



Article

Evidence Based Management as a Tool for Special Libraries

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Abstract

Objective - To examine the evidence based management literature, as an example of evidence based practice, and determine how applicable evidence based management might be in the special library environment.

Methods - Recent general management literature and the subject-focused literature of evidence based management were reviewed; likewise recent library/information science management literature and the subject-focused literature of evidence based librarianship were reviewed to identify relevant examples of the introduction and use of evidence based practice in organizations. Searches were conducted in major business/management databases, major library/information science databases, and relevant Web sites, blogs and wikis. Citation searches on key articles and follow-up searches on cited references were also conducted. Analysis of the retrieved literature was conducted to find similarities and/or differences between the management literature and the library/information science literature, especially as it related to special libraries.

Results - The barriers to introducing evidence based management into most organizations were found to apply to many special libraries and are similar to issues involved with evidence based practice in librarianship in general. Despite these barriers, a set of resources to assist special librarians in accessing research-based information to help them use principles of evidence based management is identified.

Conclusion - While most special librarians are faced with a number of barriers to using evidence based management, resources do exist to help overcome these obstacles.

Introduction

Using evidence based management in a special library environment can seem like a daunting task; however, this does not need to be the case. The following situation provides one scenario to support the use of evidence in library decision-making.

The staff of a special library supporting an environmental sciences organization knew they needed to make some changes to better serve their clientele. Like many libraries, they were trying to find the appropriate balance between traditional and digital services, programs and collections. While the library's staff felt they had a good idea about what to keep, what to eliminate and what to alter, they also realized that bringing in a consultant to independently determine what should be done would go a long way toward having those decisions accepted by the organization's management. The consultant was brought in and found that the library was already gathering some of the data that would be used to support some of the decisions that would be made. This not only reduced the time needed by the consultant, but also saved the library money. While some of the staff's earlier assumptions were confirmed by the consultant's report, other assumptions staff made were not supported by the evidence. Based on the evidence, staff were persuaded to reconfigure their service model, introducing new programs and services and dropping those that the evidence demonstrated were not as important to the

library's customers as staff had believed. The evidence further led to a redesign of the library's Web site and even a reconfiguration of the library's physical space. This library can now demonstrate greater use of both physical and digital resources, and this may not have been the case if the staff worked solely from their original assumptions. This example demonstrates that gathering evidence to be used in managerial decision-making is not as difficult as it may seem.

Scope and Methodology

Although evidence based practice is still a relatively recent concept, a number of fields, most notably medicine and the health sciences, have begun to utilize evidence to inform many of their activities. Libraries, led by those affiliated with medical and health science organizations, have been active in this arena. The general management of an organization (regardless of the type of organization) has also been identified as an arena where evidence based practice could be useful, and this has led to the development of the sub-field of evidence based management. This paper will review the literature defining evidence based management and discuss how it can be introduced and applied in an organizational setting. This information will then be evaluated for its applicability to special libraries, especially those that exist in the for-profit and government/non-profit environments. While most medical/health sciences libraries would be considered

special libraries, for the purpose of this paper, they will not be included to any extent.

Literature searches were conducted in both the management and library literature. The library literature search included the following databases: Library Literature & Information Science Full Text; Library, Information Science & Technology Abstracts; and ERIC. The management literature search was conducted in the following databases: ABI/INFORM; Business Full Text; and Business Source Premier. Both literature searches were undertaken for the years 1990 to 2007. The Web of Science, including both Social Science Citation Index and Science Citation Index, was also searched and then the Cited Reference Search and Find Related Records functions were used selectively. Various permutations of the terms evidence based management, special libraries, and evidence based practice were employed for the initial screening. The aim was initially to emphasize recall, find as many items as possible and then apply further search criteria to enhance precision. Titles and descriptors/keywords of the items retrieved were scanned for anything of interest, (primarily terms which could be used as synonyms for the primary search terms). Abstracts were then reviewed for the more promising items; and finally the full text of the most relevant articles was reviewed. From this latter group of material, the references cited by those authors were checked for additional leads to useful literature. Occasionally, this would lead to the review of a journal's table of contents for specific theme-based issues. All of the issues of *Evidence based Library and Information Practice* were also examined.

