to first years in October and January. In the first session students are told why they are being given information skills training – that it will assist them find articles and other resources relevant to their areas of study. They are also told that over their course they will develop information retrieval skills which they can use after qualification in their continuing professional development. They are introduced to Library Online (EUL's website) and shown the Veterinary Subject page. They are then taught how to structure a literature search to get the most relevant results (having first been told what a bibliographic database is and what it provides information on). In this first session they are shown basic searching in CAB Abstracts and introduced to web-based resources such as VetGate and WILDPro.

The second session introduces the students to subject searching and they are shown Medline and Web of Science. In both sessions there is time for hands-on practice and staff are available to answer any queries the students may have.

These sessions are targeted to the level of course and the search examples used are based on essay topics from previous years. This stresses the practical applications of information skills. In addition, the students appreciate that as these sessions are timetabled and are an element of their PPDPs the School view them as an important part of the students' skills base.

There are drop-in information skills sessions for students in later years. These are timetabled, but are not compulsory. Students find these a useful way to brush up on their skills, especially following the summer vacation. At present, after-hours information skills sessions are being developed for final year students. As the final year is lecture-free and clinic based, students have no time to attend information skills sessions. A recent trial of this was well received and it is hoped that this can be developed further.

In collaboration with colleagues in the Medical Libraries, a list of competencies and skills for information skills has been produced (Appendix). This shows the students what is expected of them, and follows the example of the curriculum in being outcomes based.

This collaboration also resulted in the development of supporting documentation. The students are given the following handouts:

- Short guide to electronic resources for veterinary medicine

- Structuring your literature search

- Which database?

- Making the most of Medline and CAB Abstracts

They are also provided with CAB and Ovid produced guides to CAB Abstracts and Medline. Whilst this may seem rather a lot of documentation, if it is kept in a student's PPDP it can be referred to throughout their course.

In addition, the students can refer to the Veterinary Medicine Subject Guide on Library Online (http://www.lib.ed.ac.uk/resbysub/vet.shtml). Students often state that they want to have a 'one stop shop' where they can access all the information they require. Whilst this is not possible, a subject page can be a useful compromise. Here students can find links to the various databases, references sources and professional websites they may wish to use. The Veterinary Medicine Subject Guide was also based on the guide produced for the medical students and thus ensures consistency across the College Libraries. This is a popular resource – the Veterinary Medicine Subject Guide is one of 62 subject guides on Library Online and is consistently among the top three most visited guides.

As well as supporting information skills training of undergraduates, the Veterinary Libraries provide timetabled sessions for taught postgraduates. Library staff participate in Transferable Skills sessions for research postgraduate students. These courses are organised by the College of Science and Engineering and provide students with training in communication skills, project planning, thesis writing and information retrieval, amongst other topics (http://www.scieng.ed.ac.uk/transkills/).

Training is also available for School staff. CMVML staff collaborate on database specific training sessions for staff. These may be held at lunchtimes or before 9am as staff are often unable to attend sessions during the working day. Library staff also arrange training for staff on an ad-hoc basis.

Where next?

The veterinary curriculum is undergoing another review and is constantly evolving. The Veterinary Libraries team have to ensure they keep up to date with this, as well as with other developments in veterinary medicine and educational methods. Recent developments include the Royal College of Veterinary Surgeons' Education Strategy Steering Group, which was established in 2000 to "review the key issues facing education and training in the veterinary profession"[4] and the Vet2020 Project which is examining veterinary education in twenty European countries. These reports may lead to further curriculum changes.

The Veterinary Libraries will continue to collaborate with colleagues in the Medical Libraries to produce information skills training and support. Discussions so far have led to developments in both subject areas.

More support will be made available online for users. Colleagues in the Medical Libraries have produced online tutorials for use on Medicine's VLE. Generic tutorials are more cost efficient for the Library, but users often prefer database- and subject-specific tutorials. Online tutorials can be time consuming to update, for example, when database interfaces change. Text-based supporting documentation is much easier to update and more of this will be made available on EEVeC for students to access anywhere.

Finally, as well as keeping up to date with the above, information professionals must also be aware of developments within information provision. Today's students are from the 'Google generation' and don't see why they should have to go to more than one place (virtual or physical) to find what they want. Whilst we can show them why it's important to use various bibliographic databases, we can't force them to use them! We can't stop our users looking in one place,

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[4] Royal College of Veterinary Surgeons. Education Strategy Steering Group. *Veterinary education and training: a framework for 2010 and beyond, recommendations presented to RCVS Council.* London: Royal College of Veterinary Surgeons, 2002, p1.

such as Google Scholar, and doing very simple searches. With such resources they do not need to understand the database they are searching, nor do they need to remember, for example, which truncation symbol to use. Google Scholar users often comment that using this resource they can access articles in one or two mouse clicks, whilst using Library provided resources this does not happen. They see the Library putting up barriers to resources – they have database passwords and journal password to remember, for example. Again, we cannot ignore such comments.

Perhaps the solution to this is to construct search interfaces for library resources which look simple to use, but which, behind the scenes, carry out more complex searches and produce high quality results.   At Edinburgh, we are trying to implement a federated searching system (Endeavor's Encompass) with the hope that this can be achieved.

In conclusion, information professionals in animal health have evolved their services over the last ten years as resources, educational methods and technological changes have taken place. I believe that the next ten years will be no different!

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Appendix 1

University of Edinburgh Library - College of Medicine and Veterinary Medicine Libraries
Information Skills Schedule for undergraduate students in Medicine and Veterinary Medicine – a working document

Competencies

Basic (Year 1)

- be able to identify the type of material cited in a reference
- be able to cite material using an acceptable reference format
- be able use the Library Catalogue and/or Library Online to find the locations of reading list items
- know what to expect from a bibliographic database
- know when it is appropriate to use a textbook or the literature in periodicals
- know when to use Medline
- be able to carry out a simple Medline search
- know about various databases other than Medline

Intermediate (Years 2-3)

- know what to look for to determine the quality of resource (e.g. currency, bias, conflict of interest, etc.)
- know how and when to use key databases other than Medline / CAB (e.g. WoS, BIOSIS)
- know where to find high quality life-sciences information on the wider Internet

Advanced (Years 3-4)

- be able to create a structured search from a clinical situation (involves recognising a need for information)
- know the basic steps required to perform a systematic literature search

Specific skills leading to competencies

Basic (Year 1)

- understand the components of a cited reference
- know when to cite a source, as opposed to listing it in a bibliography
- know what Boolean operators are and how to use them
- be able to choose search terms from a research question
- know where to find databases and information about them
- know how to build a search history
- know how to use limits (largely Ovid Medline?)
- know how to do a Subject Heading search
- know how to do a free-text search
- know how to truncate words or use wildcards
- know how to save search histories (Ovid)
- know how to output search results

Intermediate (Years 2-3)

- know when to use thesaurus terms versus free-text
- know to use Scope Notes to find most appropriate Subject Heading
- know how and when to 'explode' (Ovid interface specific?)
- know when to 'Focus' Subject Headings (Ovid specific)
- know when to use or avoid Subheadings (Ovid specific)
- know how to set up 'auto-alerts'
- know how and when to use Internet search engines and subject-specific gateways (e.g. BIOME , Google)

Intermediate/Advanced (Years 3-4)

- be able to make a focussed research question
- know how to use search filters (e.g. methodology filters)
- know how to do a cited reference search (WoS)