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# THE EMBEDDED LIBRARY: A MARRIAGE MADE IN HEAVEN OR IN HELL?

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## Abstract

This case study covers a number of areas in which a 90 year old medical library has been able to redefine purpose and services, and considers both the positive as well as the negative aspects of the embedded relationship.

According to the Shumaker assessment of readiness for embeddedness, the Witwatersrand Health Sciences Library (WHSL) and the Faculty of Health Sciences at the University of the Witwatersrand were more than ready to embrace a partnership by 2010. A survey indicated that a high proportion (93.5%) of academic staff felt that evidence-based information literacy (IL) should be included in the formal medical undergraduate curriculum. Tensions between faculty and librarians with regard to in-curriculum teaching of IL skills, as discussed in the literature, were not evident in this study. A majority of respondents (69.4%) indicated that librarians, in conjunction with both medical practitioners as well as pre-clinical scientists, should be involved in co-teaching IL skills to students in the Faculty of Health Sciences. Embedding into formal teaching has led directly to a change in status and job description for the librarian, from a full support service position to a 50% academic and 50% support service role, with dual reporting structures.

Simultaneously, successful embedding of e-resources occurred with the acquisition of cloud based software that enables the creation of content, sharing of knowledge and measurement of results. Marketing is accomplished by wordplay. Further collaborations include physical refurbishment of several sections, and a "serendipity of service" demonstrates that these areas have been used in ways that were never envisioned prior to restructuring. Additionally, professional librarians at WHSL actively contribute to Faculty's research output by collaborating with systematic review teams for evidence-based practice in structured searching of the literature. Librarians are co-authors of these systematic reviews in the professional literature of the different subject disciplines.

Keywords: Embedded library, embedded librarianship, LibGuides, case study

## Background

In March 1923 the Johannesburg Hospital Board, the Medical Journal of South Africa, and the University of the Witwatersrand(Wits) Medical School resolved to establish a central medical library for the use of the medical profession based on the Witwatersrand, the staff of the Hospital, and the medical students of the University. The library of the Johannesburg Hospital was transferred to the Medical School to be amalgamated with the partial collection bequeathed by Sir Grafton Elliot Smith, the renowned Australian anatomist, Egyptologist and anthropologist, to one of his students, Professor Raymond Dart, who served as Dean of the Faculty of Medicine at the University from 1925 to 1943. Dart, also an anatomist of note, is renowned for his identification of the "Taung" skull as belonging to a new species, *Australopithecus africanus*, believing that it might characterize the so-called "missing link" between "humans and non-human animals" (Tobias, 2007). The conditions under which the library collections were amalgamated and transferred to the Council of the University of the Witwatersrand were approved by the Administrator of the Transvaal on 23 September 1923, and "after some considerable delay" these conditions were finally adopted by Council on 7 May 1926 (University of the Witwatersrand, 1973).

The Witwatersrand Medical Library (WML), boasting a collection of 600 books, was formally opened on 12 July 1926 by Dart (Brown and Barnes, 1997), who acted as the first librarian until 1928. By 1958 WML had completely outgrown the physical space to which it was assigned. It finally moved to new premises in 1964, when two symbolic books were carried by Dart and Dr I Goldblatt into the new premises. This was the same task that they had carried out some 40 years earlier, when Goldblatt had been one of two medical student “librarians” under the supervision of Dart, then Honorary Librarian.

In 1982 WML moved along with the Faculty it served to new premises in Parktown, adjacent to the new Johannesburg Hospital (now the Charlotte Maxeke Johannesburg Academic Hospital) on one of Johannesburg’s many “white water ridges”, which originally gave rise to the name “Witwatersrand”. The name of WML was changed in 1995 to Witwatersrand Health Sciences Library (WHSL) when the University’s Dental Library was incorporated, reflecting the formal amalgamation of the Faculties of Dentistry and Medicine.

WHSL now serves a large Faculty (with seven Schools, teaching eight degree programs in the health sciences, from undergraduate to post-graduate level) across several decentralized campuses based at the various academic teaching hospitals associated with the Faculty of Health Sciences at Wits. The advent of electronic resources has enabled WHSL to downsize its initial main library plus four physical branch libraries at various academic hospitals, to the main physical library and print-based collections at Parktown, with only one small physical branch remaining at Chris Hani Baragwanath Hospital.

Although WHSL closely resembles a traditional print-based library, it began offering its decentralized clients access to e-journals as early as 2000. This move was made in readiness for the adoption in 2003 of a new electronic medical curriculum for the hybrid Graduate Entry Medical Programme (GEMP) (Myers, Saunders and Rogers, 2002). Based on the enthusiastic adoption of e-journals by clients, a move to e-books followed shortly afterwards as suitable material became available. WHSL thus still resembles an old-fashioned and traditional print-based warehouse collection, but now offers attractive physical study space with both wired and wifi access to current resources (including most of its former short loan collection).