Beyond the journal literature, a number of other sources were reviewed. The end-of-chapter references from the evidence based practice handbook (Booth and Brice) were

examined; as were the papers delivered at the first three Evidence based Library & Information Practice conferences (<<http://www.eblip.net>> for access to the first and second conferences and <<http://conferences.alia.org.au/ebl2005>> for access to the third conference). Relevant Web sites and blogs were also evaluated, and the most useful are presented later in this paper.

Change in Attitude

Before examining the case of special libraries, it is necessary to understand how evidence based management is described in the management field itself. As the opening example demonstrates, just gathering the data/evidence is not enough. Many organizations have the information they need to be more effective; the question seems to be what these organizations do with this information once they realize they have it or make an effort to gather it. In fact the evidence itself may not be a problem at all. As Stanford professors Jeffrey Pfeffer and Robert Sutton explain, evidence based management requires a change in attitude, a change in how a manager thinks about decision-making, so for many organizations creating acceptance for a culture for evidence based management is the major challenge ("Evidence-Based" 64). Evidence based management is a process, and with any process the best way to begin is with small, incremental steps that will eventually culminate in change on an organization-wide basis.

Pfeffer and Sutton, writing in the *Harvard Business Review*, gave managers a few steps to follow in bringing about this change in attitude. First, demand evidence – the best way to get an organization to become evidence based is for the organization's leaders to ask for the evidence that supports decisions, recommendations and the like. The danger in this, of course, is the manager needs to address the evidence that is

presented, which may well conflict with the manager's preconceived ideas of how things should be. This leads to the second step of examining the logic and critically evaluating any evidence that is presented. Pfeffer and Sutton cite a medical author who relates a joke among physicians: "If you want to have an operation, ask a surgeon if you need one" ("Evidence-Based" 65). As mentioned in the opening example, the special library's staff believed having recommendations come from an outside consultant would give them more credibility with the organization's management. Pfeffer and Sutton's third point is to treat the organization as an unfinished prototype. Any organization that feels it has nothing to learn first has everything to learn, and second won't commit any resources to trying to improve. Decision-making in an environment like this is all about maintaining the status quo and justifying why change should not happen. Try something new in a limited way, gather the evidence on how things go, and then adapt, revise and retry as needed based on the evidence. Finally, an attitude of wisdom needs to spread throughout the organization ("Evidence-Based" 70-73). Most people rarely feel they have all the information they need to make a truly knowledgeable decision, so while they need to act based on the most informed knowledge we have at the time, they also need to keep questioning what is known and the basis for a decision to see if new evidence comes to light. Additionally, for this to be effective, people need to be in a frame of mind that is accepting of any new evidence. Did something work because it was well planned and executed, or did it work because of sheer luck? People need to question their successes as much as their failures to determine why things went well, so they can build upon those successes.

Pfeffer and Sutton further identify three questionable management practices that can be remedied by using evidence based

management: casual benchmarking, doing what (seems to have) worked in the past, and following deeply held yet unexamined ideologies. They propose six standards for managers to use under evidence based management for "generating, evaluating, selling, and applying business knowledge":

- Treat old ideas like old ideas.
- Be suspicious of breakthrough ideas and studies—they almost never happen.
- Celebrate communities of smart people and collective brilliance, not lone geniuses or gurus.
- Emphasize the virtues *and* drawbacks (and uncertainties) of your research and proposed practices.
- Use success and failure stories to illustrate practices supported by other evidence, not necessarily as valid evidence.
- Take a neutral approach to ideologies and theories. Base management practices on the best evidence, not what is in vogue. (Hard Facts 41)

