# Overcoming Barriers in the Planning of a Virtual Library

**Ardis Hanson**
*University of South Florida, USA*

## INTRODUCTION

What is a virtual library? Gapen (1993) states:

*The virtual library has been defined as the concept of remote access to the contents and services of libraries and other information resources, combining an on-site collection of current and heavily used materials in both print and electronic form, with an electronic network which provides access to, and delivery from, external worldwide library and commercial information and knowledge sources. In essence the user is provided the effect of a library which is a synergy created by bringing together technologically the resources of many, many libraries and information resources (p.1 ).*

A decade later, the same definition holds true.

## BACKGROUND

The implementation of a university-wide virtual library inevitably causes significant changes within each department across the library and campus. However, real ownership comes about only with a commitment from management to 1) educate and train staff in the new technologies and procedures, 2) manage the change process as candidly as possible, and 3) disseminate information as openly and widely as possible. Each one of these commitments is essential to the change process.

When creating a virtual library, all participants must clearly define and realize institutional commitment to the plan. To do so effectively requires an examination of the organizational and cultural change agents that will affect the implementation. The cultural constructs by which the various types of librarians and staff view the worlds of work and patron must be considered in the redesign of the current environment. Although much has been written about creating virtual libraries, very little is known about the working conditions or institutional and organizational practices that make virtual libraries most usable by library faculty and staff.

Preparing a proposal for a university-wide virtual library requires a new level of collaborative visioning, planning, and implementing among the participating departments/libraries. This process depends upon a reliable and advanced networked infrastructure and on staff, facility, and financial decisions focused on true programmatic cooperation. It is well cited in the change management literature that without commitment from administration, the belief of the individual, the team, or the organization in the relevance of the project wavers or devolves to indifference to the project. Organizational commitment to the project and, therefore, to change is a key factor in determining the success of this type of project.

## COMMITMENT TO CHANGE

As libraries respond to the rapid evolution of the information environment, organizational change must occur for successful adaptation. The literature provides some insight into variables important to organizational change. An integral link exists between successful leadership, human resources, and organizational structure. If any one component has a weakness, it will negatively impact the other two. A key component to success is the ability to show flexibility and rapid response to change. This is mirrored in the qualifications necessary for staff to work effectively in a rapidly evolving environment. The literature also points to two key components in creating an effective organizational structure: 1) flattening of the existing structure and 2) development of committees that cross departmental lines.

Since open discussion of barriers is an effective strategy for implementation and adaptation of change (Beer & Eisenstat, 2000), the library as organization must be examined with a critical eye to identify strengths, weakness, ideologies, and strategic staff. Plans to resolve challenging organizational or staff problems must be devised and implemented.

Further, project outcome is shown to depend upon the behavior and resources available during the development process, and these depend upon the level of commitment. Additional factors to consider include the possibility of budgetary constraints, top management's technological non-sophistication, and the reluctance to draw up a very detailed operating plan. Finally, barriers on systems implementation included hesitation in accepting a sys-

tem, lack of standard formats, and unrealistic priorities and expectations from the parties involved. These challenges are particularly true in the design of a virtual library where resources and technical standards are constantly evolving.

When identifying problems, it is essential to determine which problems are undesirable situations but impossible to correct. This allows the project team to acknowledge the problem, but not to spend too much time on it, allowing the team to focus on answers or actions to potentially correctable issues. Common problems identified include 1) the disparate geographic locations of the libraries (especially with multi-campus or departmental libraries within a university or college); 2) the lack of parity in equipment and technologies among departments within the library or among libraries; 3) budget issues; 4) staff involvement in the project; 5) difficulty in selling the virtual library as a critical library project to university administration, teaching and research faculty, and library faculty and staff; 6) unrealistic expectations by management and staff; and 7) resistance to change.

## MANAGING CULTURAL CHANGE

The coming of a virtual library will significantly impact the culture of libraries. Janz and Prasarnphanich (2003, p. 353) believe that "corporate culture determines values, beliefs, and work systems that could encourage or impede learning (knowledge creation) as well as knowledge sharing." Policies, procedures, and behavior are a visible manifestation of these assumptions that most members of a culture never question or examine. The members of a culture may not even be aware of their own culture until they encounter a different one.

The cultural constructs by which the various types of librarians and staff view the worlds of work and patron should be considered in the redesign of the current environment. Very little is known about the working conditions or institutional and organizational practices that make digital libraries most usable by library faculty and staff. Most of the emphasis on users has been on the library patron or on the technology, not on the work environment of the library staff. Much of the literature discusses change at the technological level, again not at the human level. Examples include the use of Standard Generalized Markup Language (SGML) hyperlinks in bibliographic records, metadata, collection development with Internet sources, online reference services, end user electronic document delivery, electronic full-text reserves, and networked paper-less administration.

Models that make explicit connections between a focal technology (such as a digital library) and its immediate users should be used to review the ecology of social relationships with other social groups and organizations in which the technology is developed, adopted and used.

## IMPLEMENTATION ISSUES

To promote ownership of the virtual library plan among the library's administration, faculty, and staff, "actions" are developed for each of the areas under design within the virtual library. At institutions that have successfully implemented a virtual library, work groups and task forces were instituted to review workflow, policies and procedures, overlap, and to create implementation plans to effect organizational change and major projects driven by the new technologies (Steele, 2000). Early virtual libraries created multi-disciplinary teams across academic disciplines and support services to implement their plans or created large groups who use phased plans covering a number of years (Anderson, 1995; Birmingham, Drabenstott, Warner, & Willis, 1994).

Alternative organization design principles replace individual job design with task design (e.g., task forces and teams). These principles are an excellent way to handle the enormity of the proposed design process. They replace "one best way" thinking with choices for organizational and technological solutions (Sarin & McDermott, 2003). Such solutions can cope with more complexity and unpredictability when people in the teams are multi-skilled and delegated more autonomy and responsibility (Hoegl, Parboteeah, & Munson, 2003; Man & Lam, 2003).

Implementing a virtual library will create cultural and organizational changes, particularly in technology and staffing. It is critical that library faculty and staff be assured of their importance and value within the new organizational structure. Staff development programs need to be made available and designed in such a way that staff members feel the new skills will enhance their ability to perform their jobs and accommodate changing work functions. Administrators and department heads need to be proactive and provide these programs to staff in an appropriate time frame. The expectation that "just-in-time" training is "good enough" is unwarranted. Often, this kind of training approach increases staff stress and decreases morale, although too much advanced training can be counterproductive as well.

As technology and a growing reliance on "virtual" materials and services increase, service points and their job functions should be analyzed. This excerpt from the USF Virtual Library Blueprint (Metz-Wiseman et al., 1996) acknowledges the importance of recognizing and managing the change process as well as emphasizing the need for staff development:

"This process of change will require creativity, a more

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