

HICSA CONFERENCE 8/9 NOVEMBER 2004, BLOEMFONTEIN

**Google joins the veterinary curriculum: teaching web searching and evaluation skills to veterinary students at the University of Pretoria**

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INTRODUCTION

*The 2003 OCLC Environmental scan: pattern recognition* (1) is a report based on a survey of various libraries throughout the world, including South Africa. This report shows that the role of the Web in users' lives has become a concern for librarians worldwide.

“Librarians worry that information found using search engines does not have the credibility and authority of information found in libraries, and that people will not learn basic information seeking skills. They worry that due to inadequate search terms and skills, much valuable material may be undiscovered.”

This quote is from the *Social landscape* section of this report, and concludes: “Instead of wringing our hands over students using the Web for research, we should help them learn to use Web materials and resources more effectively.”

<http://www.oclc.org/membership/escan/social/satisfaction.htm>

Since the introduction of up-to-date computer facilities at the Faculty of Veterinary Science of the University of Pretoria, Onderstepoort, including a state-of-the-art computer laboratory next to the Library, with free Internet access all day, it was soon noticed that students were making more use of the computers in the laboratory to satisfy their information needs than coming to the library itself.

Google and *PubMed* were becoming the student's first and usually only choice for finding information.

Recent figures show that Google receive over 200 million searches every day! And the worrying aspect of this is that the users are generally satisfied with their results. They are often (mostly) unaware of the relevant information they have not found. They no longer perceive a need to use the services of a librarian.

In *Snappy Librarian comebacks* (2) we read – “one study estimated that the average employee spent at least three hours per week just looking for information and NOT finding it”

The 2003 paper by Agee and Antrim (3) also points out the increasing phenomenon of “disintermediation” where users seek and retrieve information without the assistance of the librarian. “Many students assume that the Internet satisfies all their information needs as confirmed by The Pew Internet and American Life Study (2001)”. So we are not alone in noticing a decline in use of the Library as our students turn to the Internet, whether at home or in student residences, or in the computer laboratories.

As librarians we need to try new instructional approaches to inform our students (and others, such as the lecturers) of a better way to find information.

Being able to use Google and the Internet’s various free resources effectively and to evaluate the information they find on the Web is important in the changing veterinary profession environment and the information needs resulting from these changes. With increasing emphasis being placed on continuing professional requirements in South Africa, it is essential that veterinary students who will become practitioners acquire the skills before they leave Onderstepoort.

## DESIGNING THE COURSE

In designing the course we first looked at what is being presented by other university libraries and based our content on courses presented at the University at Albany, USA (4) and University of California Berkeley (5) as well as a New Zealand Internet course (6).

Our emphasis was on searching relevant animal health related sites that are freely available. This would enable our students to be sure of being able to find meaningful information even without access to the library-facilitated commercially available databases, once they were practicing as veterinarians without access to a veterinary library.

The training modules were designed to teach advanced Internet searching skills, focusing on a selection of the best web sites in animal health and related subject fields. With the aid of handouts and a PowerPoint presentation the information specialists explain how search engines work, search engine techniques, differences between web directories, subject directories and search engines, and how to go beyond search engines in finding information on the Web.

In the Search Tips section we include how to formulate a search strategy, the use of Boolean operators, using Help Pages of search engines, and the use of features to make searches more specific, such as quotation marks.

For optimum relevance, impact and student satisfaction we link the course content to the study areas covered in the students’ final year, namely Veterinary Public Health, Companion Animal Medicine, and Production Animal health.

Websites of relevance to veterinary practitioners are covered in detail, such as Vetgate, IVIS, OIE, FAO and WHO.

Free reference databases for animal health are included (*PubMed* and *Agricola*) and the special diagnostic information provided by Cornell University's *Consultant* database.

We also cover how to cite electronic sources (7) and emphasise the necessity of giving credit for downloaded material, including visual material.

Evaluation of the information they find on the Web is a new concept for them and they find this aspect of the course particularly useful. We based this part of the course on tips found on a New Zealand site (4) as well as the University at Albany USA training course (6).

Being able to give examples of bad information found on the Web from our personal experience is an effective means of demonstrating the necessity of evaluation.

To reinforce the learning experience we designed exercises which participants complete on their own. We based them on the New Zealand Internet training course as we liked its participatory approach where students are asked for feedback on the search engine used, the sites searched, the terms used and the time taken to complete the search. We substituted the topics they listed for more African-related ones.

Our course is presented in the computer laboratory to groups of 9 students at a time, in the afternoons. It takes approximately 2 hours to run through the course and allow time for individual searching on the various websites to enable students to experience the differences.

The exercise usually takes them 30 minutes to complete and allows them the opportunity to give us feedback.

This course has the full support of the Faculty as it is part of the official Clinical Rotation in the final year of the BVSc curriculum. Attendance and the satisfactory completion of the exercises is reported to the Director who is responsible for this clinical year.

