

## **Development and evaluation of a library skills programme for postgraduates: An example of evidence-based librarianship**

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The University of Wales College of Medicine (UWCM) offers a Diploma in Biomedical Methods to postgraduate students (mostly PhD students) (1). All students take the core course covering information skills, medical statistics, ethical issues, and the presentation of scientific research.

The information skills module covers:

- a) An overview of the research literature,
- b) Converting information queries into answerable questions,
- c) Searching for the best evidence using databases, the Internet and other sources of information,
- d) Reference management software, and
- e) Critical appraisal.

As is inevitable with a group of postgraduates from a range of backgrounds, the levels of library and information skill within the group vary greatly. For example, of 40 students in the 2001/2002 group, 12.5% considered their database searching skills to be non-existent (or almost so) while 30% felt that they were proficient searchers. 15% had experience of critical appraisal and 17.5% of using reference management software, but over 80% had no experience of either technique.

In response, we are developing a self-paced workbook approach (plus extensive tutor support) to ensure that students progress to the required level, at a speed appropriate to their existing skills and experience. To guide these developments, a detailed evaluation of the 2001/2002 course content was carried out.

The evaluation consisted of pre- and post-course questionnaires (at the first session and six-weeks after the last session), plus structured interviews with volunteer students to assess responses to different teaching methods and the subsequent value of the techniques taught.

The main findings from the questionnaire study (100% response to the pre-questionnaire and 88% response to the post-questionnaire) plus interviews with four students were:

- a. Small group-sizes with tailored hands-on teaching were preferred (by 60% of respondents).
- b. Work book questions should be directly relevant to student's PhD topic if possible.
- c. *PubMed* (2) training was requested by a significant minority of students (14%), in addition to training on the multi-database service available at UWCM (nine biomedical databases via OVID and the Citation Indexes via the Web of Science).
- d. Internet sessions to concentrate on quality appraisal of internet sites rather than basic searching.

- e. The critical appraisal of journal articles and reference management training were very popular. Two months beyond the course these skills were being used by 80% and 74% of students respectively, compared to baseline levels of 17.5% and 15%. The current awareness service (ZETOC) (3) was less popular (but was subsequently used by 48% of students compared to a baseline of 0%).

These findings will be integrated into next years' course. In particular:

- a. The course will be run with a work-book component for each session, preceeded by a short tutor introduction/demonstration with tutor support for the rest of the session.
- b. One or more questions in each work-book will be of direct relevance to the student's PhD topic.
- c. Database (Medline, Embase, Science Citation Index) & Internet searching, critical appraisal and reference management software will continue to be covered. The course will also include information on the pros and cons of using *PubMed* and the multi-database searching facility available at UWCM; The ZETOC component of the course will be reviewed & adapted with student input.

The 2002/2003 course will be assessed and evaluated with an emphasis on long term outcomes (use of skills six months beyond the end of the teaching sessions).

These findings and the changes planned for next year's course, including examples of the course materials, will be demonstrated in the talk. This study is a pilot for the development of an evaluative approach to all learning and teaching programmes offered by Library Services at UWCM.

(1) [http://www.uwcm.ac.uk/study/medicine/dip\\_biomed\\_meth/](http://www.uwcm.ac.uk/study/medicine/dip_biomed_meth/)  
(accessed 14.08.02)

(2) <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi> (accessed 14.08.02)

(3) <http://zetoc.mimas.ac.uk/> (accessed 14.08.02)