

Academic Medical Libraries at the Crossroads: Managing Knowledge to Enhance Our Mission

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Introduction

Ten years ago, the Director of Computer Assisted Instruction (CAI) in the College of Medicine at The Ohio State University (OSU) and the Director of the University's Health Sciences Library met to explore the idea of bringing library, CAI staff, and support services together at a shared resource desk. Although this concept had potential value for our customers, the conclusion was that the technology and the culture prohibited implementation. Much progress has been made on both fronts in the intervening years as evidenced by the opening of the ASK (*Assistance, Service, and Knowledge*) Desk in January 2005 within the Health Sciences Library. During the planning stages, it was not fully realized what a positive impact this seemingly simple service enhancement would have on the library's mission of serving the ever-growing information and technology needs of the faculty, staff, and students. This effort was the first tangible benefit of aligning tradi-

tional library services with the technology development and support activities of our newly formed Center for Knowledge Management (CKM) within the OSU Medical Center campus. This presentation will provide an overview of the conceptualization, development, and implementation of the CKM as a model for enhancing the mission of libraries by harnessing the principles of knowledge management.

Let's begin with a reminder of what has not changed over the past ten years. Librarians remain the most visible stewards of knowledge. This has been the one constant and the foundation upon which the education of librarians is conducted. As librarians we continue to dedicate a significant amount of time educating our customers on the value of information and discerning quality information resources as seen when they query us about information they retrieved through Google™. We teach them basic research methods helping them build effective search strategies.

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However, many things have changed in the years following our formal training, most notably the influx of technology at almost every point of the information chain. The nearly inexhaustible amount of information available on the World Wide Web and its fingertip accessibility have led to the expectation that everything a person needs can be found online, 24 hours a day, seven days a week.

Knowledge management is not merely a by-product of the interaction of information and technology. It also requires the input, expertise, and intuition of the staff that interfaces with and guides the data and processes throughout overlapping stages: knowledge *creation*, knowledge *application* and knowledge *dissemination*.^{1,2} While the addition of “*knowledge management*” to our vocabulary may seem new to academic libraries, its principles of codifying, communicating and mentoring are readily found in the activities we support in the laboratories, classrooms, and hospitals of our respective institutions. As academic stewards of research, teaching and clinical care, the tenets of knowledge management—creating, sharing and applying knowledge—map directly to the mission of the academic medical library. The challenge of managing knowledge in academic medical libraries results not only from the immense volume of information available, but also from the way knowledge has been affected by dramatic changes in medical education, the introduction of evidence-based medicine, and the expansion of information systems to provide information access and to generate and harness information in a meaningful way.

This environment results in unique challenges in managing, integrating, and sharing a constantly growing pool of information and knowledge, while enabling individual convenience and immediate gratification. The expectations of our customers and the progress of technology are transforming the ways our libraries are structured and organized. Many libraries have adopted the information commons model to meet the ever-growing demands being placed on staff and services. In its most popular form, the information commons is a physical facility designed to organize workspace and service at an integrated location. Extensive theoretical roadmaps for information commons within academic libraries have been described by Beagle, Halbert, and Tramdack.^{3,4,5} Cowgill et al. extended the theoretical and practical aspects of developing a Commons⁶ while

Bailey and Tierney articulated the obstacles and challenges that libraries face when attempting to implement the commons model.⁷ When thoughtfully executed a commons provides a single service point and can effectively synergize the information skills of reference staff, customer support skills of computer staff, and, in some cases, the production skills of media staff.

Creating the Center for Knowledge Management

In late 2002, the leadership of the OSU Medical Center looked to the Prior Health Sciences Library to begin exploring ways to more effectively manage and support the academic information technology and knowledge needs of its diverse constituencies. After examining the information commons concept, it was determined that managing knowledge in a large academic medical center requires more than supporting a customer’s technology and information needs. A task force was charged to develop a framework for the Center for Knowledge Management. The following goals and objectives were identified:

Creating knowledge

- Develop and assimilate new knowledge-based products that enhance excellence in biomedical research, health sciences education and patient care.
- Package informational resources as discrete, re-usable, and sharable resources that enhance work collaborations.

Using knowledge

- Preserve original biomedical data of historical value.
- Disseminate knowledge in biomedical research, education and clinical practice consistent with our mission.

Sharing knowledge

- Enable cost-effective, timely and convenient access to biomedical knowledge.
- Provide a challenging and supportive environment to foster professional growth of staff and trainees.
- Strengthen digital linkages across the health sciences campus and the university to foster collaboration in knowledge development, sharing and dissemination.