## **Full index of the course**

Introduction

Search tips

Search tools

    Subject gateways

    Web directories

    Search engines

Subject tools for animal health

- Animal health gateway : VetGate
- BIOME
- Bristol Biomed Slide collection
- Consultant (Cornell University)
- DATABASES: Agricola and PubMed
- E-BOOKS, including Merck Veterinary Manual
- Electronic Zoo

- FAO
- IVIS
- OIE
- Tutorials for practitioners
- Vetscite
- WHO
- Zoonoses websites

Evaluating web resources  
How to cite web resources

### SOME CONCLUSIONS

All students were very positive about this course, stating it to be the most relevant of all the information literacy training sessions they had received. They all agreed that it should be presented much earlier during the undergraduate degree program, such as at the beginning of the 3<sup>rd</sup> year.

These sessions were held for final year (BVSc VI) students to prepare them for their future roles as practitioners. Lecturers were so positive about the training that they arranged to send students in future in their pre-final (5<sup>th</sup> year) from 2005.

Most of the students had done Internet searching with Google being the search engine 99% used. Yet it soon became clear that they had only superficial knowledge of Google. They were impressed to discover all the facilities that could be used to refine searches. This aspect showed that the information specialist definitely still has an important role in showing library clients how to search effectively.

Another surprise finding for the information specialists was the fact that most of the websites that were featured in the course (specifically animal health orientated ones) were unknown to the students. Subject gateways or portals such as IVIS and VetGate are top-notch veterinary sites, and yet were unknown to these “surfers”. This proved once again the importance of helping users to focus on the worthwhile sites on the Web. One can market such sites via e-mails to students, but hands-on, face-to-face sessions in the computer laboratory are more effective.

We found these Internet training sessions became ideal opportunities to re-enforce training we had given in their previous year (BVSc V) in searching library (commercially available) databases such as *CAB Direct* and *Medline*. We emphasized the fact that for comprehensive coverage for research projects they would have to consult these subject specific databases and not only rely on Google and *PubMed*.

### FUTURE

Future plans include placing the course on the Web so that students can do it plus the exercises in their own time and at their own pace. On the other hand, the small group sessions were conducive to interactive discussions leading to group sharing and learning.

These groups remain the same throughout this final year of the course as they proceed through the various clinics.

To promote the relevance of the course the lecturer will set each group in future a task consisting of an assignment on a specific veterinary public health topic. This assignment will be undertaken after the group has attended the Internet training session as well as the usual preceding Information Literacy course. It will test all aspects of the training including searching the commercially available databases as well as the free ones on the Internet, and evaluating the results. These will be compulsory group assignments and marks will be allocated to them.

We are considering presenting such Internet Searching training sessions at veterinary practitioners conferences and workshops, thereby generating funds for the library, and helping practitioners to obtain maximum benefit from the Internet to upgrade their skills in treating their patients and supporting their continuing professional development.

In conclusion, even though Google has infiltrated our information world with an intensity and rapidity that leaves us information specialists confused and concerned about our future, these training experiences at Onderstepoort show clearly that the mighty Google can only reach his full potential when we information specialists show the way!

## REFERENCES

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<http://www.oclc.org/membership/escan/social/satisfaction.htm> (accessed 25/08/2004)
2. Abram, S. Snappy Librarian comebacks; what to say when the boss tells you that everything's free on the Internet!  
<http://www.sla.org/chapter/cwcn/wwest/v2n3/sainduh/htm>  
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3. Agee, J. and Antrim, P. (2003) Stone buildings, cyberspace, and the library user. *New Library World*, vol.104 (1194/1195): 474-480
4. Internet tutorials  
University at Albany, USA  
<http://library.albany.edu/internet/> (accessed 12/08/2004)
5. Types of search tools  
University of California Berkeley  
<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/ToolsTables.html>  
(accessed 12/08/2004)

6. New Zealand. Ministry of Education. English online. Internet tutorial  
<http://english.unitecology.ac.nz/resources/resources/tutorial/> (accessed 2/11/2004)

7. Murdoch University. World wide web documents (citing)  
<http://www.lib.murdoch.edu.au/guides/harvard.html>

#### OTHER USEFUL SITES:

Internet searching: The World according to Google  
[http://www.keepmedia.com/ShowItemDetails.do?itemID=312284&extID=10043&data=internet\\_searching](http://www.keepmedia.com/ShowItemDetails.do?itemID=312284&extID=10043&data=internet_searching)  
(accessed 12/08/2004)

ICYouSee: How can you find anything on the web?  
Ithaca College Library  
<http://www.ithaca.edu/library/training/find.html>  
(accessed 12/08/2004)

Itrain online materials  
[http://www.bellanet.org/itrain/materials\\_en.cfm](http://www.bellanet.org/itrain/materials_en.cfm) (accessed 13/08/2004)

The Library in your office (University of Pretoria Academic Information Service, Service Unit Veterinary Science)  
<http://www.ais.up.ac.za/vet/virtlib.htm> (accessed 13/08/2004)

Teaching Internet research skills  
<http://www.virtualchase.com/researchskills/google.html> (accessed 13/08/2004)