Be that as it may, evidence based management does not appear to have proliferated through the business world or the business literature in the same way that total quality management, reengineering, the balanced scorecard or other management ideas of the past 20-25 years. While evidence based management may have a solid toehold on the rock-face of credibility, it is still just a toehold. Just as evidence based practice in librarianship has its advocates, Pfeffer and Sutton are clearly leading the charge for evidence based management. Pfeffer and Sutton are the driving forces behind the evidence based management Web site and blog (<<http://www.evidencebasedmanagement.com>> and <<http://www.evidencebasedmanagement.com/blog/index.php>>). Links off the Web site lead to over a dozen publications by Pfeffer and/or Sutton on

evidence based management, as well as syllabi for business school classes that take an evidence based approach. Denise Rousseau, in her capacity as president of the Academy of Management, has also championed the benefits of evidence based management. "The promises of evidence-based management are manifold. It affords higher-quality managerial decisions that are better implemented, and it yields outcomes more in line with organizational goals. Those who use evidence (E and e) and learn to use it well have comparative advantage over their less competent counterparts. . . . A focus on evidence use may also ultimately help to blur the boundaries between researchers, educators, and managers, creating a lively community with many feedback loops where information is systematically gathered, evaluated, disseminated, implemented, re-evaluated, and shared" (267-68).

The gap between the results of many research studies and the information which practitioners say will be useful to them has been noted in many fields, including management and librarianship. Rousseau notes that for evidence based management to truly be worthwhile, that gap needs to shrink. She posits that it will take a concerted effort to make this happen. Faculty need to incorporate more evidence into their instruction, students need to use evidence in their assignments, researchers need to find/create evidence that will be useful in the field, and practitioners need to identify and utilize appropriate evidence in their decision-making and daily practice (266-267). However, there is no quick fix. Any organization that seeks to incorporate evidence based management will find it a time-consuming and frustrating process. Additionally, what works for one organization may not work for another even in the same industry. The best, most rigorously obtained evidence is worthless if applied to an organization without the

informed judgment of those in the organization itself.

Special Libraries and Evidence Based Management

From an organizational perspective, it would be beneficial for special librarians to apply the principles of evidence based management to their work environments. First, since most special libraries are particularly vulnerable to reductions, downsizing, or even closure, demonstrating that decision-making is supported by evidence could help to substantiate the businesslike nature of operations. Most of the environments where special libraries are found don't have to support those libraries, so presenting an evidence based focus could help minimize questions of the library's value to the organization. Second, adopting an evidence based approach may not be an option if the parent organization utilizes evidence based management or even if the librarian's manager is a proponent of evidence based management. It is not surprising that medical and health-related libraries have taken the lead with evidence based applications, since the medical/health care field is far ahead of other disciplines in applying evidence based practices. Third, the only thing most special librarians have in excess is work to do, so being able to identify and eliminate functions that don't really help one accomplish anything is extremely useful. As a profession there are numerous things any library does because it is a library, but do all those really need to be done in every library in every organization?

There are very few examples of evidence based management in special libraries outside medical libraries. This supports the viewpoint that one of the reasons why the profession doesn't embrace evidence based practice more fully is the lack of an evidence base (Brice, Booth, and Benson 16). Two papers about using evidence based management in special libraries were

discovered: one dealt with the use of information in decision-making in the banking industry in the UK (Reid, Thomson, and Wallace-Smith 86-109), and the second was a meta-analysis of studies on the use of information in decision-making in six different environments in the UK, Canada and the United States (Grieves 78-85). As Brice, Booth and Benson indicate, this is partly a result of our over-reliance on anecdotal evidence and on our own experience (17), which leads to the numerous how-I-done-it-good type articles that fill the pages of our professional journals. The lack of an evidence base is also noted by Lerdal as she assessed the value of evidence based librarianship for law librarians (33-60).