These goals were realized through the creation of the Center for Knowledge Management (CKM)

physically located in, and organizationally aligned with, the Prior Library. Leveraging the strengths of people, processes, data, and technology, the CKM was chartered to foster the creation, analysis, dissemination, and utilization of knowledge. By aligning and integrating these activities, the CKM was positioned to amplify the value of knowledge-based assets and enhance the library's commitment to excellence in biomedical research, graduate and healthcare education, and patient care. Partnerships formed among library, computing support, information, and educational technology staff would allow us to cost-effectively refine the support models for information, reference, educational, and technical services. Aligning the support for digital repositories, data sets, mobile computing devices, computerized testing, and interactive multimedia made philosophical and economic sense enabling us to provide information tailored to the needs of our students, faculty and staff.

Beginning in July 2003, three information technology (IT) support teams were relocated to renovated space within the Prior Health Sciences Library. Each of the three support teams entered the center from disparate administrative areas within the medical center and with pre-established but varying financial models, customer bases, and repertoire of IT services and organizational cultures. With guidance from organizational development staff, the three teams explored opportunities for refocusing and enhancing alignment of their services, support, and staffing mix. Economies of scale were appreciated through the identification of new opportunities and the consolidation of duplicate services. Centralizing, coordinating, and consolidating the support services offered by the three initial teams has 1) afforded medical center customers with a single point of entry, 2) enhanced cross-training of personnel, and 3) expanded the breadth and depth of services to be offered. The phrase "Creating, Using, and Sharing" quickly emerged as the CKM's slogan. Several noteworthy initiatives have emerged as a result of this integration.

The Ask Desk

Building on the information commons concept, a comprehensive academic ASK (Assistance, Service and Knowledge) support desk was developed and implemented in January 2005. Jointly staffed by librarians and technology support personnel, the ASK desk provides customers with a one-stop shop for

their academic information and technology needs. CKM service points (e.g., pager distribution, mobile computing support, and graphic design services) that were previously distributed throughout the building have been relocated to the more customer-convenient ASK desk on the first floor of the Prior. Library services including circulation, reference, and print reserves were also relocated to the ASK desk.

Prior to the construction of the ASK desk, a series of focus groups were conducted with faculty, staff, and students throughout the health sciences center. Their comments provided a clear direction for the library/CKM staff to pursue in development of the ASK desk. The following are some of their suggestions:

Faculty

- Assist in developing effective database search strategies and limiting searches.
- Provide guidance and support for handling and securing the use of digital images.
- Develop techniques to assist their students in identifying quality Internet-derived information.
- Coach faculty on how to use new technology with a hands-on approach.
- Conduct ongoing evaluations of users needs to ensure services meet current and future information needs.

Staff

- Create a marketing service educational page (i.e., tips for developing presentations)
- Train support staff to ensure they are knowledgeable about available support services and resources.
- Conduct ongoing outreach activities to encourage the exchange of information between the ASK desk staff and the constituent audiences it serves.

Students

- Provide basic information research classes.
- Create discipline specific, web-based resources for students to help guide their online needs for information.
- Increase the promotion and communication of library/CKM services.
- Provide information to new incoming students to adequately inform them of the services and resources that are available to them.

Computer-delivered Testing

To facilitate exam processing, incorporation of multimedia, and improve score reporting and item analysis, the OSU College of Medicine and Public Health began piloting computer-delivered student assessments in 2001. The success of the 2-year pilot prompted a planned expansion of computerized testing throughout the curriculum for all first and second year medical students. As a result, a new state of the art student computer and testing center was implemented in the fall of 2004 and housed in the Prior Health Sciences Library. The 85 workstation lab is supported by several CKM groups. IT staff are responsible for the systems required to manage the workstations and the delivery of the assessments. Educational staff work with the college in the preparation and distribution of the exams. The lab facility also serves as an open lab for student personal productivity needs, such as access to computer enhanced learning systems when testing is not taking place.

Do It Yourself Stations

Adjacent to the ASK Desk are a series of workstations loaded with multimedia and personal productivity hardware and software. The need for such workstations was the result of feedback obtained through the aforementioned focus groups on the interest for customers to “do information technology (IT)” themselves. A frequent component of many information commons implementations are multimedia workstations for public use in a lab-like setting. However, placing such workstations in the renovated computer lab was difficult since it is configured primarily as a secured testing facility. The closing of the lab facility during testing would also make all of the IT workstations unavailable on a frequent basis. The proximity to the ASK desk, which at times is staffed by multimedia professionals, provides an opportunity for staff to assist customers in using the equipment.

How Do I? And Just Ask!

A growing number of library web sites are now utilizing some form of online frequently asked questions service, often referred to as “How Do I?”. As the ASK desk was being developed it became apparent that the staff would require a similar set of tools for behind-the-scenes questions and processes not meant for the public view. Since the library had already begun development

of a How Do I service it made sense to use a common database for both public and staff information, the latter being named Just ASK!. This database has been populated with hundreds of questions and answers related to both Library and CKM services. Implementation of this service provides two additional advantages:

- Support for cross-training of library and CKM staff by providing answers to questions outside of a staff member’s home department,
- Assistance for customers in obtaining information during the hours the library is closed.

