

Personalised Library Portals and Organisational Change

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Abstract: *Customised and personalised library Web portals have the potential of changing how libraries are used and how librarians will do their work. These portals have the potential of bringing about real change to the library profession and to library organisational culture. Portals will enable libraries to be more customer centred. Systems and processes will be based on dynamically linked and scalable databases that will enable library staff to concentrate much more on content delivery and teaching. These trends will inevitably enhance the academic library's ability to deliver on its major strategic goal - delivering positive learning outcomes to customers and stakeholders.*

Introduction

Top Library and Information Technology Association (LITA) experts, during a January 1999 American Library Association (ALA) Midwinter meeting, identified a number of important future trends for technologies in libraries¹. Trend 1 "library users who use the Web, expect customisation, interactivity and customer support" deals directly with issues related to library portals. The group emphasised the user-focused approach as the trend of the future. They mentioned the University of Washington My Gateway and NCSU's MyLibrary@NCState#/LINKCONTENT (<http://my.lib.ncsu.edu/>) as examples of customized library portals. Other library technology trends identified are also related to the possible impacts of library portal implementations – focused use of digital resources, interactive help, identifying "human" libraries for support, co-operative support among libraries and more.

By creating library portals, librarians can act upon two of the three Keystone Principles² identified by a group of leading Association of Research Libraries (ARL) Library Directors. These sets of values are: (1) "Libraries are responsible for creating innovative information systems for the dissemination and preservation of information and knowledge regardless of format" and (2) "The academic library is the intellectual commons for the community where people and ideas interact in both the real and virtual environments to expand learning and facilitate the creation of new knowledge."

Customisable and personalised library portals address these values directly, by being customer focused, and empowering users to create personal information systems that are responsive to their individual needs. A library portal leverages the library's expertise both in the form of the underlying database of resources built by librarians and through greater accessibility of those librarians.

Portals allow users to customise their web information, based on their personal preferences and needs. Academic libraries exist for the purpose of collecting, organising and disseminating information.

1 LITA Top Tech Trends, "Technology and Library Users: LITA Experts Identify Trends to Watch." ALA Midwinter, January 1999. <http://www.lita.org/committe/toptech/trendsmw99.htm> Accessed February 14, 2001.

2 Kathryn J. Deiss, "The Keystone Principles." ARL: A Bimonthly Report on Research Library Issues and Actions from ARL, CNI and SPARC, Issue 207 (December 1999): 8-9. <http://www.arl.org/newsltr/207/keystone.html> Accessed February 14, 2001.

They also help students become lifelong learners and enable faculty and students to maintain superior research activities. Libraries have to maximise their visibility and their usefulness especially to our primary customers – our own students and faculty. In short, branding is important for libraries. The development of personalised and customisable web portals or gateways is an important tool for enabling our customers' better access to information they need. These portals will empower customers to create their own information and research environments based on local and remote library resources. They will enable close and effective communication between librarians and their customers, and by implication create healthier local learning communities.

Personal portals have the potential of contributing to positive learning outcomes, as they will be designed to be customisable to the needs of each individual. It also has the potential of changing how libraries are used and how librarians will do their work. In short, these portals have the potential of bringing about real change to our professional and organisational culture.

Academic libraries are presently confronting the issues of organisational viability and relevance. Academic libraries are adapting to the new reality of the web – since 1995 when Netscape enabled real access to the Internet, libraries stopped being the main owners of the information gateway. The web has changed every aspect of life, but nothing changed more than the size, rate of change and speed of information availability and delivery.

How does the issue of organisational relevance reflect on the future of library services and with the promise of customisable and personal portals?

Interest in organising access to academic information and scholarly knowledge in a much more systematic fashion, has been proposed in a thoughtful and future oriented paper by Jerry Campbell, Dean of University Libraries, University of Southern California. The paper proposes that the research library community investigate the feasibility of creating a broad based "scholarly information" portal in order to continue the library community's basic function of providing information and learning and staying relevant in this new exciting environment³.

What is a Portal?

There are various definitions, depending on perspective, mission or function. From a mission perspective, Gerry McCartney, Associate Dean and Chief Information Officer at the Wharton School at the University of Pennsylvania, sees portals as whatever the institution wants it to be. "A portal is a place that draws people to it because of what it offers and what it enables.