Obstacles for Special Libraries

For special librarians, the other factors identified by Brice, Booth, and Benson also ring true. One of these is the lack of time many special librarians face due to staff size; there are too many things that need to be done for the staff available to do them. The irony here is the special librarian may not have the time to find evidence to help manage the library because he/she is busy finding evidence for others in the organization to assist them in managing their operation. Another factor, prevalent among special librarians, is an emphasis on practical rather than theoretical knowledge. This may be a result of staff size and workload, leading special librarians to look for ideas they can implement quickly and easily, often without taking the time to evaluate just how effective the new idea might be. However the Special Libraries Association (SLA) provides a number of opportunities for disseminating research project results to its members, including its annual conference. Finally, there is the idea that librarians don't have the skills to critically appraise the evidence they do find. Again, even those special librarians with the ability to analyze and evaluate the research

they can access probably don't have the time or get any workplace reinforcement to do so. And for those who may not have these skills (or have not used them recently), they can be learned/relearned relatively easily. These obstacles are not just applicable to special librarians, Koufogiannakis and Crumley, in looking at the status of research in the field overall, identified access to the research literature, time and support from the workplace, experience with research, and funding as obstacles to be overcome to make evidence based librarianship more viable in any library environment (333-335).

It can be seen from the literature that there are identifiable reasons why information professionals and managers in general do not use or engage in evidence based research. These include the inability to generalize from specific case-studies or to apply general studies to local settings, and an emphasis on practice rather than theory. A study by Kathlyn Turner in New Zealand found that special librarians in government agencies were less likely to use research than their academic counterparts and that the smaller the library staff size, the less likely the librarians were to use research. Turner also found that attending conferences correlated with increased research use and that the second most-cited reason information professionals consult research, after personal professional development, is "to assist with managerial activities...such as problem-solving, decision-making, planning and/or evaluation" (4), indicating a potential opportunity for evidence based management.

However, information professionals who work in the corporate or government sector are susceptible to the same limitations as other corporate managers. Rousseau in her address to the Academy of Management emphasized the problems resulting from not using research and from managers not

having a systematic understanding of the principles governing organizations and human behaviour. She asserted, "The reality is that managers tend to work in settings that make valid learning difficult. This difficulty is compounded by the widespread uptake of organizational fads and fashion....In such settings managers cannot even learn why their decisions were wrong, let alone what alternatives would have been right" (261). But, Rousseau concludes, "Evidence-based management leads to valid learning and continuous improvement" (261).

Strategies for Implementing Evidence based Management

Despite these obstacles it is believed that most special librarians would benefit from adopting some form of evidence based management. Clearly demonstrating the ability to make focused decisions supported by the best available evidence will assist special librarians in being recognized as competent information/knowledge managers within any organization. Examining strategies drawn from nursing management might be a potential way forward. In a paper on evidence based management for nurse executives, Lauren Williams (249) puts forth three groupings of strategies: strategies to establish an evidence based management culture (making it clear that the leaders of an organization support and actively encourage evidence based management); to create the capacity to change to evidence based management (e.g. management research forums and leadership development programs to integrate evidence based management into practice); and to sustain that change (e.g. evidence based management in performance plans, establishing collaborative partnerships between practitioners and the academic community and to create an evidence based management collaborative database).

These strategies are supported by a prescription for applying evidence based practice in special libraries put forward by the international SLA's Research Committee in 2001 (Marshall). Their recommendations are similar but more specific than those put forward by Williams, concentrating on what individual managers can do, rather than what Management with a capital 'M' should do to institute evidence based management. Beyond a personal professional commitment to using the best evidence, they recommend discussions with colleagues, participating in data collection and sharing evidence and analysis (44).