Intellectual Property And Copyright

To facilitate the important issues regarding copyright and intellectual asset management (e.g., steps and processes for securing, implications of the TEACH Act within the digital classroom, etc.), the CKM is currently developing a Copyright Center. This center will provide copyright expertise, training and staffing support resources to the OSU Medical Center faculty, staff and students. The center will assist in securing copyright for materials being distributed as well as using copyright to protect content that is created. The center will also play a critical role in enhancing the use and sharing of knowledge-based resources and assets.

Bioinformatics Integration

Library faculty have adjunct status in the medical center’s new department of Biomedical Informatics, which is expected to provide new collaborative opportunities. One of the first initiatives already underway is the development of a new undergraduate program in the biomedical sciences scheduled to enroll its first students in 2006. Librarians are actively involved in the curriculum development and will be teaching segments on research strategies and knowledge management principles. The alignment with the CKM with other knowledge-based initiatives and the research activities of bioinformatics are also being planned.

Enhancing Our Mission

The Center for Knowledge Management at The Ohio State University enhances the overall mission of the health science colleges and the OSU Medical Center by creating an unparalleled service model through its support of the knowledge management needs of health professionals throughout the continuum of their careers. Students encounter CKM supported activities

early on in their training through its support of online learning, laptop computing, introductory bibliographical research, and computer-based testing activities. Later CKM resources are brought to bear as students move from the classroom into the clinic where support for personal digital assistants, patient simulators, and introduction to clinical research is needed. In their post-graduate years, the CKM helps support residents and interns by providing educational programs in advanced research strategies and simplifying access to clinical information systems. Finally, as clinicians and educators, the CKM offers support services that aid in instructional design, classroom technologies support, and access to online databases and document retrieval services.

Training our own is also an important goal of the CKM. As the traditional managers of knowledge, libraries must continue to provide an environment conducive to professional growth and development to ensure the next generation is adequately prepared for what the evolution in the information sciences is predicted to bring. By involving our library staff in new and exciting CKM initiatives, we help ensure they acquire new skills and are exposed to new technologies. This involvement has repositioned the library staff so they are now proactive rather than reactive. We continue to expose our staff to new teamwork building and partnership opportunities that they otherwise would not have encountered.

Lessons Learned

Our efforts during the past two years have brought great change in thinking, culture, and process. We have learned some lessons that others might consider when faced with internal and external pressures to meet the ever-changing information and technology needs of the constituencies they serve.

- Listen to your customers, especially during the concept development phase, to ensure you build what is needed.
- Just do it. It is very easy to over-think the concept.
- Reach out as far as possible within your organization during the concept stage to identify new partnerships. Groups that do not seem to have any relationship often do.
- Rally around a cause, common goal, or challenge when trying to bring disparate groups together to maximize your chances for success.

- Focus on your similarities, not your differences when trying to synergize librarians and technologists. As Lavagino and Cain note, the similarities between the two groups that often come from different academic preparation and cultures may actually be greater than one may think.^{8,9}

- Inspire your staff through leadership. Change is difficult for everyone and a team full of naysayers can keep greatly limit your success. Team leaders need to be supportive of change and convey this positive vision to their staff

- Build it and they will come. Although a cliché, remember that although the digital age, with 24/7 access to information, is changing how we do business, our building gate counts are increasing. The role of librarians as educators is increasing. Reassess your customers' total information needs and respond to them. We need to continue refining our repertoire of services to meet the ever-evolving needs our customers.

Conclusion

Knowledge is at the core of our mission as academic libraries. Integrating traditionally disparate library, computing, and educational technology services and support teams can foster new knowledge initiatives, streamline support services, enhance accessibility, and appreciate economies of scale. By combining technological initiatives with the information, instruction, and resource services in our libraries, we can leverage and synergize knowledge creation, knowledge dissemination, continuing education, and knowledge application. Through the use of knowledge management to enhance the mission of the Prior Health Sciences Library, we have created an entity responsive to all our mission areas and audiences, to the benefit of the patients, faculty and staff of the medical center as well as our university, community, and beyond. Doing this has enabled us to create that one constant that can follow health professionals at The Ohio State University throughout all stages of their careers.

Notes

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3. Donald Beagle. "Conceptualizing an Information Commons," *Journal of Academic Librarianship* 25, 2 (March 1999): 82–89.
4. Martin Halbert. "Lessons from the Information Commons Frontier," *Journal of Academic Librarianship* 25, 2 (March 1999): 90–91.
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