

BASE CAMP TO SUMMIT: A COLLABORATIVE APPROACH TO BUILDING SKILLS AND PROVIDING SUPPORT IN THE AREA OF EVIDENCE BASED PRACTICE

INTRODUCTION

The growth of the evidence based practice movement has demanded a response from health librarians at Curtin University Library. This paper outlines how a collaborative approach to building librarians' skills from shaky beginnings to firm foundations has facilitated a level of Faculty research support that is recognized, utilized and appreciated.

Demand from the Faculty of Health Sciences in the area of evidence based practice started in 2009 with a request from a research centre for training on how to search the literature for systematic and integrative reviews. The upskilling required to provide this training was undertaken by the Faculty Librarian alone and was a daunting process. As more requests of a similar nature were received, it became clear that a team approach would be more effective.

METHODS

We undertook the following multi-faceted approach:

1. To seek and receive training for the Health Sciences team in evidence based practice
2. To broaden our knowledge base by undertaking a high level of academic reading and discussing articles read
3. To use the knowledge gained from the above to produce two LibGuides: *Evidence Based Practice* and *Systematic Reviews*
4. Agreeing to work collaboratively with the Faculty on a project to train Honours students in how to do systematic reviews
5. Partnering with systematic review team researchers and their Australian collaborators in the implementation of a robust search strategy
6. Running workshops for Faculty postgraduates and academic staff on how to search the literature for systematic reviews
7. Collaborating with Perth based health librarians in the organisation of a research workshop called *Searching Systematically* at which we presented a paper on 'Searching the Literature when Undertaking a Systematic Review'.

RESULTS

The Faculty's expectations of expert librarian support are now being met at a level that we could not have previously envisaged. For example, feedback from our workshops has shown that we are perceived as being highly skilled and able to take on new areas of support that academic staff have identified such as the need for assistance in *qualitative* research practices.

CONCLUSIONS

Working collaboratively within our own team, with the Faculty and with other health librarians has been highly effective in our growth to date and we are keen to seek out further opportunities for engagement as we continue on this exciting journey.

RELEVANCE

It has become apparent that the Faculty of Health Sciences at Curtin University considers us to be expert searchers who are able and willing to meet their demands. Our paper demonstrates how the role of the Health Sciences library team has needed to evolve in line with Faculty expectations and needs.

What was at base camp? New beginnings...

The Faculty Librarian for Health Sciences had become familiar with the concepts of evidence based medicine while working as a part-time librarian in the Medical and Dental Library at the University of Western Australia (UWA). She was very fortunate to have worked with experienced librarians who had in-depth knowledge in this area and who provided in-house training for staff, students and academics. She had assisted with information literacy sessions for medical students on evidence based medicine but the concepts occurred to her as more of a theoretical construct at this stage.

On her move to Curtin University in 2005, the focus was now allied health not medicine or dentistry and she grappled with how to translate and embed her skills into the Faculty without having specifically been asked to. As a new Faculty Librarian the challenge was to discover if and how evidence based practice was being taught in such a large Faculty with seven schools. Fortunately, a request came a few years later when the Faculty asked for her assistance in conducting training sessions on searching the literature for evidence. The invitation came from the Director of the Western Australian Centre for Evidence Informed Healthcare, a Joanna Briggs collaborating centre based in the School of Nursing & Midwifery. She was invited to co-teach with the librarian employed by the Centre, ironically one of her previous UWA colleagues. This was both a great opportunity for collaboration with the School and with her former colleague, and a way to refresh her previously acquired knowledge in evidence based practice. Since then, the Health Sciences team has been invited to present these sessions on a regular basis.

Another early initiative was to work on producing a webpage which provided links to various evidence based practice resources for the seven schools of the Faculty. This arose out of conversations at Faculty Teaching & Learning Committee meetings about evidence based practice resources. A previous member of the Health Sciences team was formerly a nurse and her experience was very useful in the sourcing of resources and in the layout of the webpage.