Resources for Special Libraries

Given the barriers to using evidence based practice, what resources would enhance the use of evidence based management in special libraries? Additionally, what factors would increase these resources' acceptance and use by the special library community? Though not exhaustive, a list of factors might include the following: a) the source of evidence needs to be readily accessible, which in most instances means electronically available or at the very least a print-based serial publication of some kind; b) both library and non-library environments should be included to help expand horizons and adopt a broader view of what might be applicable to our home institutions; c) some type of initial evaluation of the information needs to have been made so the special librarian can assess the resource with confidence. This applies to articles from peer-reviewed publications, Web sites or publications sponsored by a reputable source; and d) a standard format for reviews of evidence based literature needs to be used so the special librarian can quickly determine the relevance and validity of the review and its potential use. From the range of material reviewed, some resources that may assist information professionals in applying evidence based

management are provided in an annotated list below:

1. Pfeffer and Sutton's *Evidence-Based Management Web site* (<<http://www.evidence-basedmanagement.com/>>). Includes an extensive bibliography as well as frequently updated columns, concrete examples of evidence based management in use, and examples of evidence based management being taught (primarily in business schools).
2. *Evidence Based Library and Information Practice e-journal* (<<http://ejournals.library.ualberta.ca/index.php/EBLIP/index>>). Research articles and analytical summaries of the evidence-based literature in librarianship. It reflects the general finding that the majority of evidence based information in special librarianship focuses on operational issues — which can be used by managers — but not on management per se.
3. *Libraries Using Evidence* (<<http://www.newcastle.edu.au/service/library/gosford/eb/>>), and especially its *EBLIP Toolkit* (<<http://www.newcastle.edu.au/service/library/gosford/eb/toolkit/>>). This Web site is full of well-organized information, but it is the Toolkit that is a straightforward tool for carrying out and evaluating evidence based research.
4. Lindsay Glynn's "A Critical Appraisal Tool for Library and Information research." in *Library Hi Tech*. Glynn reviewed appraisal models in several fields and devised a tool consisting of a list of questions to ask about a research study to judge its validity, applicability and appropriateness. This kind of appraisal tool would work well for quantitative studies of library functions but would be difficult to apply to general management studies that deal with qualitative and prescriptive topics.
5. Graham Walton's "Theory, Research and Practice in Library Management: New Column for *Library Management*". This new column reviews a different area of library management each time, beginning with the topic of "flexibility" (pp. 165-171). It provides guidance within an evidence based framework, but to date has not provided practical analysis relevant to special libraries.
6. Outsell, Inc. (<<http://www.outsellinc.com/>>). Outsell undertakes market research for the information industry and provides consulting services to special libraries and their organizations. A large database of survey results from corporations and government agencies has been accumulated which can be used by subscribers to apply to local special libraries. Outsell analysts periodically produce reports summarizing the data on selected topics and recommend steps managers can use to apply that evidence. They also specialize in performing needs assessments and strategic assessments.
7. Special Libraries Association (SLA) (<<http://www.sla.org/>>). From the strategies identified by the SLA Research Committee for implementing EBLIP (<<http://www.sla.org/content/resources/research/rsrchstatement.cfm>>), to the SLA information portal on LIS Research (<<http://www.sla.org/content/resources/infoportals/research.cfm>>), SLA provides a variety of resources to use for evidence based practice in special libraries. Other resources are dispersed among the newsletters, Web pages and

blogs of the SLA subject-oriented divisions as well as papers presented at the annual conference.

8. Various compilations of evidence based practice in other fields, such as the What Works Clearinghouse in education (<<http://www.whatworks.ed.gov/>>), the Campbell Collaboration in justice and social sciences (<<http://www.campbellcollaboration.org/>>), and the Cochrane Collaboration in medicine (<<http://www.cochrane.org/index.htm>>), especially for learning how they do critical appraisals and systematic reviews. Another useful critical appraisal tool is the Critical Appraisal Skills Programme (<<http://www.phru.nhs.uk/Pages/PHD/CASP.htm>>).