Michael Looney and Peter Lyman define the web portal as "systems which gather a variety of useful information resources into a single, 'one stop' web page, helping the user to avoid being

3 Jerry D. Campbell, "The Case for Creating a Scholars Portal to the Web: A White Paper." ARL: A Bimonthly Report on Research Library Issues and Actions from ARL, CNI and SPARC, Issue 211 (August 2000):1-3. <http://www.arl.org/newsltr/211/portal.html> Accessed February 14, 2001.

overwhelmed by 'infoglut' or feeling lost on the web"⁴.

University Portals

Visionary university leaders realise that campus portals are transformational resources. These resources will change the way students, faculty, staff interact, learn, do research and work. Universities recognise that portals may be the way to engage stakeholder and client groups, empower them with access to branded campus information resources and communication tools and retain their loyalties as potential students or alumni. It is a community building tool⁵.

A portal vision is emerging. Portal technology provides a central on-line tool to access and exchange internal information as well as links to external information, vendors and resources according to needs, mission and priorities of the institution. However, in order to integrate portal technology, institutions must focus equally on technology, strategic thinking, planning and systems thinking. They have to re-examine organisational missions, processes, and student, faculty and staff needs and re-evaluate educational philosophy with the task of integrating web technology into the pedagogy. For universities, the goal is to combine horizontal and vertical portal concepts into an integrated, personalised and customised dynamic interface for all users – in order to also foster a sense of community and belonging to the institution. This portal has to be simple, easy to use, convenient and comprehensive in its access to information, people and processes. Its development requires strategic thinking and co-operation between disparate units on the campus. Although the technical challenges are considerable, the real challenge is to foster an organisational culture change – and changing organisational cultures is very difficult indeed.

It is important to emphasize that portals in any form are collaborative tools. Higher education in the new information environment demands collaboration between campus stakeholders who are used to a high degree of independence. Institutional wide portal is only possible with effective inter-departmental commitment.

Portal implementation is challenging. Richard Katz, Executive Vice President of EDUCAUSE, noted "that the implementation of a portal strategy is necessary, difficult, and perilous in higher education. It is necessary because colleges and universities – to both realise the full benefits of their investments in data warehouses, enterprise systems, and other elements of the campus infrastructure – will need to integrate information, services, and infrastructure across a seamless and easy-to navigate Web interface. A portal strategy is difficult and perilous because many on campus are weary and suspicious of yet another new enterprise-wide information technology initiative, and because portal initiatives, by definition, require across-the-institution agreements on approach and design that are hard to achieve in loosely coupled organisations like academic institutions."⁶

Robert Kvavik, Executive Vice President at the University of Minnesota, noted on a number of occasions while speaking on the implementation of the My One Stop portal that it forces those involved to think outside the box. The project illustrates the need for planning and the need to involve stakeholders early and for visionary leadership.⁷ He points out that the campus portal receives about 13 million hits a month on average with about 3 million pages downloaded versus early numbers, which were around 13,500. Based on these numbers, one can conclude that the portal must be a success and real change is possible.

4 Michael Looney and Peter Lyman. "Portals in Higher Education." *EDUCAUSE Review*, 35:4 (July/August 2000): 30.

5 Michael Looney and Peter Lyman, 33.

6 Richard N. Katz. "It's a Bird. It's a Plane. It's a ...Portal?." *EDUCAUSE Quarterly*, 23:3 (2000), 11.

7 Robert B. Kvavik and Michael N. Handberg. "Transforming Student Services: The U. of Minnesota takes a fresh look at client/institution interaction." *EDUCAUSE Quarterly*, 23:2 (2000), 30-37.

Exciting examples of working campus portals are the University of Washington's MyUW -<http://myuw.washington.edu/>, UCLA's very popular MyUCLA -<http://www.my.ucla.edu/>, University of Buffalo's MyUB -<http://www.buffalo.edu/aboutmyub/>, and University of Minnesota's My One Stop -<http://onestop.umn.edu/>.

Developing university portals in collaboration by sharing open source code is well described and documented by the JA-SIG Portal Framework Projects⁸, in the Boston College Whitepaper⁹ on the subject. Other examples of collaborative implementations are University of British Columbia's MyUBC - <http://portaldemo.ubc.ca/index.jsp> and University of Delaware's UD and ME -<http://www.misc3.udel.edu:9091/portal/>.

Developing Academic Library Portals

The academic library portal development has to be understood strategically as part of the campus portal plan and its implementation integrated into the campus portal planning process. While this is a big challenge, the library can both advance its own mission as well as strengthen the universities mission of creating an integrated learning and research community by partnering with faculty and other stakeholders.