The uphill journey - why we had to build skills

A test to the skills and knowledge of the Faculty Librarian was received in 2009 when a request came from the Director of the Centre for Cardiovascular and Chronic Care located at the Curtin Sydney campus and affiliated with the School of Nursing & Midwifery. The Faculty Librarian was requested to provide two half days of training to PhD students and researchers. The first day was to focus on effective searching skills, setting up alerts and finding journals in which to publish. The second day was to concentrate on checking search strategies and specifically how to search the literature for integrative reviews and systematic reviews. This was a daunting task, because while the Faculty Librarian was familiar with

systematic reviews in a general sense in terms of locating them in the Cochrane Library, she had never heard of integrative reviews and certainly had no clear idea about the differences in methodology.

Preparation for this trip involved a lot of frantic reading on how to develop search strategies for systematic and integrative reviews and on a more practical level, how to maximize the use of appropriate database limits. The Faculty Librarian produced a document entitled *Search strategies for systematic reviews – useful resources and key points* for the attendees which has been used many times over the years. This was knowledge that was not by any means new but it was unfamiliar to her. It was a rather stressful experience but it certainly drove a desire to become more skilled.

In general we discovered that requests for assistance from the Faculty came with an assumption and expectation that health librarians would have the necessary skills and knowledge to meet their needs. As an example, the director of the Centre was so confident in the quality of the sessions to be delivered, that unbeknown to the Faculty Librarian, she had invited colleagues from two other universities and two Sydney hospitals to attend.

From the Sydney experience it became obvious that a one person operation was no longer viable and reinforcements were necessary in anticipation of more requests of a similar nature. Consequently the Faculty Librarian enrolled the help of one of the librarians on her team who from the outset had always been keen and willing to expand her knowledge in the health arena.

Another driver in the development of this team approach was the proliferation of requests for assistance with systematic reviews, not only in selecting suitable databases in which to search for evidence and the development of effective search strategies, but also in the more theoretical aspects of developing protocols and determining inclusion and exclusion criteria. The Faculty Librarian invited her colleague to sit in on several one-to-one consultations. This has been a highly effective approach to simultaneously build skills.

Gaining momentum - how we built skills

1. Training courses – the climbing blocks

As well as assisting research students and academics with the systematic review process, we had been asked on a number of occasions to check search strategies for systematic reviews and generally felt underqualified for this activity. While we were fully versed in demonstrating search strategies for undergraduate information literacy sessions and in providing assistance to research students for their literature reviews, the level of searches that we were being asked to comment on were generally beyond our expertise and experience.

Consequently, we started looking for courses to assist us. In 2010 we found a Moodle course run by the Medical Library Association, U.S. entitled *Expert Searching for Evidence Based Nursing*. The Faculty Librarian approached her Associate Director to inquire if both she and her eager, unwitting colleague from the Health Sciences team

could participate in this course. Her colleague was completely new to the world of evidence based practice. This in essence was her base camp and she found the Moodle course overwhelming and nerve-racking with its expectation that participants would be involved in online discussions about evidence based practice principles of which she had no previous knowledge. So it was a truly a steep learning curve for her. The course was initially publicised as being an eight hour course to be run over six weeks. When it became apparent that participants were struggling to meet the deadlines, the course was extended to several months. Although, this significantly increased the number of hours we spent together on completing each module of the course, the experience of working collaboratively was extremely strengthening for both of us. It forced us to read extensively which drove our learning and laid a strong foundation for working differently in the Faculty.

Some of our managers were under the impression that since we had completed the Moodle course on *Expert Searching for Evidence Based Nursing* we were now expert searchers and hence did not require further training. It took some persuasion from us and evidence of Faculty demand to convince our managers that we needed to keep abreast of new information and continually update our skills. We both applied for the *Evidence Based Practice Librarians' Residential Seminar* and although we would have preferred to do this together, we attended it at different times (2011 and 2012 respectively). This seminar provided another layer of learning, cleared many misconceptions, reinforced the understanding of some of the previously studied concepts and opened a gateway to a whole new world of knowledge. The learning was facilitated by group study with highly experienced group leaders. The handouts given were invaluable and formed a stepping stone for branching out to other useful resources. The principles and practical applications of evidence based practice were now slowly beginning to gel and fall into place.