Conclusion

Since this paper began with an example of evidence based management in a special library environment, it seems appropriate to conclude with another such example. Several years ago, when the topic of metadata was emerging, and Google had not become widely accepted, a special librarian saw a great need to improve the public's ability to retrieve relevant public health information from his organization's Web site. The common wisdom at that time was that one should hire indexers — preferably librarians — to provide metadata for the Web pages. The special librarian sought the assistance of a colleague from a local library school, and they devised a project to address the question, "Can Web page authors themselves create high quality metadata?" They set up an experiment and found that in fact the authors (content creators) could create useful metadata of most types, but not all types. Subsequently, they found that what worked best was for librarians to review the subject metadata

created by the authors for consistency and for full subject coverage. These findings were then used for management decisions involving resources. This example reinforces Rousseau's comments about collaboration between practitioners and academic researchers and shows one way practitioners and academic researchers can work together to develop evidence for evidence based management and challenge the conventional wisdom. While there is an extensive literature on both the pros and cons of practitioner-oriented research from the academic sector, this is not the place to pursue this further. Suffice it to say for now, this is a highly relevant topic to the widespread adoption of evidence based management and will need further investigation in the future.

This and the earlier example illustrate the usefulness of evidence based management in a special library. Anyone who manages in a library setting can and should make use of evidence based management, especially the aspect of it that says to question the conventional wisdom and to base your decisions on the best available evidence. This is especially true for those in the corporate or government sector where libraries are being downsized and information professionals have to develop new roles for themselves. It is only by incorporating the evidence based management principles into every aspect of their managerial roles that these librarians will be able to convince higher management of their value and continue to contribute to their respective organizations. The authors hope the information above will give colleagues the impetus to take the initial steps in creating a workplace environment supported by evidence based practice.

Works Cited

- Booth, Andrew and Anne Brice, eds. Evidence-Based Practice for Information Professionals: A Handbook. London: Facet Publishing, 2004.
- Brice, Anne, Andrew Booth, and Nicola Benson. "Evidence Based Librarianship: A Case Study in the Social Sciences." World Library and Information Congress: 71st IFLA General Conference and Council, Oslo, Norway. Aug. 2005. 22 Nov. 2007 <<http://www.ifla.org/IV/ifla71/Programme.htm>>.
- Glynn, Lindsay. "A Critical Appraisal Tool for Library and Information Research." Library Hi Tech 24.3 (2006): 387-399.
- Grieves, Maureen. "The Impact of Information Use on Decision-Making: Studies in Five Sectors – Introduction, Summary and Conclusions." Library Management 19.2 (1998): 78-85.
- Koufogiannakis, Denise and Ellen Crumley. "Research in Librarianship: Issues to Consider." Library Hi Tech 24.3 (2006): 324-340.
- Lerdal, Susan Nissen. "Evidence-Based Librarianship: Opportunity for Law Librarians?" Law Library Journal 98.1 (2006): 33-60.
- Marshall, Joanne. G. "Influencing Our Professional Practice by Putting Our Knowledge to Work." Information Outlook 7.1 (January 2003): 40-44.
- Pfeffer, Jeffrey and Robert I. Sutton. "Evidence-Based Management." Harvard Business Review 84.1 (January 2006): 62-74.
- _____. Hard Facts, Dangerous Half-Truths and Total Nonsense. Boston: Harvard Business School Press, 2006.
- Reid, Christine, Julie Thomson, and Jayne Wallace-Smith. "Impact of Information on Corporate Decision Making: The UK Banking Sector." Library Management 19.2 (1998): 86-109.
- Rousseau, Denise M. "Is There Such a Thing as 'Evidence-Based Management'?" Academy of Management Review 31.2 (April 2006): 256-269.
- Turner, Kathlyn J. "Do information Professionals Use Research Published in LIS Journals?" 68th IFLA Council and General Conference, Glasgow, Scotland. Aug. 2002. 22 Nov. 2007 <<http://www.ifla.org/IV/ifla68/papers/09-118e.pdf>>
- Walton, Graham. "Theory, Research and Practice in Library Management: New Column for Library Management." Library Management 28.3 (2007): 163-164.
- Williams, Lauren L. "What Goes Around Comes Around: Evidence-Based Management." Nursing Administration Quarterly 30.3 (July-September 2006): 243-251