### **The Concept of the Embedded Library**

Dewey (2004) observes that the academic library is often seen as a distinct physical entity. As such, it was a place to be visited by clients seeking information and services relating to such information-seeking activities, and with the rules of use determined by the librarian. This centralization of the collections moved the library from its original academic origins as a much used collection in an academic department. The academic library was therefore originally already “embedded” in the subject department, and moved to a centralized location only when departmental collections became too difficult to manage, for a variety of reasons. Inspired by the so-called “embedding” of journalists into U.S. military activity during the Iraqi war, the concept of embeddedness implies that the embedded group experiences as much as possible the day-to-day activities of the group to which it becomes attached, and is thus inherently an “appropriate definition” for the collaborations that occur between academic librarians and faculty at institutions of higher education.

Seminal work undertaken for the U.S. Special Library Association (SLA) by Shumaker and Tally (2009) notes from their review of the literature that essential characteristics of embeddedness for a librarian could range from the librarian being physically located with the client group as opposed to being located in the library itself (Allen, 2003; Boyd, 2004; Brown & Leith, 2007); or that the librarian was funded by a specific client group (Moore, 2006; Seago, 2004); or that the librarian was supervised by a “non-librarian” manager (Davidoff & Florence, 2000; Hearn, 2005). According to Shumaker and Tally (2009), the term had been widely used in the library and information service (LIS) professional literature to embrace academic librarians teaching information literacy skills as part of formal curricula, both in the classroom and in the library; to cover special, research, or academic librarians whose offices were moved from a central library to their customer groups, so that they could work more closely with the members of those groups; and included clinical medical librarians who form part of clinical health care teams, often at the patients’ bedside. The Shumaker and Tally (2009) definition of an embedded librarian is

thus broad in concept is simply stated as “one who provides specialized services to specific groups”.

Shumaker and Tally (2009) thus move the concept of an embedded place (as noted by Dewey, 2004) to an embedded person. However it must be asked if the librarian’s functions can necessarily be separated from the professional services offered by the library as a base of operation for the librarian, and whether the “embedded library” is not actually personified by the embedded librarian. The model espoused by Shumaker and Tyler (2007) moves from traditional “just-in-case” collection development and maintenance (as offered by the library as place), to a targeted, “just-in-time” delivery of information of immediate importance to the work of the client group (as offered by the librarian in person).

In 2010, Professor David Shumaker was a keynote speaker at the biannual conference of the Southern African Online User Group (SAOUG), and offered a workshop on “Succeeding with embedded librarianship: a self-assessment” (Shumaker, 2010). This workshop, based on the surveys carried out for SLA, asked questions of workshop attendees such as whether delegates:

- Provided training on information resources or information management tools away from the library
- Attended social events held by the client group
- Collaborated on or contributed to the client group’s work
- Attended meetings, classes or conferences in the clients’ area of expertise (as opposed to those related to LIS)

Questions were given weighted scores for each attribute, depending on the frequency of occurrence. Scores ranging from 80 to 100 were taken as evidence of being highly embedded. WHSL scored in the high 90’s for this exercise. Clearly, WHSL was more than ready to offer embedded services, and had already begun to provide some of these services.

### **Faculty-Librarian Tensions**

A survey undertaken at the Wits Faculty of Health Sciences (Myers, 2011) indicated that a high proportion (93.5%) of academic staff surveyed felt that evidence-based information literacy (IL) should be included in the formal medical undergraduate curriculum. Tensions between faculty and librarians with regard to in-curriculum teaching of IL skills, as reported in the literature (Badke, 2005; Biggs, 1981; Given & Julien, 2005; Hardesty, 1995; McGuinness, 2006), were not evident in this study. A majority of respondents (69.4%) indicated that librarians, in conjunction with both medical practitioners as well as pre-clinical scientists, should be involved in co-teaching IL skills to students in the Faculty of Health Sciences. This finding is in keeping with the majority of health sciences libraries internationally, where the role of the librarian has become more embedded in specialized activities such as facilitation within medical problem-based learning curricula (Eldredge, 1993; 2004; Marshall, Fitzgerald, Busby & Heaton, 1993), or where the librarian accompanies healthcare practitioners in activities such as ward rounds (Cimpl, 1985; Giuse, *et al*, 1998; Kesselman & Watstein, 2009).

Embedding into formal teaching has now led directly to a change in status and job description for the librarian, from a full support service position to a 50% academic and 50% support service role, with dual reporting structures to the Library Director and the Head of the School of Clinical Medicine (in which the majority of the formal teaching is undertaken). This “third track” position is unique at the University, where professional librarians are not members of the academic staff cohort.