Both of us applied to attend a Health Libraries Australia (HLA) Professional Development Day called *Speaking Systematics - Primer on Systematic Reviews for Health Librarians* which was held in Sydney in 2012. The distance and cost of the airfares for a one day seminar was a huge obstacle resulting in only the Faculty Librarian being allowed to attend. The expectation was that she would bring her colleagues up to speed on her return. The day included speakers from the Joanna Briggs Institute, the Cochrane Renal Group, the National Centre for Immunisation Research and Surveillance and university libraries. The in-depth presentations on conducting systematic reviews, on using published standards for systematic review searches and the role of health librarians on a systematic review team had the effect of dramatically widening the knowledge of the Faculty Librarian. Furthermore, the information and resources provided during the day were extremely useful in the development of the Health Sciences team's own resources in this area, for example, the Systematic Reviews LibGuide.

2. Academic reading – casting the net wide

One benefit of the Moodle course was that it started our habit of reading more widely and exploring evidence based practice web materials. All relevant materials discovered were stored in an EndNote library. The course had provided us with a rich collection of

resources to explore which we felt we had not done justice to during the course. Consequently, we set up regular weekly meetings for discussion and investigation, bouncing ideas off each other to help clarify confusing concepts.

We also used these weekly meetings to work together on developing new resources and on the preparation and updating of teaching materials. We often felt overloaded with information and sometimes got lost in the detail but there were also moments of great excitement and illumination. The main challenge was to juggle these set appointments with our other professional duties.

Summit in sight – research into practice

1. LibGuides

As a result of our participation in the U.S. Moodle course, we decided to convert the previously designed Evidence Based Practice resources webpage into a LibGuide in order to include what we had learned from our training courses and to provide a more pedagogical structure. This guide has been well received and is being heavily used in the Faculty.

From information gleaned at the *Evidence Based Practice Librarians' Residential Seminar* and the *Speaking Systematics Day*, we felt ready to tackle a Systematic Reviews LibGuide. Initial steps involved collaboration with our Perth health librarian colleagues who had also attended these training courses. Working together helped us develop a framework for the guide which then took us several months to complete. Based on our conversations with research students and academics we wanted the guide to support the kinds of queries we had been receiving. We decided that the structure of the Systematic Reviews LibGuide should take the form of an instructional step by step guide in how to do a systematic review, as well as providing links to useful resources. The resulting guide contains steps on how to develop a systematic review protocol, how to develop a focused clinical question, how and where to search a range of resources and how to report and manage search results. We particularly wanted the section on 'How to search' to contain robust information and to support this we consulted the Cochrane Handbook for Systematic Reviews of Interventions, the Joanna Briggs Institute Reviewers' Reviewers Manual 2011 edition and the Cochrane Methodological Standards for the Conduct of Cochrane Intervention Reviews.

At the time the Systematic Reviews Libguide was being developed in late 2012, the Health Sciences team was approached by an academic in the School of Occupational Therapy & Social Work who wanted assistance in training Honours students on how to conduct systematic reviews. She requested that the existing LibGuide be adapted by adding unit specific resources. This resulted in the creation of the Allied Health Research Design 341 LibGuide. The academic also requested that a workshop be run to provide additional support for these students. We have now done this for two years with much collaborative support and appreciation from the School and the eighty students who have attended these workshops. In 2014, we added an additional workshop where students practiced searching based on the search strategy they had developed from their PICO's.

All three health librarians in our team were available to provide hands-on assistance during the session.

Statistics of all page views for our relevant LibGuides are as follows:

	Jan- June 2013	Jul – Dec 2013	Jan- June 2014
Allied Health Honours Research Design 341	2002	989	2767
Systematic Reviews	1307	2598	3163
Evidence Based Practice	1988	2613	2448

2. Workshops

The team further collaborated with the School of Occupational Therapy & Social Work in the planning and development of a combined workshop on systematic reviews. The School delivered the theoretical framework in the morning session and the Library ran the afternoon session which covered searching strategies. This was the first systematic review workshop to be run by the Health Sciences team and was attended by thirty academics. Although it took a long time to plan and prepare, the success of the first workshop boosted the confidence of the team to run two more *Searching the literature when undertaking a systematic review* workshops. These were offered to both staff and postgraduate students in the Faculty of Health Sciences and could only be attended by twenty six people each time because of the capacity of the training room. We were pleasantly surprised that the first workshop was booked out in just half an hour and confirmed that we were moving in the right direction.