Within the context of a campus enterprise portal, an academic library has to consider some of the following questions as it plans its own portal strategy:

- How can a portal enable more clients to use the library's resources and services more effectively and more conveniently?
- How can a library portal empower clients to be more self reliant in their information seeking activities?
- How can librarians provide more effective public service?
- How can the portal save time for clients?
- How can the portal promote information literacy?
- And more...

Examples of academic library portals are –

- California Polytechnic State University, Robert E. Kennedy Library - <http://www.lib.calpoly.edu/mylib/cgi-bin/index.cgi>
- Cornell University Library - <http://mayfly.mannlib.cornell.edu/peswg/screens/MyLibraryLogin.html>
- North Carolina State University Libraries - <http://my.lib.ncsu.edu/>
- University of Washington Libraries - My Gateway - <http://www.lib.washington.edu/resource/help/MyGateway.html>
- University of Utah, Spencer S. Eccles Health Sciences Library - <http://medstat.med.utah.edu/personalize/welcome.html>
- Virginia Commonwealth University Libraries - <http://www.library.vcu.edu/mylibrary/>

The continuing viability of libraries is in finding new ways to carry out their core purposes of collecting, organising and disseminating information and teaching information literacy. The Web is the preferred tool used by most of our users to search for information, to communicate, to be entertained, to shop, etc. Most of our customers prefer to interact with us via the Web. In order to survive and stay relevant in this information environment, libraries

8 JA-SIG Portal Framework Project. <http://www.mis2.udel.edu/ja-sig/portal.html> Accessed February 14, 2001

9 Bernard W. Gleason. Boston College University-Wide Information Portal: Concepts and Recommended Course of Action. January 26, 2000. <http://www.mis2.udel.edu/ja-sig/whitepaper.html> Accessed February 14, 2001

have to create environments and services that respond to user needs directly, interactively and in timely fashion. Libraries and universities have to make access to information seamless, relevant and personally useful to clients and stakeholders - while at the same time competing with new information providers.

This places tremendous stress on our human resources and on our facilities. The way we work is being constantly pressured - to change. New resources and new technologies are added at very fast pace. Infrastructures and people are struggling to keep pace and people search for some kind of stability. Job content changes rapidly and skills have to be continuously upgraded. Although the purpose and service values of librarians will stay focused on customers, what librarians will be doing, how they will do their everyday tasks and achieve their goals will change dramatically. The portal may be one of the change agents.

The library, as an academic information service environment which maintains links to local and remote information resources, makes the MyLibrary@NCState type of portal available in order to provide students and faculty with a more effective web experience for their learning and teaching needs, thereby making the library and its services more effective, productive and responsive to client needs.

Librarians have been and continue to be concerned that the library is losing its importance, centrality and its perceived usefulness especially with the acceptance of the web as the place where students look for information. Many see disintermediation as dangerous to libraries and librarians. However, designing useful library web sites - based on ongoing usability studies - may be one way of keeping the library relevant and useful for our customers. Librarians will concentrate on developing learning modules in close co-operation with faculty and systems staff. They will increasingly concentrate on teaching research and writing skills. On the collections front, libraries will concentrate on leasing vs. ownership, creating seamless and intuitive access to information.

For libraries to succeed in their new tasks, libraries have to enhance, change and transform their organisational and professional cultures.

What is Organisational Culture and Why Does it Matter?

Organisational culture is important because initiatives and changes undertaken without its consideration often have unforeseen consequences - and usually negative ones from the perspective of organisational effectiveness. Culture matters because it is a "powerful, latent, and often unconscious set of forces that determine both individual and collective behaviour, determines strategy, goals and modes of operating"¹⁰. Leaders and managers patterns of thought and activities are often determined by culture.

Organisational culture focuses on beliefs, values and meanings used by members of an organisation, and the practices and behaviours that exemplify and reinforce them. Researchers, consultants and managers have gravitated to the concept of culture in order to better grasp why and how organisations originate, evolve and operate. Culture is not simple. It is tempting to think about culture as just "the way we do things here," "the rites and rituals of the company", "the company climate", "the reward system" or "our basic values". These are all manifestations of culture, but not at the level where culture really matters. A better way to think about it is to realise that it exists at several "levels" and we need to understand the deeper ones.