### **LibGuides and Promotion of Embedded Services**

The decision by the University Library to purchase cloud-based content management software called LibGuides from Springshare (2010) was instrumental in assisting WHSL to explore using these guides not only as finding-tools for resources in specific subject areas, but as an actual learning management (LMS) tool used in teaching. WHSL has been involved in the formal

teaching and assessment of undergraduate medical students since the inception of the Graduate Entry Medical Programme (GEMP) curriculum in 2003, when it was decided by the Faculty of Health Sciences to develop its own e-learning program for this curriculum. This program is highly specific to the problem-based nature of medical education, but not really suited to anything with regard to information retrieval, beyond providing lists of hyperlinked references to relevant resources, or the inclusion of a set of slides or podcasts of lectures.

The University as a whole experimented with various turnkey LMS programs some years later, but it was not until the end of 2011 that a firm decision was taken as to the particular LMS that would become the standard at Wits. In experimentation with these various LMS, they were found to be less than desirable for the way in which WHSL approaches its skills-based information retrieval (IR) courses, whereas the easily managed authoring tools of Springshare's LibGuides enabled quick implementation of various integrated teaching and learning topics as modules of a larger course. This modular approach also lends itself to supporting content in the formal curriculum. As the content of these LibGuides can be set up for open access, and do not require passwords, they are available for revision or drill and practice exercises 24/7 throughout the year, and can even be used as life-long refresher courses on the various topics. Information is "chunked" into relevant sections according to sound pedagogical principles, and student evaluations indicate that WHSL's LibGuides are extremely user-friendly and highly relevant. Additional benefits of this cloud-based software are that the LibGuides are not subject to the vagaries of institutional IT infrastructural issues, and that they can be embedded into any LMS system.

Most promotion and marketing of the LibGuides is done through word-of-mouth recommendations, though some formal promotion occurred through Faculty committee structures early on. WHSL took the opportunity this year however of promoting the use of the e-LibGuides by wearing labeled LibGuide caps at orientation programmes. Students responded very positively, still seem to remember "their" particular human "LibGuide" several months after orientation, and it is hoped that this will promote the personalized human interaction still possible between librarians and students in addition to providing remote virtual assistance.

At the end of 2011, WHSL noted that numbers attending its annual face-to-face training classes had declined slightly (by 5.6%) from the previous year to just under 10 000, whereas use of the LibGuides increased by an overwhelming 91.3% from the preceding year to 71 559 hits. This would seem to indicate that the convenience of using e-guides, especially on a widely decentralized campus, is probably beginning to replace the demand for physical face-to-face classroom instruction and training.

### **Repurposing of WHSL Space**

Three years ago, WHSL was prompted to turn a largely underutilized, dark corridor-like section in which central electrical and cabling ducts were situated, into two inter-leading areas for what was envisioned would become additional wifi space for WHSL's information literacy instruction programmes. The space was designed to accommodate informal groups too large to be taught in the fixed-line WHSL Cyber Classroom (also used as a knowledge commons), or the Faculty's computer labs. Surprisingly, Faculty immediately "adopted" this space (dubbed the WHSL Cyber Space) as part of its "Cyber Hub", and students began to gravitate to the Space, when not being used for teaching and training, as an informal wifi discussion room for group learning.

The serendipitous use of this area was further enhanced by formal requests from one of the Faculty Masters' programmes for the Space to be reserved three times a year for periods of six weeks at a time as a teaching venue for their research methodology courses to successive new Registrar intakes. The embedding of this course into the Library's physical space (as opposed to embedding the library into the teaching space) has led to enhanced "on-demand, just-in-time" training by librarians in various aspects of information literacy at the point-of-need.

Having the Space booked for long periods led to a shortage of electrical plug points for portable devices in a library, designed in an age where nothing electrical beyond perhaps a vacuum cleaner or microfiche reader was ever envisaged. Co-incidentally, the WHS Librarian's presence at a Faculty IT Committee at which discussions about suitable areas for "laptop charging

stations” led directly, at no cost to WHSL, to the installation of electrical plug points at every fixed carrel in WHSL’s large reading rooms.

### **Systematic Review Teams**

The introduction of evidence-based medicine into education saw many collaborative initiatives between medical educators and librarians (Dorsch, Aiyer & Lynne, 2004; Phillips & Eldridge, 2009; Vogel, Block & Wallingford, 2002). These initiatives began to assume even greater significance with the growing awareness of the importance of using expert searchers (as opposed to subject discipline experts) to conduct systematic searches of the literature in the health sciences, especially for systematic reviews. A systematic review (as opposed to an overview of the literature) uses systematic, explicit methods to identify, select and critically appraise research of relevance on a particular topic. Systematic reviews, often seen as the “gold standard” of evidence-based practice, are used increasingly to assist practitioners and decision-makers keep abreast of new evidence, used to inform changes in both policy and practice. Errors in the search string and process could potentially result in bias from an incomplete base of evidence (McGowan & Sampson, 2005). Thus, despite ubiquitous availability of end user databases and simplified web-based search software, it has been found that expert searching for relevant studies in the literature, in order to evaluate inclusion or exclusion in the systematic review, has been found to be a critical factor in success.