Evaluation from Curtin academics and students was extremely positive and some comments from the workshops included:

“Friendly nature of the librarians - very knowledgeable and happy to work alongside as a partner in learning.”

“Getting a first-hand opportunity to understand searching literature in a systematic way.”

3. Collaboration with academics

The success of the systematic reviews workshops gave rise to an opportunity to further collaborate with the School of Occupational Therapy & Social Work. The team was invited to partner with a systematic review research team and their collaborators in the Autism Collaborative Research Centre (CRC). This took the form of working with them to plan a highly robust search strategy which was initially daunting due to the complex nature of the research area. They were patient and inclusive and we had many meetings and discussions with the research team to develop a PICO and determine and refine terms based on the search results. There was much mutual appreciation of each other's skills and knowledge and it was a very valuable experience for all concerned. We both found working together on the search strategy to be an effective way to check that we had not missed any relevant terms. The PhD students who sat in on these meetings all made appointments with us afterwards. These appointments gave us a better insight into their database and searching challenges and provided some potentially useful material

to include in our future workshops such as how to use EndNote effectively when doing a systematic review.

Feedback from collaboration in the School of Occupational Therapy and Social Work includes the following:

- Honours students enrolled in Allied Health Research Design 341
 - students evaluated their unit very highly and discovered that doing their research proposals made them very aware of gaps in the literature;
 - students have commented that they value the stepwise format given to them in order to carry out their systematic reviews. The unit co-ordinator has commented that she could not have run this unit without the Library's help. The Library's integral role was in the demonstration of effective literature searching skills;
 - a Qualtrics survey was used to evaluate the Library sessions (database searching and EndNote). The students' comments on the most valuable aspects of the training included: knowing how to refine a search, knowing how to search effectively in subject specific databases and knowing how to store, manage and record their searches. The mean satisfaction score was 4.63 out of a possible score of 5;
 - students' literature searching skills were much improved as reported by their lecturers who discovered that they were relying solely on Google and Google Scholar rather than using electronic databases;
 - the Allied Health Honours Research Design 341 LibGuide was a great support for staff and students;
- a request for a Qualitative Research LibGuide, as the research conducted by the School of Social Work is usually of a qualitative nature.

Our collaborations with academics in the Faculty over the past five to six years have both helped us to define our role and also to overcome sticking points or gaps in our understanding. For example, it was suggested that our Systematic Review workshop should be practical in nature, concentrating on how to develop and conduct effective search strategies rather than delving into aspects such as how to critically appraise a paper. Academics have been very generous in sharing their knowledge and experience. In the early days of our journey we sought out their expertise on topics such as types of designs for clinical studies and the different kinds of reviews in the literature.

4. Collaboration with colleagues

While looking for more courses in expert searching, we approached both the Cochrane Library and the Joanna Briggs Institute to see if they ran appropriate sessions but nothing seemed available apart from a five day course which we were not allowed to

attend. Discussions with Perth based health librarians about what we could organise “in-house” resulted in the collaborative organisation of a peer learning seminar called *Searching Systematically: best practice in librarian support for systematic reviews*. We ran a shorter version of our systematic review workshop and our colleague Cheryl Hamill provided a snapshot of emerging trends such as data mining, data management and altmetrics. The consensus was that it was a very productive session and we were approached by attendees to hold follow-up sessions on further improving searching skills.

The Summit – are we there?

As we have stated in our introduction, working collaboratively within our own team, with the Faculty and with other health librarians has been highly effective in our growth to date. We are now excited about our future plans which include:

- developing a Qualitative Research LibGuide;
- holding workshops on how to search for qualitative literature;
- running hands-on systematic reviews workshops where participants bring their review questions, and work on their PICO and search strategies with the assistance of the Health Sciences team;
- using and teaching the PRESS methodology to assist with the checking of search strategies;
- seeking deeper collaborative opportunities with the remaining six schools of the Faculty.

As our future plans indicate, it is evident that a new summit will always loom above us. The milestones we have reached along the way have given us great encouragement and confidence to keep on climbing.

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