Organisational Culture refers to the overt and covert rules, values and principles an organisation owns and that is influenced by history, custom and practices. These are enduring set of tenets and norms

10 Cameron, Kim S. and Robert E. Quinn. Diagnosing and Changing Organizational Culture: Based on the Competing Values Framework. Addison-Wesley Series on Organization. Reading, MA: Addison-Wesley, 1999

that form the basis of a social system and allow the members to attribute value and meaning to the external and internal events they experience.

The essence of culture is the jointly learned values, beliefs and assumptions that over time become shared and taken for granted. This results from a joint learning process.

Organisational culture is stable and is difficult to change. It represents the accumulated learning of a group. The important parts of culture are essentially invisible. Culture is the shared mental model that the members of an organisation hold and take for granted. Culture is difficult to decipher for insiders. There is no right or wrong culture - except in the relationship to what the organisation want to achieve. The relative strength of an organisation culture is dependent on how well the group deals with external adaptation and internal integration¹¹. In essence, the organisation needs to pay attention to its survival as an organisation and to its processes and structures - to the systems it uses to do what it has to do in order to deliver its products and services in such a way that it ensures its ability to survive in the long term.

Library Portals Impact on Customers

Library portals have to be simple to understand and use. Customers need automatic access to their personal portals, in order to insure acceptance and increase usage. Ease of access, useful information together with ongoing promotion of the service will increase student use. The portal should be customised for clarity, simplicity of use, links should be self-evident and ready for information retrieval and should have very flexible personalization options. The portal should empower the client to get what they want when they want it and will decrease the anxiety of interacting with librarians or reference environments where they feel inadequate.

Access to subject content will be customized for local study and research needs and customers will be able to add personal options. They will have the ability to focus on their needs - in essence create an environment where they can get most of their learning and research information easily, with expert advice and in a timely fashion. A personal library-subject based portal will save time and anxiety. An outcome may be more self-confident students. The portal should increase students' confidence in the information search process itself. The portal should enable librarians to assess and evaluate the quality of their services, as well the contribution of those services to learning outcomes. Only by instituting continuous customer focused assessment environments and processes, will we ensure that service quality remains positive.

The MyLibrary@NCState type of portal enables clients to easily identify and contact a librarian. They will have very current updates about new library services and happenings. Students and faculty will receive updates for local resources they need, such as lists of new books in the call-number ranges they are interested in, tables of contents for new resources, lists of newly acquired resources in their subject, etc. With seamless campus portal integration, students will have easy access their course schedules, academic advisors, course assignments and library resources directly related to the specific courses. Assignment specific library support could include special bibliographies, library resources and user education activities focused on the course.

Students and other stakeholders will have enhanced access to one-on-one consultation with librarians about specific needs. Focused, subject specific information will be pushed to the client automatically. User will expect service wherever they are, at the time they need it and in a variety of venues. In short - better service will raise client expectations - which will continue to challenge the library.

11 Edgar Schein, "Coming to a New Awareness of Organizational Culture." Sloan Management Review, 25:2 (Winter 1984), 3-16.

Library Portals Impact on the Library and on Library Staff

One of the crucial points about the MyLibrary@NCState application is that librarians who create and plan the content do not have to bother with HTML and other technical issues. The technical details are in the background and are not their concern. The focus is on the customer – provide external simplicity but hide the underlying complexity of the portal.

This is a very powerful idea. Librarians don't have to become immersed in the details of the technology to be able to continue to do their job in the new electronic library. They join the patrons on the other side of the technology. The librarian is freed to concentrate on creating content, organising information for the customer and teaching. The need for partnering with faculty, for teaching and research will become self evident - even to the faculty. In this

environment, the librarian will know more about the needs of the customers, since communications channels will be personal and persistent. The librarians can form a community with the patrons and the Web becomes the medium of communication¹². The Web becomes less like a radio and more like a telephone. Librarians will work be in a more interactive mode, closer to their customers; the dialog we be on a more even footing.

Librarians, Information Technology staff and other university staff will have to co-operate more. The portal implementation itself will force collaboration, systems thinking, and will break-up functional silos. Staff at every level will realise that in order to succeed in this environment, collaboration, openness with information will become essential. All systems are interconnected and a diverse work force has to work together in order to enable customer centred services.

Good database design will increase the value and the life span of the data it contains. Bad database design can be a liability for a long time to come and a sinkhole for scarce resources. The primary requirement for good database design is close collaboration between the technical people building the database and that database's end users, in the library's case, the librarians and the patrons.