Most systematic reviews are conducted collaboratively by teams of individuals with varying skill sets, and many teams include medical librarians as their expert mediated searchers (Medical Library Association, 2007). WHS librarians are increasingly called on to perform expert searches for systematic reviews conducted by staff of the Faculty of Health Sciences, and are contributing substantially to capacity building amongst young researchers in this regard. As acknowledged co-authors of systematic reviews, WHS librarians thus contribute actively to the research output of the Faculty in which it is embedded.

### **Pros and Cons: The Good, the Bad and the Ugly**

Shumaker & Tally (2009) are concerned that too many embedded services depend solely on the excellence of individuals, and therefore suggest strongly that a set of skills, competencies, and attributes that lead to the embedding of library services should be encouraged by library directors amongst their staff.

At WHSL, embedded services have led to increased status and visibility of professional librarians, and have opened new career paths within the University itself. Sustainability of WHSL’s embedded status, however, is of some concern as this status has been largely built on a trusted relationship with one individual over a period of many years. It appears essential for sustainability that librarians continue to create meaningful conversations using a shared set of values, norms and commonly understood language with members of the academic community (Meulemans & Carr, 2013). In an academic library, there is little doubt that part of this shared language comes from a pedagogic base (Bewick & Corral, 2010), and that librarians need to consider qualifications (either formal or informal in-service training) in teaching, as well as in the subject areas in which services are provided, in addition to their LIS qualifications.

There is little doubt that teaching in the formal curriculum has led to enhanced job satisfaction, as the “end product” can be seen when the student graduates or successfully completes a course. The downside of this however is that formal assessment is an integral part of formal teaching, and examination papers need to be set and evaluated, scripts need to be marked, and examiners’ meetings need to be attended – all usually with stringent deadlines. While it is useful to gain an understanding of whether students do in fact understand the material taught, there is not doubt that this side of formal teaching adds considerably to the librarian’s already considerable work load. Librarians (used to open door policies and being available at all times) need to learn to set boundaries and consulting hours for students, otherwise embedded service provision can become overwhelming. This is especially true when students try to “negotiate” a failing mark.

Increased training opportunities (both in terms of requests and opportunities) is a very visible benefit of embeddedness, but it is difficult to calculate quantifiably the return-on-investment in

such programmes, especially when extremely large numbers are trained. The need for increased library personnel as a consequence, with increased competencies and higher skill sets, can be seen as both positive and negative. There is little doubt that formal LIS training in South Africa does not meet the requirements of such practice, and there is a limit to how much time and effort can be devoted to innovative in-service training, especially in a busy service point. Staff shortages, for a multiplicity of reasons, especially at peak teaching periods, can become nightmarish to handle, and managing competitive services in an under-resourced and under-staffed embedded library can be extremely difficult. Shumaker & Tally (2009) suggest therefore that the embedded service point should rely strongly on the main library service for assistance at such times. However, in practice this is not particularly easy to achieve, especially in a large, decentralized academic library, and depends very much on collegiate willingness to co-operate.

Embeddedness does help to achieve a far clearer and more specific vision of the “core” business (in WHSL’s case medical education), as opposed to the University Library’s more generalized vision of supporting the teaching, learning and research of the University. The down side to this is that there are often conflicts in scheduling, and in addressing both University Library as well as Faculty needs, especially when determining attendance at meetings or social events, as well as workflow.

Finally although WHSL’s enhanced service delivery as a result of its embeddedness is clearly proved by its statistics of use, the lack of time available to perform routine library administrative functions can prove fairly stressful to manage.

## Conclusions

The embedded relationship between a library and its partner can assume the highs and lows of any marriage or partnership. Like any good marriage, the relationship needs constant commitment, reflection and redefinition, and as in any harmonious relationship, humour and laughter is required (sometimes in copious quantities), especially in the face of conflict negotiation or adversity. As in a marriage, the relationship is nurtured by a shared sense of identity, while at the same time allowing for a certain degree of autonomy. Both partners need to work at the relationship, and it requires adaptability and a willingness to embrace change from both.

The bottom line is that the embedded relationship can be wonderful at times, and absolutely daunting at others. Overall, however, it has proved a worthwhile experience, and there is little doubt that as a strategy for WHSL, it has helped to provide exceptional service delivery.

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