

**“NATURAL STREAMS OF INFORMATION”:
THE INFORMATION ECOLOGY OF
AN INTERDISCIPLINARY ORGANIZATION**

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This paper discusses the knowledge management challenge faced by Active Living by Design (ALbD), a Chapel Hill-based center focused on increasing physical activity through community design. ALbD is a small organization devoted to solving a critical public health problem: epidemic obesity. Obesity research is highly interdisciplinary, involving methods and data not only from public health, but from fields such as nutrition, city planning, transportation engineering, and architecture. The interdisciplinary work of finding solutions to the obesity crisis is new and rapidly evolving. Much of the available published information is scientific, focused on establishing clear research outcomes, while this organization emphasizes advocacy and practice.

The complex requirements of this new and dynamic field created a challenging knowledge management problem for ALbD. On the one hand, no single library exists that effectively serves ALbD’s diverse range of disciplines, and need for advocacy-oriented information. Nor did the organization have the resources to create a formally constituted and professionally staffed library of its own, even though accessible, high-quality information is central to its hectic daily work of advising communities around the country. It is an environment of time-pressured inquiry: ALbD’s staff members need to find information quickly, share information with colleagues and partners, and incorporate retrieved information into their work practices and products.

We investigated how ALbD responded to this knowledge management challenge with the aim of drawing implications for similar organizations and for the design of systems that provide access to interdisciplinary resources. Through interviews with staff members at ALbD and analysis of documents and systems there, we discovered a complex set of knowledge management practices. ALbD created a local knowledge management system through the ad hoc application of library techniques and public health expertise. This system contained multiple overlapping (and sometimes, conflicting) components, including a physical library with an electronic catalog, a digital library, and multiple Websites.

Our fieldwork placed these activities in the larger context of ALbD as an “information ecology,” (Nardi & O’Day, 1999) and examined how the knowledge management system fit into institutional processes of information creation, organization, and use. In particular, we examined how the director and staff members at ALbD tried to organize their specialized knowledge using a variety of tools and

methods. The most striking approach here was ALbD's idiosyncratic use of an EndNote database to manage a diverse collection of articles and books. EndNote is ordinarily used by students and researchers to manage a personal set of references; ALbD transformed it into an information retrieval system.

This usage illuminates the challenges of "informal knowledge management" or "bricolage"—the application of existing tools in new and unexpected ways (Halverson, Erickson & Ackerman, 2004). While EndNote was simple to set up—an important consideration for a small organization—it proved difficult to integrate into work practices at ALbD. We observed that few users at ALbD actually relied on EndNote to find information or citations as part of their work. This observation changed our understanding of the design challenges for interdisciplinary information access. We originally conceived the challenge at ALbD as an information retrieval problem, but the fieldwork made this conception seem oversimplified. Users at ALbD didn't need a better information retrieval system so much as they needed a better information ecology: "a system of people, practices, values, and technologies in a particular local environment" (Nardi & O'Day, 1999, p. 49).

In ALbD's existing information ecology, we observed a basic tension between a vision of ALbD as a national clearinghouse of information and the practicalities of daily work. This tension disrupted its information ecology, creating a need for greater engagement of its staff in the ecology. The implication for knowledge management and the design of supporting systems is that access to information is not always the greatest problem for end users. Rather, they need ways to better contextualize and use the information they retrieve from an array of "informal" sources, such as colleagues, listservs, Web searches, conferences, and their personal files—what one project officer at ALbD called "natural streams of information." And they need ways to effectively share this information with partners around the country, and then collaborate with those partners using that information. Applying knowledge management research and practice in contexts where, as at ALbD, informal information use and distributed collaboration are common, is an important challenge for future work.

References

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