Personal interaction with the customer – through e-mail, instant messaging, consultation, real time contacts will increase. This means that librarians will have to reevaluate, re-prioritize and restructure their work. Libraries will have to rewrite librarians job descriptions. But mostly librarians will be able to concentrate on service outcomes for customers – because the customer will be closer and more directly demanding.

From a system of learning new skills, librarians will transition to a lifelong learning framework. This environment will need flexibility and capability to enhance new technical and non-technical skills. Librarians may need to develop new communication skills using new tools. Librarians will continue to develop new skills, with training becoming part of work. Training and constant learning will be emphasised and expected. New ways of delivering local, distance services are already being developed. 24/7 reference services are being built. Libraries will concentrate on developing flexible, multi-tiered approaches and innovative alternatives to current public services¹³.

Librarians will have to focus to acquire and maintain personality traits of flexibility, friendliness and tolerance such as:

- Adapt to even faster changing technological environments.
- Maintain healthy scepticism of technology
- Maintain a high degree of curiosity

- Develop and maintain customer focus
- Develop and maintain good relations with faculty as well as students
- Work co-operatively with different types of people with diverse personalities and cultures.
- Maintain the desire to work independently and co-operate constructively.

Library Portals Impact on Library Structure and Internal Communication

The library portal framework, together with the resources and the processes needed to make it work effectively and efficiently, requires open systems of internal communication and for an understanding of the relationship between systems and people. By clarifying the direct links between well designed and accurate data structures and information seeking outcomes, as well the direct relationship between the visible and the invisible aspects of library services, the library portal can become a force for change.

This means that libraries will have to be more open, flatter organisations, where all work is interdependent. Management will have to be thin, responsive and discourage functional silos. Ideally, groups and teams will be empowered and encouraged. New jobs will emerge and creativity will be appreciated.

Library Portals Impact on Continuous Assessment

If we build the portals well, they will change libraries, enable librarians to be more effective and create learning communities. Library Web portals will inevitably make libraries and their staffs more customer centred. All the work involved in creating and maintaining a dynamic library portal, from the attention to well designed OPACs, precise metadata and good indexing, to building dynamic subject based resources and making librarians more visible and accessible through the portal, will invariably result in better customer relations for the library. It will surely have a huge impact on learning outcomes for the students, enhance research and build better learning communities. To ensure that these outcomes become realities, we have to create organisational cultures that incorporate continuous assessment of our systems and outcomes.

We can only ensure that our new methods are effective by gathering feedback. Jakob Nielsen has led the way in devising effective ways to test and improve the usability of Web sites¹⁴. We must realise that the database-backed Web site has its own tool of self-assessment built right into it. The database for a portal must contain a profile of each user's preferences. It can also be used to track usage automatically. Systematic analysis of usage logs and attention to client feedback will keep the portal dynamic and relevant. In addition to these assessment tools, libraries have to continuously survey the level of customer satisfaction and create measurable high service standards. To succeed, libraries have to create a culture of assessment¹⁵

Conclusion

The portal will become the agent, which transforms the library into a

12 Philip Greenspun, "Scalable Systems for Online Communities," Philip and Alex's Guide to Web Publishing, Chapter 3. <http://www.arsdigita.com/books/panda/> Accessed February 14, 2001

13 Chris Ferguson, "Shaking the Conceptual Foundations, "Too: Integrating Research and Technology Support for the Next Generation of Information Services." *College & Research Libraries*, 61:4 (July 2000), pp. 300-312.

14 Jakob Nielsen, *Designing Web Usability: The Practice of Simplicity*, New Riders, Indianapolis, 2000.

15 Amos Lakos, "The Missing Ingredient - Culture of Assessment in Libraries: Opinion Piece." *Performance Measurement & Metrics*, (August 1999), 3-7. Accessed February 14, 2001

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learning organisation. Building a portal takes vision, leadership, and sustained co-operative effort from many diverse stakeholders, systems thinking, organisational openness and promotion of personal trust. The portal will force universities and academic libraries to focus on outcomes to customers. Portals will help institutions respond directly to customer expectations with visible increase in

service quality and learning outcomes. A successful portal will also enhance the learning and research environments of the campus and will contribute to a better informed and more open society. Ultimately, the portal will change the organisational culture of institutions of higher learning and help them evolve into real learning organisations.